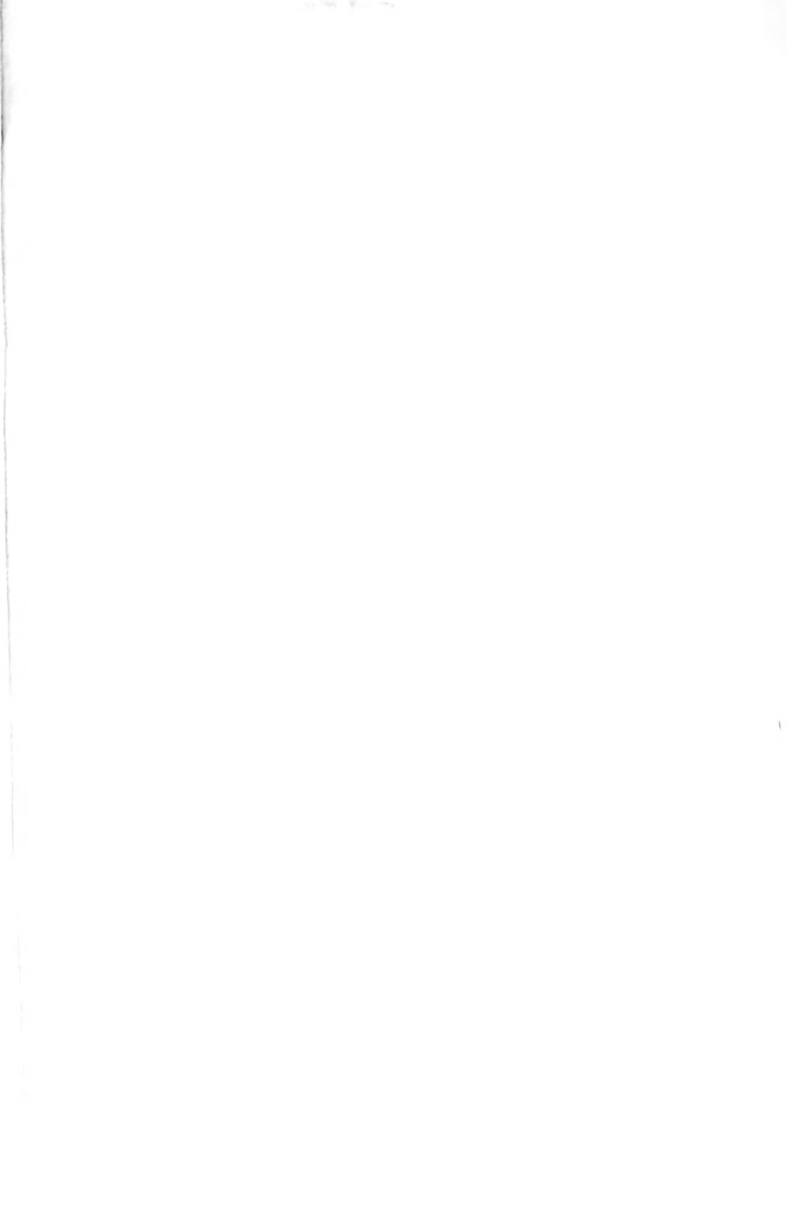




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"Quantam ego quidem video motus morborum fere omnes a motibus in systemate nervorum
ita pendent, ut morbi fere omnes quodammodo Nervosi dici queant.—Cullen's Nosology: Book
II., p. 181—Edinburgh Ed. 1780.

THE

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A QUARTERLY JOURNAL

—OF—

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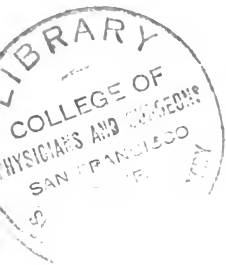
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No. 1.

ORIGINAL CONTRIBUTIONS.

Some Recent Progress in Diseases of the Nervous System.*

By TALBOT JONES, M. D., of St. Paul.

THERE is scarcely a saying that has a more general acceptance, and one withal more, trite than that medical science is advancing with rapid and steadily increasing velocity. It arrests the attention and challenges the admiration of every thoughtful physician. There can be no differences of opinion that new facts are almost daily discovered, and a new impetus given to medical thought and discovery.

Restless activity, unwearying research and patient investigation meets the beholder at every turn. The multiplication of specialists in medicine, though not without attendant evils, has stimulated research in various fields, and, through their collective investigations, the sum of medical knowledge has been greatly increased. Every appliance that humanity can suggest or ingenuity devise is now employed to control disease or prevent it.

Investigations made in experimental physiology and morbid anatomy have been so fruitful of results, as to almost mark an epoch in recent medical progress.

Man is now no longer content to pursue the beaten paths of his predecessors; he brings to his aid the microscope, the chemist's retort, the thermometer, galvanism, the

*The report as Chairman of the Committee on Diseases of the Nervous System, to the Minnesota State Medical Society, 1883.

sphygmograph and even spectrum analysis is made to aid him in his eager search after truth.

Perhaps in no single department of investigation has greater success been achieved than in that of diseases of the nervous system. We have thought that it might not be without interest on this occasion to note some of the advances that have recently occurred in this important branch of medicine. In England, on the continent of Europe, and in the eastern section of our own country, diseases of mind, nervous diseases and electro-therapeutics, occupy a position of commanding importance; not so in Minnesota. Some of the ablest minds in the profession are devoting themselves exclusively to investigations connected with neurology and psychiatry, but it is generally admitted, that in the northwest these subjects excite but comparatively little interest, and their importance is underrated. Your committee, therefore, has thought, that a paper on some recent progress of diseases of the nervous system would be timely, and it is hoped it will be the means of arousing more interest in this important department of medicine. The subjects will be rather hastily treated of, and we shall reserve for the last that which is perhaps of greatest importance.

Dr. Duchenné long ago directed attention to what he called *sub-acute anterior spinal paralysis*, which was characterized by the loss of power, with retention of sensation in the limbs, and followed by rapid wasting of the muscles. It differed from all acute, general or diffuse spinal paralyzes, which had heretofore been observed, and invariably, but slowly progressed to a fatal termination. The ultimate anatomical lesion, as in infantile paralysis, was an atrophy of the cells of the anterior cornua. In *progressive muscular atrophy*, both the wasting muscles and paralytic phenomena is due to the shrinkage of nerve cells. Carter, of Liverpool, has recently published the histories of four cases of this hitherto hopeless malady, cured by the hypodermic injection of strychnia, the internal use of phosphorous, and Charcot's white-hot cautery applied along

the spine. Other observers have since confirmed Carter's success.

Closely allied to this subject is that of *infantile paralysis*. For a long time much obscurity attached to this disease, as may be inferred from its name, which implies a morbid condition of the spinal cord observed in children only. Recent investigation, however, has revealed the anatomical lesions of the disorder, and it is now known that the same disease is not infrequently observed in the adult—the morbid anatomy of both apparently being identical. As the same form of disease, then, is encountered in the adult, the term infantile paralysis is now no longer appropriate, and the term *poliomyelitis anterior acuta*, first proposed by Kussmaul, expressing as it does, the seat and character of the disorder, is the one probably by which it will be subsequently known.

Recent investigations in morbid anatomy have shown that in infantile paralysis the anterior nerve-roots undergo a change, both at their emergence from the cord, and at their termination. They become thin, translucent, atrophied, and their peripheral endings show more or less degeneration. The changes, however, of most importance are observed in the cord itself. Without the aid of the microscope no morbid alterations are discovered, but this instrument shows that certain sections of the cord, especially well marked in the dorso-lumbar and cervical enlargements, the nervous substance have undergone inflammatory softening, separation of nerve cells, and the presence of granulation corpuscles and free nuclei. The multipolar nerve cells in the anterior horns of the gray matter are shrunken, many of them markedly atrophied, and all in a state of atrophic degeneration. Coincidentally with these changes there occurs a decided hyperæmia of the cord—most of the blood vessels being distended to twice their former caliber, with more or less serous exudation into the substance of the marrow, and a hyperplasia of the neuroglia. The cord is not uniformly affected by these changes; they occur only in certain

areas or patches. The softening may be observed on one side only, but in some cases on both. This atrophic degeneration is not always confined to the anterior horns of the gray matter, but may extend to the adjacent antero-lateral or even posterior columns. The muscles supplied by these nerves undergo a marked change. Individual muscular fibers may disappear, and most of them become degenerated; fat-cells and granules appear, and there is a marked proliferation of the connective tissue. These facts regarding the morbid anatomy of *poliomyelitis anterior acuta* have been acquired in recent times, for in no systematic work on practice, unless written within the last year or two, will any description be given of its pathology. Athetosis, allochiria and pseudo-hypertrophic spinal paralysis have recently been added to the list of nervous diseases, and for a description of which we search general medical treatises in vain.

One of the most important articles that has appeared for years is a paper of DaCosta and Longstreth (*American Journal Medical Science*), who after an exhaustive investigation of the subject, have arrived at the conclusion that all the morbid processes, embraced under the generic term of Bright's disease of the kidney, are directly due to antecedent structural changes in the great abdominal ganglia of the sympathetic. The nature of this nerve change is akin to, if not identical, with fatty degeneration. They show that the neural change is primary and causative; the alterations in the kidney being secondary.

Localization of cerebral lesions has been largely studied, and has attracted great attention during the last decade, and very decided advances have been made in this subject, which still continues to engross the attention of the medical profession. Our increased knowledge is due to investigations in morbid anatomy and experimental physiology, and also to clinical observation. The important investigations made by Fritsch and Hitzig, in 1870, by electrization of the cerebral hemispheres in the lower order of animals gave results of capital importance.

These experiments, which at once attracted great attention to the subject, were quickly followed by those made by Ferrier, though the latter's were far more comprehensive in scope, and valuable in their results. Other workers soon began to labor in the same field, and the result of the investigations of Broca, Schiff, Vulpian and others is now well known to the scientific world. Owing to the fast accumulating knowledge with regard to localization of cerebral lesions, it is highly probable, if not reasonably certain, that the day is not far distant when this subject, taken from the domain of speculation, will become one of the most exact sciences of our art; and then the skillful physician will be able to determine with as much certainty the nature and seat of cerebral lesions, as he now does morbid states of the lungs or valvular disease of the heart.

A few years since, Ord, Mahomed and other English physicians directed attention to a certain curious form of disease, characterized by more or less diffused swelling of the entire body, but especially prominent in the lips, tongue and eyelids. Its most characteristic feature, however, was a *cretinoid* state supervening in adult life in women. In this country, thus far, there have been but three cases reported. In the cases examined the speech was deliberate and slow, hearing impaired, and the mental observations obtuse. The finger ends became club-shaped, and the bodily temperature was below the normal. The swelling of the body did not pit on pressure, as in advanced cardiac or renal disease, and there was an absence of albumen in the urine.

The thyroid gland was always markedly atrophied, and in many cases had disappeared. From the swelling of the body, mental decay, thyroid atrophy and change in facial expression, Sir Wm. Gull, who first described this disorder, came to regard it as a disease closely allied to a form of imbecility long ago recognized in Italy and Spain, and known as *cretinism*. The disease is slowly progressive, confined to adult life, chiefly observed in

women, and most frequently seen in those who have borne many children. With regard to the etiology of *myxœdema*, the name by which this curious disorder is now known, little positive can be said, though Allan McLane Hamilton in a recent able article (*Medical Record*, Dec., 1882), has apparently proven that the true seat of the disorder is in the deepest recesses of the sympathetic nervous system.

Charcot, Vulpian and others (*Arch. de Neurologie*) have lately directed attention to certain skin eruptions, which appear in cases of *locomotor ataxia*. These eruptions may be ecchymosis, papulæ, or maculæ, but are not observed in every case of tabes, nor indeed in a majority of cases. The eruptions are not observed before or during a paroxysm of pain, but immediately after, and appear over the seat of greatest pain and follow the course of the spinal nerves. They vary in size from that of a split pea to that of a silver half-dollar, and often resemble the spots which result when the skin is severely pinched. Strauss regards these eruptions of frequent occurrence in ataxia, and ultimately connected with morbid alterations of the posterior columns of the spinal cord. He thinks they are reflex phenomena (irritation of the vaso-dilators). While on the subject of posterior spinal sclerosis some interesting investigations recently made by Tuzek may be mentioned. He had the opportunity to study an epidemic of ergotism, and found in many of the patients tabes dorsalis was produced artificially by this drug. All of the cases showed symptoms of ataxia, paræsthesia, pains, incoördination and complete absence of tendon-reflex. Post-mortem examination in four cases showed sclerosis in the posterior root-zones, though no change was observed in the columns of Goll. Dogs were now fed on ergot, to see whether or not the disease could be produced artificially. They grew rapidly thin, showed signs of incoördination, but on being killed no lesions were found in the cord. Other recent progress connected with this subject are some observations of Vulpian (*Revue de Médecine*, 1882), wherein he shows

that in certain cases of locomotor ataxia, epileptic phenomena are observed. In the cases reported the subjects had attacks of loss of consciousness, right side hæmiplegia, aphasia and laryngeal constriction, all of which symptoms subsided when decided tabes made its appearance.

The pathology and physiology of the *cortex cerebri* used to be, and to many physicians and students is still regarded as a *terra incognita*. The inherent difficulties to the study of this subject has heretofore appeared almost insuperable, hence, but little additional information has recently been acquired concerning its functions. Important investigations, however, have lately been undertaken by Prof. Goltz of Strasburg, who experimented on the cerebral hemispheres of dogs, by means of White's boring machine. His general conclusions are as follows (*American Journal Insanity*):

1st.—The hypothesis of circumscribed centers for special function in the cerebral cortex is untenable. 2nd.—There is no area of the cortex exclusively concerned with sight, hearing, smell, taste or touch. 3rd.—It is impossible by any circumscribed lesion of the cortex to produce permanent paralysis of any muscle, or remove it from the influence of the will. 4th.—The vital manifestations, which we regard as indicative of intelligence, feeling, emotion, instinct, are not dependent on functionally differentiated cortical regions. 5th.—Destructive lesions of the frontal regions of the hemispheres cause defects, which differ in certain respects from those caused by lesions of the occipital regions. These differences depend probably on simultaneous lesions of the conduction tracts, which lead to the crura. Removal of the anterior regions shows itself in clumsier movements, and reduced tactile sensibility; removal of the hinder lobes, more distinctly affects sight and other specialized senses. The general intelligence is also somewhat more affected in destruction of the hinder lobes.

The etiology of *pernicious anæmia*, which is essentially characterized by a rapid and progressive diminution in

the number of corpuscles, with symptoms of profound anæmia, is still involved in much obscurity. While the cause, whether nervous or myelogenous, is still *sub judice*, Dr. King has lately ably advocated the idea that the etiology is to be sought for in lesions of the sympathetic system, while Little maintains, that, the primary cause is a change in the vaso-motor region of the ganglionic system—the alterations in the blood being secondary.

Brigidi, it may be remarked, actually found in one case of pernicious anæmia, a lesion of the cœliac plexus. Only the briefest *résumé* can be given of the *progress in static-electro therapeutics* during the last year. It is generally employed, and often with conspicuous success, in certain varieties of palsy where other forms of electricity have failed, as in hemiplegia, in the so-called irritable spine, and in subacute rheumatism. Dr. Morton, of New York, has used it with benefit in diphtheritic paralysis, Bell's paralysis, muscular atrophy, neuritis, angina pectoris, anæsthesia, etc., though he found it unsatisfactory in locomotor ataxia.

We now have occasion to speak of a subject, which in our humble judgment is by far the most important yet alluded to, and it is here the most brilliant advances have been shown. The investigations in *cerebral syphilis* mark an epoch in recent pathology. When we remember the great antiquity of syphilis, it having been described according to good authority in Chinese systems of medicine, 4,500 years ago, it is truly surprising that its ravages in the nervous tissue should have received their true interpretation only within the last twenty years, and that the greatest progress and most important additions to our knowledge of its pathology and symptomatology has occurred during the last decade. Indeed, it is only since the former date, that syphilitic lesions of the cerebrum have had nosological existence.

The far-reaching, and beneficent effects of these discoveries are all the more important, since of all the organic lesions affecting the meningeal or cerebral tissues, those due to the syphilitic poison are by far the most

amenable to amelioration and cure. Until within a recent period our knowledge of the affections of the nervous system caused by syphilis was fragmentary and imperfect; yet much has been learned in the last few years. Owing to recent researches made by Virchow, Yraven, Ricord, Lancereaux and many others, a syphilitic neoplasm of the brain may at the present time be determined with as much accuracy as a lesion due to sclerosis, or a non-specific tumor. The specific lesion may be situated in the cerebral parenchyma, in the membranes, the dura-mater, or the internal surface of the cranium, under the form of tophus with more or less abundant osteophytes, or as characteristic osseous cicatrices. Wherever situated it manifests itself chiefly as gummata, tumors, patches of softening or thickenings. Chronic interstitial indurations may develop tough adhesions of the dura and pia mater, and increased consistence of the brain. In chronic inflammation of the dura mater, sometimes infiltrated with osseous products, the affection usually takes the form of external or internal pachymeningitis.

Increased thickenings of the membranes may result in firm adhesions to the cranium and subjacent meninges. Various retractions produced by chronic meningitis occur, with exudation of connective tissue products, causing strangulation and partial atrophy of the cranial nerves at the base. Meningeal syphilis may take the form of syphilomata. In their minute structure, these tumors appear either rounded prominences, composed of soft infiltrations, reddish, consisting of spindle and stellate cells, or as round cells, with nuclei distributed through the tissue of the part, or irregular neoplasms of a gray color disseminated throughout the new-formed connective tissue. These syphilomata vary in size from that of a pea to that of a hen's egg. To the naked eye they differ in appearance from the neoplasm of fibro-cellular tumors or tubercle (*Wargner, Arch. f. Heilk., 1865*). According to Reinfleisch syphilomata develops in the brain at the expense of the lymphatic sheaths, and along the blood-vessels, and they produce

spots of softening by compression of the vessels and arrest the circulation. A great number of cells may be densely packed in an interspace, forming an alveolar arrangement. The neoplasms contain capillary blood-vessels, but sometimes they are dry and yellowish, and undergo a cheesy transformation. They may undergo liquifaction and result in the loss of substance, or the formation of a cavity. There may be thickening of the ependyma and small foci of fatty degeneration in the ventricles, which become enlarged, (Rosenthal). According to Charcot, syphilomata rarely occur in the cerebral parenchyma.

A favorite site of this gumma is between the two layers of the dura. The gumma nodules may develop on the convexity or at the base of the brain; when in the latter situation, they may fill up all the interspaces around the pons, crura and chiasm. They may give rise to hemorrhagic softening, partial sclerosis or incomplete liquifaction of the cerebral substance with which they are in contact. The brain is softened near the indurated spots, through defective nutrition from impeded flow of blood in the diseased vessels. Specific meningitis may accompany circumscribed cerebral inflammation or "may follow in the train of syphilitic tumors."

Westphal has observed syphilomata in the white substance of the optic tracts, the pons, pituitary gland and the cerebellum. It is only within the last few years that anything was known of the effects of specific disease on the blood-vessels of the cerebrum. Science is indebted chiefly to Heubner, of Leipzig, who in 1874, first recognized and explained the importance of syphilitic neoplasms that develop in the arteries of the brain. The arteries thus affected and thickened, hard, almost cartilaginous in consistence, lose their transparency and assume a grayish or whitish-gray color. The changes thus wrought are due to the deposition of granulation tissue in the tunics of the vessels, their starting point being in the intima or between the elastic layers of the intenal coat and endothelium. According to Heubner, this process is not specific in its

nature since the cells are similar in structure to those of certain sarcomata and gliomata.

Owing to the interposition of cells, the endothelium becomes thickened and the interposed cells become compressed and flattened, and fusing, become giant-cells. The lumen of the vessel is encroached upon and its caliber diminished by one-fifth or one-third. Small round cells, probably derived from the vasa vasorum, produced by irritation, now appear, or they may first be circular. These changes are observed chiefly in the larger arteries at the base of the brain. No disease of the veins has yet been noted. This new-formed tissue develops towards the center of the vessel, and obstructs the blood current, as the vessel's longitudinal axis is diminished. Rosenthal (*Diseases of the Nervous System*) remarks that the obstruction thus produced may give rise to thrombosis cerebral softening and endarteritis. Syphilitic endarteritis may cause complete stenosis of the artery, or multiple thrombosis, and emboli, and result in grave disturbances of nutrition and circulation. Many vessels may be involved and in various degrees. The small ones may rupture with apoplectiform attacks; may contain microscopic aneurisms, or may become completely obliterated.

The distinctions between syphilitic endarteritis and atheroma are these: In the latter the caliber of the vessel is seldom diminished; in the former the lumen is lessened to a degree that may cause stenosis; in the latter only a few vessels are involved, in the former a large number; in the latter calcification may ensue, never observed in the former, and finally the latter is incurable, which is not always true of the former.

But this paper, which we know has taxed your patience on account of its unreasonable length, must be brought to a close without anything being said of recent discoveries in central myelitis, post-paralytic chorea, the hereditary forms of tabes dorsalis and other diseases; or mentioning some recent progress in neural therapeutics, physiology and electricity.

Medico-Legal Relations of Epilepsy.

By JAS. G. KIERNAN, Chicago, Illinois.

THE position which the law holds respecting epilepsy is, like that which it holds on any individual psychosis, a most doubtful one. Epileptics are the insane to whom the absurd right and wrong dictum of the law does most injustice. An epileptic may perform an act apparently premeditated, and may appear to know the exact legal consequences of his act, and yet the act be the direct result of the disease. Even in some of the lower mental states, there is an apparent premeditation, which, to the law lords, would, from their *a priori* ideas and dicta, appear inconsistent with the real mental condition. In a case reported by Spitzka,* a patient, who was absolutely unconscious, and was held by three persons, his wife holding his head to prevent him biting at the others, was seen "to put out his tongue, like a tentacle, to feel where a portion of his wife's hand was available for biting." This man was in a condition of complete unconsciousness, yet there were, as will be seen, skilfully coördinated automatic movements. When epilepsy is spoken of in connection with homicide, the first idea that strikes the amateur alienist is, was the act committed in a state of epileptic mania? for this and epileptic dementia are the only forms they recognize. This is something strange, as an old attendant soon learns to recognize the various mental disturbances of epileptics. In my early studies I obtained hints from one, which were more in accordance with the dicta of modern science, than the ordinary text-books.

Calmeil, long ago recognized that the epileptics, whom he regarded as not yet insane, were impressionable and excitable. Esquirol† cites the case of a Swabian peasant,

* Medical Record, Dec. 31, 1883.

† Maladies Mentales. Tome II.

who became epileptic, at the age of eight, continued epileptic till his twenty-fifth year, when the epileptic attack was replaced by an irresistible homicidal tendency preceded by an aura, during which the patient recognized his imperative conception as illegal, but irresistible. He demanded restraint when he felt the aura coming on. Renaudin* showed, that a temporary paroxysmal insanity replaced the epileptic paroxysm. Billod† reported cases similar to that of Esquirol, and agreed with Renaudin. Griesinger‡ says, that striking psychological phenomena occur before the attack. During the attack there is, in many cases, a sudden obscuration or suspension of consciousness. The patients execute combined movements of varied character. After the attack incoherence may result, which lasts for several days. Paroxysms of mania, or a degree of blind fury and violence, sometimes occur. He evidently had noticed, but not demarcated intervallary cases, for he speaks of "an intermittent mania alternating with epileptic attacks." Morel|| speaks of a case in which violence, dreamy mental states and imperative acts appear and disappear with great suddenness, which he called masked or larvated epilepsy. Falret§ says, "A remarkable phenomenon, which frequently complicates the incomplete epileptic attacks, or the interval between two perfectly developed attacks, deserves mention. The patient seems to have come to himself; he enters into conversation with persons who surround him; he performs acts which appear to be regulated by his will, and seems to have returned to his normal state. Then the epileptic attack recommences. As soon as it has ceased, and the patient has recovered his reason, it is found that he has not preserved any recollection either of his words or acts, said or done in the interval of the two attacks. Under the designation of *petit mal intellectuel*, Falret describes a condition, which may continue for several hours or

* Annales Medico-Psychologiques, 1850. Tome I., p. 479.

† Ibid., p. 611.

‡ Mental Pathology and Therapeutics (Wood Edit.) p. 288.

|| Traite des Maladies Mentales, 1860, p. 480.

§ Archives Générales de Médecine. Tome XVI, 1860

days after the post-epileptic stupor has disappeared, during which the patient is sullen, irritable and unable to fix his thought or will. Under the designation of *grand mal intellectuel*, an analogous condition of greater duration with alternate stupor, or furious excitement is described. Hammond¹ reports cases tending to corroborate these views of Falret, and like cases are reported by Delasiauve,² Hanshalter,³ Arthaud,⁴ Baillarger⁵ and Castelnau.⁶ Howden⁷ reports a case, where the epileptic psychical phenomena were of religio-erotic type. Thorne⁸ reports the case of a man, in whom mental phenonena would from time to time take the place of fits. In these states he would seize a knife and declare he would kill his children. At another time he would steal. Echeverria,⁹ Hughlings Jackson,¹⁰ Weiss,¹¹ W. A. F. Browne,¹² LeGrand du Saulle,¹³ Dagonet,¹⁴ Orange,¹⁵ Kerlin,¹⁶ Hoffman,¹⁷ Sankey¹⁸ and Dickson¹⁹ have reported cases belonging to the same category. Witkowski,²⁰ however, claims that "the existence of the psychical equivalent has not been satisfactorily established." Had I Dr. Witkowski for just two hours in the Ward's Island Asylum, I would soon convince him of this. His reasoning is in the highest degree forced. He concludes that many cases, not epilepsy, are included under that term. Such an argument is the argument of the *dilettante*, and is inconsistant with a knowledge of

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1. Diseases of the Nervous System, 1876.
 2. Traité de l'Epilepsie, 1854.
 3. Du Delire Epileptique.
 4. Gazette Medicale de Lyon, 1867.
 5. Annales Medico-Psychologiques, 1873.
 6. De l'Etat Mentale des Epileptiques au Point de Vue Medico-Legale.
 7. Journal of Medical Science, January, 1873.
 8. St. Bartholomew's Hospital Reports, 1870.
 9. American Journal Insanlty, 1873-74.
 10. West Riding Asylum Reports, 1875.
 11. Allgemeine Zeitschrift fuer Psychiatrie, 1878.
 12. Journal of Mental Science, October, 1868.
 13. Traité de l'Epilepsie.
 14. Traité de Maladies Mentales.
 15. Cited by Tuke, Psychological Medicine.
 16. ALIENIST AND NEUROLOGIST, 1882.
 17. Allgemeine Zeitschrift fuer Psychiatrie. Band XIX.
 18. Lectures on Mental Diseases.
 19. Medicine in Relation to Mind.
 20. Allgemeine Zeitschrift fuer Psychiatrie. Band XXXVII.

the literature to which Dr. Witkowski pretends. It is difficult to see in what the described cases of psychical equivalent differed from true hereditary epilepsy; as most of them were. Doctrinaire teaching of this kind is absurd in science. "I don't believe it is, therefore it is not, and if it seems to be, somebody else has made a mistake," is the sum and substance of Witkowski's argumentation.

Falret* has given the following classifications: Those cases in which psychical phenomena of temporary character, precedes, accompany or follow the epilepsy. Those cases in which psychical symptoms occur in paroxysms independent of the convulsive or vertiginous phenomena. Sautet† includes Falret's *petit* and *grand mal intellectuel* under acute post-epileptic insanity, which he defines as insanity immediately consequent on a fit, and taking an acute course. This is subdivided into simple post-epileptic stupor, complicated, perhaps, by dreams, psychical phenomena or confused illusions or hallucinations or talking. *Post-epileptic morbid conditions of fear and fright*, either simple or complicated, by *delire raisonnante* or great excitement: *Post-epileptic moria* (flight of ideas) closely simulating acute mania; the patient being more irascible, treacherous, malicious and violent, than the acute maniac. He also describes the other states under chronic protracted epileptic insanity.

Hughes‡ states that there may be *ante, post or supplemental* paroxysms of maniacal automatism, in which acts apparently volitional, but without free or voluntarily directing will, are performed, and these acts may be violent or incendiary, or otherwise destructive and criminal as well as harmless. Garimond,|| Defosse,§ Delasiauve¶ and Luys** express similar opinions.

Spitzka†† adopts the following classification: *The*

* Archives Générales de Médecine, 1859-60.

† Archiv fuer Psychiatrie. Band V. and VI.

‡ ALIENIST AND NEUROLOGIST, p. 545. 1880.

|| Annales Médico-Psychologiques, Tome I, 1878.

§ Thèse de Paris, 1878.

¶ Traité de l'Epilepsie.

** Maladies Mentales.

†† Insanity; Its Classification, Diagnosis and Treatment.

epileptic psychical equivalent, which replaces the attack. *The acute post-epileptic insanity*, which follows the attack, or its psychical equivalent. *The pre-epileptic insanity*, which precedes the outbreak of a convulsive attack or its equivalent, and increases up to the time the paroxysm explodes. *The intervallary epileptic insanity*, which occurs between the paroxysms. A similar classification is adopted by Sommer.*

These attacks may vary in duration from a few hours to weeks, and in character from a single act of violence to a long continued manical attack. A crime resulting from epileptic psychical phenomena may be preceded by a feeling of depression, may be accomplished with comparative deliberation, and, as Bucknill and Tuke,† Falret‡ and Echeverria|| observe, there may be a motive mixed up with an insane condition. It may be followed by excitement. The patient may lose all consciousness of the same until a return of the insanity, when he may remember the circumstances of the crime, of which he was ignorant, during the period of sanity. It is unnecessary to allude to the fact that epileptic attacks are often extremely slight. As one patient, whom I propose to discuss, committed a crime in a prison, it might be well to inquire what psychoses are ordinarily found among convicts. Perhaps the most valuable contribution to this subject is that of Heimann.§ He found that many of the insane criminals coming under his observation had been epileptic during childhood, and that many were not regarded as either epileptic or insane until long after their first crime, when the full history of the case was obtained. Kirn¶ has had very similar experience.

The question of feigned epilepsy and its causes is a question naturally germane to this subject. Independently of the epilepsy feigned to escape the legal consequences

* Archiv fuer Psychiatrie. Band XI.

† Op. cit.

‡ Op. cit.

|| Op. cit.

§ Allgemeine Zeitschrift fuer Psychiatrie, Band XXXVII.

¶ Allgemeine Zeitschrift fuer Psychiatrie, Band XXXVI.

of crime or incautious contracts or marriages, there are cases in which, as shown by Dr. C. Macdonald,* a criminal feigns epilepsy to enable others to commit crime. The type of the epilepsy alleged to have been feigned, the existence of dilated and mobile pupils, on which stress has been laid by Dr. L. C. Gray,† the presence of relaxed spincters, the peculiar contractions of the fingers in the palm of the hand will furnish sufficient evidence as to the truth or falsity of the patient's statments, when contrasted with the history of the case. A curious case came under my own observation, where the son of a hysterical mother, so persistently feigned epilepsy to secure her sympathy, that he was at length committed to the New York City Asylum for the Insane, where his feints were detected and he was discharged as not insane,‡ and his peculiarities accounted for by the statement that he was "a bad boy," under which term the superintendent comprehended the affective insanity of youth.

It may be of historical interest here to note, that (according to *Notes and Queries*, 1881.) "Cranke is the character name of one who feigns epilepsy," and the case cited in that periodical is that of Harman, the cranke of 1567, "Finding, so to speak, the game becoming very hot, in consequence of his being detected doing this for money, 'he toke a skoller,' and was pulled over the water to St. George's Fields. Overtaken and questioned he damned himself over and over again if he had any more money about him; but, as it happened, he had plenty and had to produce it. He lived he said, 'in Maister Hilles, his rents, having a pretty house well stuffed.' Hilles' Rents was near to one of the beer gardens and within sight of the place where, about thirty years after, Shakspeare's Globe Theater was built. The cranke was soon in the comter and bridewell; here his true character was made known; he was stripped and

* American Journal of Insanly.

† American Journal of Neurology and Psychiatry, 1882.

‡ Dr. A. E. Macdonald has stated (*Journal of Insanity*, 1880-81.) that a case of feigned epilepsy never came under his observation in the Asylum. He had forgotten this case.

was afterwards whipped at the cart's tail through London to his own door." It should, however, be remembered that the adjective cranky was, and is used, by many of the Scotch, Scotch-Irish and Northumbrian English to denote the display of emotional or mental peculiarities.

The circumstances of the first case were as follows: A convict named Hayvren murdered another convict named Salter. The deceased and the prisoner were, as a rule, good friends, but the prisoner is reported by one witness to have said "that he would never go to Kingston, and that he had stabbed Salter because Salter wanted to send him to Kingston, and that Salter would never call him insulting names again." The convicts entertain a dread of being sent to the penitentiary at Kingston, but it does not appear that there was any intention, nor had Salter any power to send the prisoner there, nor was it shown that the prisoner was called "insulting names." The murder was committed openly in presence of a number of witnesses. Hayvren had convulsive attacks of some kind during childhood and youth. Although the patient himself had been a criminal, of a low grade, from his youth up, his family are very respectable people. The deed was committed with a knife made out of an old file,† a kind of weapon very common, at least in the United States, among convicts, work-house men and other criminal and semi-criminal classes under confinement. It appears from the evidence that the prisoner had abundant opportunity to commit the homicide under more favorable circumstances; that "the prisoner stood perfectly still for a minute after committing the deed."

Dr. H. Howard, of Montreal, was the first medical expert called. He testified that the first thing which struck him was the prisoner's peculiar epileptic pallor. He at once saw the prisoner was an imbecile. From private friends, public and police reports, he found the man's

† Although this was urged as an evidence of premeditation one hundred, such knives were taken from the convicts after Hayvren's execution, and it was proven that the possession of them by the convicts was known to the jail authorities.

conduct to have been very bad. He found the prisoner to have been an habitual inebriate from youth; constantly in prison, and, lastly, sentenced for five years to the penitentiary; while in the Montreal prison, previous to his removal to St. Vincent de Paul, he attempted to escape through a sky-light, by means of a small cord, which broke, causing him to fall a distance of thirty feet. It was natural for the man to try and escape from prison. The insane in lunatic asylums all over the world try every day to escape, and very frequently succeed. But the means employed for the end prove the fool. No intelligent man of the size and weight of Hayvren would venture his life with the piece of small cord which he used. In the infirmary of the penitentiary, while under medical treatment, he requested the nurse to take a club and strike him with it on the back of the head. One witness said that he (Hayvren) confessed to him, that he did premeditate it; but, such a confession from an insane man must be taken *cum grano salis*. Insane persons not only accuse others, but themselves of impossible crimes

But if Hayvren did, from some supposed injury of which he was the victim, premeditate revenge upon Salter, it would be no proof that the murder was not an unpremeditated, uncontrorollable, impulsive act, an impulse called into existence at the moment by the appearance of Salter, so there would be no connection whatever between the premeditation and the act. Again, if he did premeditate the act, and was in the passage waiting and watching for Salter, with the intention of pouncing upon his victim, that would not prove that he was not insane, or that he could control his insane desire; on the contrary, it might be a still stronger proof of his insanity, that under the circumstances in which he was placed, he would do an act from the fearful consequences of which it was impossible for him to escape. Every day there are examples in lunatic asylums of insane persons committing crimes, that they have premeditated. Premeditation is no more a proof of a man's sanity, than

is the right and wrong test which has so long disgraced the statute books. If the knowledge of right and wrong be the test of insanity, then one-third at least of all those in asylums all over the world should be set at large, and if giving an intelligible answer to a question be a proof of sanity, then a still greater number should be discharged.

Hayvren made a poor attempt at committing suicide, showing that like all insane persons, he was a moral coward, he wanted to die or thought he did, as when he wanted the nurse to strike him on the head. Then when the kind-hearted acting warden went to him for the knife after the homicide, he actually tried to get that officer to shoot him, all only positive proof, that like all insane persons, the man was a moral coward. The Rev. Father Knox, who obtained the knife from Hayvren, testified that when he saw the man in his cell he was a raving maniac. Psychologically there was not much to be observed. He spoke but little, and that little did not show intelligence. He said "there was something alive in his belly," and asked the doctor to cut it out.

In reply to the question "Did he sleep?" he answered, "No, he could not sleep." He complained of being tired; he wished to sleep. The keepers in charge told Dr. Howard he was seen every half-hour and, whenever spoken to always answered, showing that he did not sleep. Insomnia is one of the most marked symptoms of insanity. He was very nervous and excitable, picking up bits of thread, and dividing every fibre. His face and body were anæmic; perspiration was pouring from every pore, cold and clammy; his pupils were dilated and sluggish in action; locomotion was normal. His pulse was a hundred and ten; temperature 93.8° ; respiration thirty-six. The radial artery could be seen pulsating. The motion of the abdominal aorta was clearly visible when he stood, sat or laid down, this was the something alive in his bowels, which he wished removed. Five days after, Dr. Howard's examination was continued.

His pulse was one hundred; temperature, 92.4°; respiration, thirty-six; cardiac sounds at base normal, at arch of aorta, something like a bellows sound; apex of heart, first sound, strong; second, weak; the abdominal aorta, abnormal. These are frequently found in an epileptic neurosis, but they may be early symptoms of aneurism.

Here, however, was an abnormal state of the vascular system, caused probably by a fall from the roof of the prison; but whatever the cause, it might suffice to produce, at least, functional, if not organic, derangement of the mental organization, to account for the man's actions. It is easy to understand what havoc such a diseased vascular system might produce upon such a mental organization. Dr. Howard found motility normal; but the patient was partially analgesic. This is one of the unailing symptoms, always to be found in the insane: it can never be feigned, no more than can temperature, which is always below par in the insane, unless in case of complications.

Dr. Howard did not hesitate to declare Hayvren a man of unsound mental organization. He was intellectually and morally insane. If he did kill Thomas Salter in the manner in which he is said to have done, he killed him while laboring under an insane epileptiform, uncontrollable impulse, for which he was not responsible. His mental aberration was due to three causes: Heredity; to his being an inebriate from his youth up, and third, it had been aggravated by his fall from the roof of the jail, previous to his having committed the crime of which he is accused.

The use of instruments, though here justifiable, it must be confessed looks something like clap-trap. Many of these statements must strike the alienist reader as being too positive, and some of them as being even slightly contradictory or fanciful. For example, the fact that the prisoner attempted to escape from the prison by such imperfect means is not inconsistent with sanity. Many desperate criminals are known to have attempted

escape by similarly imperfect means. The evidence given by the witness that the prisoner said he premeditated the murder is, as Dr. Howard claimed, no evidence that the murder was not committed during an epileptic state, but at the same time it is a very suspicious circumstance where the burden of proof certainly lies on the insanity theory. As Dr. Howard claims, an epileptic may premeditate a homicide and yet carry out that homicide at a time, and under circumstances which could not fail to show the homicide was then unintentional, and the direct outcome of an epileptic explosion.

Dr. Howard's statement, that all insane persons are moral cowards, is certainly not to be proven. Had he said many epileptics, he would have been nearer the truth. The statement about analgesia being always a symptom of intellectual insanity is demonstrably erroneous. The statement that the man was an imbecile, and the assignment of the amount of intelligence Dr. Howard gives to the prisoner, are however, not necessarily incompatible. Dr. Howard, like Drs. Nichols and Ray, holds that imbecility is a result of teratological defect; insanity, a result of pathological defect. They, therefore, classify the primary monomania of the Germans with the imbeciles, as imbecility of the first grade, both being equally insane in the sense of the law.

Dr. Howard may have positive reasons for saying that in his opinion the temperature of the chronic insane is always below par; this has not yet been established. That in certain cases it is, cannot be denied, and this is undeniably the case with epileptics and paretics. Among certain insane and certain neurotic subjects temperature may fall very low. Lowenhardt* reports two cases of insanity in which the temperature was at various times 87.5° F., 89.6° F. and 90.5° F.; these were cases of maniacal excitement. Mendenhall† cites a case of dementia in which the temperature was 90.5° F. Zenker‡ has

* Allgemeine Zeitschrift fuer Psychiatrie, 1868.

† Medical Record, June 4, 1881.

‡ Allgemeine Zeitschrift fuer Psychiatrie, 1875.

studied nine cases of insanity where the bodily heat was found to sink easily; it fell in three cases as low as 90.6° F., and in one instance as low as 87.06° F. Bechterew* has reported two cases of progressive paresis in which the temperature was 93.2° F. and 86.9° F., respectively; one senile lunatic in whom the temperature was 87.8° F. Ulrich† has reported one case of progressive paresis in whom the temperature was 91.3° F., and one melancholiac, whose temperature was 83.4° F. Tilling‡ has had under observation a primary monomaniac, with a temperature of 89.6° F.; a melancholiac, with a temperature of 82.4° F., and two progressive paretics with a temperature of 83.3° F., and 81.5° F. respectively. Ireland|| has had under observation an idiot, with a temperature of 82° F., and like cases reported by Hebold.§ Phenomena of this kind, from what is now known of the action of the nervous system on temperature, are nothing more than might be expected. It may therefore be admitted, that a patient having a temperature below 96° not in collapse, may be assumed to be suffering from some neurosis, presumably of a psychical kind.

Some things are to be noticed in his evidence in favor of the theory of the prisoner's epilepsy: 1st.—The peculiar pallor observed by Dr. Howard. 2nd.—The existence of neurotic symptoms, low temperature and analgesia. 3rd.—The convulsive attacks during childhood and youth. 4th.—The patient's standing still after the attack. 5th.—His violence coming on after the comparatively calm manner in which the crime was executed. Dr. Angus Macdonald, after having read Dr. Howard's report and examined the prisoner, testified that he entirely agreed with Dr. Howard, that the prisoner was insane when he committed the crime.

Dr. Edmond Robillard testified that he was the Government Inspector of Insanity at the Montreal Jail.

* *Archiv fuer Psychiatrie*, Band XII.

† *ALIENIST AND NEUROLOGIST*, April, 1885.

‡ *Detroit Lancet*, January, 1883.

|| *Journal of Mental Science*, April, 1882.

§ *ALIENIST AND NEUROLOGIST*, April, 1883.

When he examined the prisoner, the latter was nervous, uncomfortable, and reluctant to converse. He said he did not suffer from headache. During the two or three first visits, his pulse was agitated and he was in perspiration; at the end of each examination his pulse would fall to seventy or seventy-two, and the perspiration would all cease, as if the fright was over; at each visit he told Dr. Robillard he was all right, except that he had something in the abdomen which pained him. The muscular system was that of a strong man. He discovered aortic dilation; the prisoner's respiration was eighteen or nineteen, and natural. All the perspiration had been caused by fright at the sight of a stranger; on being asked why he killed Salter, he always answered "I do not know," and could not be brought to speak on this question very much. At another examination he was asked if he knew Salter was dead, and he answered he did not know. He came to the conclusion that the prisoner was a man with greatly perverted morals, who would do anything to attain his objects. He did not see any symptoms of epilepsy. The prisoner could distinguish right from wrong. Dr. Robillard was of opinion that half the epileptics become insane. Uncontrollable impulses are very rarely met with in imbeciles or idiots. An epileptic does not remember what he does during one of these uncontrollable impulses. He believed that prisoner was perfectly conscious of his act, but that immediately after, he became greatly excited, and this fact moved his dormant impulses. The prisoner was neither an imbecile nor an idiot, but the muddle in which he passed the greater part of his life made of him a most depraved character. Dr. Robillard would not have sent him to an asylum, as insane after his examination. He had great respect for the opinion of Dr. Howard, but did not accept certain of the latter's theories respecting the nervous system. He did not make any examination for partial analgesia. He found the prisoner had an aneurism. He agreed with Dr. Howard, that intellectual and moral

insanity are the same, but did not believe that mind was the product of the body. The prisoner was a man in whom all the noble attributes of man were wanting.

Dr. Pominville testified that he had seen the prisoner almost daily in the penitentiary, but had not noticed any mental derangement; the prisoner was taciturn and morose, but that was not extraordinary. He was debased morally and mentally, like most of the convicts, the results of vice. He knew right from wrong, and was responsible for his acts. He was cool and collected after the murder, and seemed to be looking in a looking-glass at the slight wound, that he had inflicted on his throat. Dr. Pominville stated he had not made a special study of mental science; had paid attention to ordinary diseases; had never seen, and would not know how to use the æsthesiometer referred to by Dr. Howard; was not shaken in his belief by the evidence of Dr. Howard; could not speak as to the partial analgesia. Dr. Howard had not used these instruments when he pronounced twenty-five convicts in the penitentiary insane. He (Pominville) had solicited a specialist to examine them. He had not followed the progress of psychiatry and did not wish to pronounce an opinion on what was termed "uncontrollable impulse," but did not believe any such thing occurred in the prisoner's case. In answer to a question by the Court, said that he thought that on the day of the homicide the prisoner was sane and knew right from wrong, although at the very moment the act was committed he might not have thought of either; both before and after the deed he was perfectly sane.

Dr. Vallée testified that after hearing all the evidence, he was of opinion that the prisoner was sane at the moment he committed the deed, and perfectly able to distinguish between right and wrong. A man whose temperature is at ninety-five and two-thirds must be suffering greatly. At Beauport Asylum the epileptic maniacs are considered the most dangerous. In epileptic insanity

the impulses are momentary; the acts are automatic, violent and without motive. An epileptic never remembers the acts he has committed. Imbeciles are subject to uncontrollable impulses. In court the prisoner, as a rule, manifested a great indifference, but, when pointed remarks were made, the prisoner paid greater attention. Dr. Vallée had studied medicine in Paris, under Charcot. In London he had attended St. Thomas Hospital. He had been physician of Beauport Asylum for two years. There are insane people, who appear sane to every one except alienists. Insane people are sometimes endowed with cunning. Dr. Vallée's views as further given by him,* are as follows: No matter how marked the depression of temperature, of itself it does not constitute a symptom of insanity. Dr. Howard arrived at the conclusion that the prisoner struck the blow while under a fit of epileptic mania; and, consequently, could not be held responsible for his act. Admitting this hypothesis, the fit must have been epileptic dizziness or masked epilepsy. Now, the unsettled state of the mind, the obtuseness of ideas, the confusion of memory, are essential characteristics of such attacks. Nothing analogous can be detected in Hayvren; on the contrary, everything indicated most clearly that his crime was designed beforehand. He chose his victim, fixed his hour, and, after striking down Salter, explained his reason for so doing: "You'll never call me C—S— again."

Dr. William Gardner testified that he had practiced for sixteen years, and is Professor of Medical Jurisprudence at McGill College. Dr. Howard has the reputation of knowing his specialty very well, but of holding extreme views. There were no facts in the evidence to warrant the opinion that the prisoner was an epileptic, maniac or imbecile, but he was certainly stupid, and of a low order of intelligence. From the evidence he has heard he would not have made such a diagnosis as Dr. Howard's, but had he done so would consider the prisoner a

* Canada Medical Record, November, 1881.

fit subject for asylum treatment; he himself would not have sent him to a lunatic asylum. He was of the opinion that prisoner could distinguish between right and wrong. It is possible to be partially insane. Insomnia is not a symptom of insanity. He was of opinion that all the isolated symptoms combined would not constitute insanity. In all his experience and reading he never knew of a case where the temperature was so low, except where death was impending. He never had been connected with an insane asylum, but had treated about thirty insane patients.

Dr. Charles Cameron testified that he had practiced for eight years, five of which he passed in the Montreal General Hospital; was Professor of Medical Jurisprudence at Bishop's College. He had heard the evidence of Dr. Howard, but was still of opinion that the prisoner was sane. He had heard nothing to prove that the prisoner was incapable of distinguishing right from wrong. He agreed with Dr. Gardner on the subject of low temperature; the lowest temperature on record is 92.2° . As a supplement to Dr. Cameron's evidence the following expression of his views should in justice be taken:* "A man must be the measure of himself; his mind must be the standard of comparison by which to determine his sanity or insanity, responsibility or irresponsibility. The only safe way in such cases is to compare the individual with his former self."

Such is the evidence given in the case. The statements of Dr. Vallée respecting the unsettled state of mind, obtuseness of ideas, confusion of memory, are true as regards many of the epileptic psychoses, but they are wanting just where they are needed, in many of the psychic equivalents of an epileptic attack. Even the circumstances of a psychical equivalent are sometimes seemingly clearly remembered. Nasse,† for example, reports cases where epileptics recollected hallucinations

* Canada Medical Record, December, 1881.

† Zeitschrift fuer Anthropologie, 1825, I.

occurring during the attack, and similar cases have been observed by Horryng.* Now these seem to indicate the occurrence of consciousness during the epileptic attack, but such recollections are really the result of a different cause and one which gives rise to the so-called delusions of memory. As Meynert† has pointed out, these remembrances have the following pathogeny. An epileptic attack occurs in consequence of an arterial spasm of a hemisphere. It may readily happen that this spasm may only occur in part of a hemisphere. When this spasm proceeds to the extent of complete occlusion, collateral hyperæmia will result, engendering an irritation; a pronounced contraction of a vessel leading to a diminution of pressure in collateral branches. These phenomena do not produce an hallucination, but the hyperæmia in question may produce a delusion of memory at the time the hallucination occurs, by causing the subjective sensation to receive such colors that the sensorium retains the imprint of it. Now, while this is not a true memory, it approaches so closely to it that, differentiation by an unskilled observer is impossible. Hughes‡ has reported cases in which consciousness has been seemingly preserved in its entirety, which may perhaps be explained in like manner as the remembrances of the hallucinations.

As elements of differential diagnosis, the value of the psychical phenomena, cited by Dr. Vallée, is therefore but very relative.

Dr. Robillard's statement that impulses are rare with imbeciles, using the latter term either in the sense of Dr. Howard or the ordinary sense, is not in accordance with the views held by alienists. His testimony that the prisoner was nervous and disinclined to converse, and was so frightened that his pulse and perspiration were affected, disposes of the theory that the prisoner was a hardened criminal, who would commit a crime in a reckless, brutal manner. No reckless, hardened criminal would act in

* Die Epilepsie. Tuebingen, 1859.

† Jahrbuecher fuer Psychiatrie, Band III.

‡ ALIENIST AND NEUROLOGIST, July, 1881.

such a manner, and no sane criminal of any other type, would have committed such a desperate crime for such a more than dubious motive. What Dr. Robillard means by saying "the prisoner was perfectly conscious of his act, but became immediately, excited and that roused his dormant impulses," can not well be determined, but it is obvious Dr. Robillard was endeavoring to explain some psychic phenomena of the prisoner to his own satisfaction. There is here then, first a crime performed with great calmness, then great excitement, and then very great stupidity; but it may well be asked: Does not this correspond ideally with certain epileptic phenomena? The meaning of the paragraph, "The muddle in which the prisoner passed the greater part of his life made of him a most depraved character," is very obscure. Perhaps it alludes to the prisoner's intoxication. It was obvious Dr. Robillard did not make a thorough examination of the prisoner, or he would have determined the same analgesia found by Dr. Howard.

According to Dr. Pominville, the prisoner was cool and collected after the murder, but was taciturn and morose naturally, and was debased morally and mentally, whatever that may mean. He evidently did not believe that the prisoner premeditated the act, or he would not have said that the prisoner at the time of the act never thought of wrong or right. If he did not weigh the consequences of the act, it was not premeditated; and by this evidence the theory that the act was more than impulsive, receives a severe shock. It must be remembered in weighing the value of the statement that "Dr. Pominville never saw any evidence of mental derangement in the prisoner," that in Canada, as in the United States, politics determine appointment to medical positions in jails, and that as a rule, mental derangement is not first noticed by the jail physicians, but by the keeper, who, having an extended experience with malingers, puts the burden of proof on the illness theory, and naturally requires tremendous evidence to make him believe that a

convict, ill physically or mentally, is not feigning. Hayvren, however, was placed in the infirmary soon after his attempt to escape. While there, he asked the infirmary nurse to strike him in the head, and made so many other strange requests to this man, who at first thought he was joking, but finally concluded that the man was mad.

Dr. Gardner appears from his testimony to consider the man of a low order of intelligence but not an imbecile, although even from the stand-point of a low order of intelligence he is very stupid. How this differs from imbecility, I cannot determine. Dr. Gardner's reading respecting temperatures did not embrace the *Journal of Mental Science*, nor the *Allgemeine Zeitschrift fuer Psychiatrie*, nor the *Medical Record*, or he would not have made the statement that death must be impending if such a temperature existed.

The same remark will apply to Dr. Cameron's corroboration of his evidence on this point. As to Dr. Cameron's statement that "a man must be the measure of himself," etc., a little reflection will show, that while this is true in a very limited sense, considered as an absolute rule, it is a failure. The primary monomaniacs are always monomaniacs, and the imbeciles are always imbeciles. The attempt to compare them with their former selves is an absurdity. This idea of change of character being an absolute rule is an enormous hindrance to progress and has caused not a little injustice in forensic psychiatry. Dr. Cameron, in his editorial comments, seems to have forgotten that there is such a thing as an epileptic countenance, pupils and a pallor peculiar to epileptics, and that a sound and scientific diagnosis of epilepsy might be made on this evidence, although the patient was never seen in a "fit."

Taking into consideration the facts, that this patient presented an epileptic pallor, that he had a convulsive disorder during childhood and youth, that the alleged motive was baseless, that immediately after the crime he was at first cool and collected, standing perfectly still for

a minute, and then markedly and violently excited, so that an intelligent observer (the Catholic Clergyman) claimed that the man was maniacal, and the subsequent stupidity, the presumption that the crime was the offspring of an epileptic psychosis seems fully justified. The alleged calling of names was probably hallucinatory. The prisoner's statement, that his aneurism was something alive, which needed cutting out, was not necessarily a delusion. In a man of his intelligence, the supposition that it might be a parasite, was a not unnatural one, and the belief that it needed cutting out, was fully in accordance with many popular ideas on surgery. The prisoner was found guilty and executed. The brain presented the following features: The sylvian fissure was united with the first frontal gyrus; there was a junction of the inter-parietal with the parieto-occipital and first temporal fissures; an extension of the calcarine fissure into the scissura hippocampi; a union of the collateral and calcarine sulci, and there was a fusion of the first frontal gyrus, so that there appeared to be four frontal convolutions arising from the ascending frontal or anterior central gyrus. These findings were teratological in character, and indicated imbecility, in the sense of Dr. Howard.

A patient now under my charge has the following history: His grandmother's mother and sisters were subject to "fainting spells" from their twelfth year. During his childhood and youth, he had these "fainting spells," but nothing further. His first attack of *grand mal* occurred at the age of nineteen, while on guard at Fort Yuma, Arizona, and exposed to an intense solar heat. The attack was preceded by an hallucination of a beautiful woman, who placed herself in very lascivious positions before him. This hallucination produced a seminal ejection, which was followed by the *grand mal*. For several years this hallucination has preceded an attack, and remained until the patient was placed under potassium bromide, when the hallucination was replaced by another, of a devil darting a trident at him, which reached his

forehead, when he became unconscious. While under this treatment, he had attacks of post-epileptic insanity. On one occasion, just previous to an attack, he was very irascible, and engaged in a heated political discussion. During this his face suddenly became pale, his pupils dilated widely, and for a moment his face had a blank expression. He seemingly recovered from this, and pursued his opponent in the argument, with open clasp-knife, which he held by the blade, making several stabs at the latter with the handle. This excitement disappeared suddenly, and it was found that the last thing he remembered was the political argument; the rest was blank. He said he believed that he had been very irritable just previous to the argument, this irritability resulting from an indefinable dread. The patient has been placed under ergot, conium, and amyl nitrite. Has been ordered cold sitz-baths and cold sponging, and has been prohibited meat diet. Under this treatment the convulsions and psychical phenomena have failed to appear. It will be obvious that the circumstances, which show the mental phenomena to have been of *ante* and *post-epileptic* nature, are such as would be ignored by the average observer. The stabbing with the handle, in lieu of the blade, was purely accidental, dependent on the way the knife was seized. It might have been just as easily seized by the handle, and the opponent dangerously wounded. If this had occurred, how hard it would have been to convince a jury of the prisoner's irresponsibility for his act. He was irascible on account of his epilepsy; the excitement of the political discussion caused an apparent anger, and by a less intelligent observer than his opponent (his employer), the preceding symptoms of his violence would have passed unnoticed, more especially if his disease had been unknown. Much might be said here about the hallucinations, which, like Spitzka,* I regard as of cortical origin, but this would be scarcely consistent with the title of this article.

* Journal of Nervous and Mental Disease, 1877.

Congregate and Segregate Buildings for the Insane.*

By R. S. DEWEY, M. D., Kankakee, Ills.

IN the following pages I have sought, without entering into consideration of details in building plans, to discuss the general questions involved in the two systems of construction of asylums and hospitals for the insane, known as "congregate" and "segregate."

These two contrasted types of building are characterized on the one hand by concentration, and on the other by separation of the different parts of an institution, and of the different classes of patients.

Each style has its advantages, and the "congregate" style has the great advantage of mainly occupying the field at the present time; having met with general approval and adoption in the United States; and being considered, if I may so speak, "orthodox," while a suspicion of "heterodoxy," in some degree, attaches to the idea of segregated construction in the minds of many whose opinions are entitled to weight.

Each style of construction, too, has its disadvantages; and it will appear from what is here advanced, that, in the opinion of the writer, the disadvantages of the congregate and the advantages of the segregate system are likely to become more apparent as time goes on; new conditions are encountered, new questions press for solution, and wider experience is obtained in the vast and complicated problems involved in the management of the insane. For segregated styles of construction, while they offer in some directions greater difficulties, present compensating advantages in allowing of closer adaptations and

* Read before the Conference of Charities, Louisville, Ky., Sept., 1883.

wider variations to meet the multiplicity of wants and conditions, while the evils of scattering buildings and patients, admit of being surmounted to a great extent by the newer appliances of intercommunication and oversight, which the inventive genius of the day is developing, and many of those evils are proved by experience to have been overrated.

The congregate system represents one view of the insane, the segregate another. The former in effect treats the insane, as all needing the same or very similar surroundings; all equally in need of closest seclusion and confinement; all requiring uniform regimen, regulations and restrictions.

The latter inquires after the individual, and is solicitous to procure for every patient each and all the privileges he is capable of enjoying with safety, and of removing none of the prerogatives of sanity, which it is not clearly proven the condition of the individual precludes.

Neither of these systems or ideas can be logically carried out to its absolute limits. In each of them, there is good and truth embraced, and no institution exists, or could exist, which would exemplify fully the complete supremacy of either idea. But as in other human affairs, a golden mean is to be sought, established, and put in practical execution.

The reader is doubtless familiar with the main characteristics of each system; the "congregate," "corridor" or "Kirkbride" construction as represented by most of the hospitals and asylums for the insane in this country. The central building with its wings branching to right and left, for each sex, in sections and cross sections; constituting practically one mass or close group of buildings, so arranged, that all the occupants are to all intents and purposes under the same roof. And on the other hand the segregation or scattering of buildings, whether, as in the "pavilion" plan, all connected by one common passage way, or, as in the "block" plan, having either the "corridor" arrangement of wards, or day rooms and dor-

mitories, but consisting of larger or smaller groups of separate "blocks" or buildings, more or less complete in themselves; or again as illustrated in the "detached ward," or popularly named "cottage" plan, where the buildings are, nearly as possible, like an ordinary house, vary among themselves, are quite distinct from each other, often widely separated in their location, and arranged in a manner corresponding more to the domestic idea of architecture.

Of these two systems, the former or "Kirkbride" plan has heretofore very largely met with favor, and is for certain purposes, perhaps, the best possible form of building; but there has been an increasing tendency, in the past few years, to separate in disconnected or detached buildings the different parts of the asylum, and especially to provide for different classes of the insane, or forms and degrees of insanity, some mode of construction varying according to the condition and needs of each. These opposite tendencies toward "congregate" and "segregate" forms may each be taken to represent an essential element, like the centripetal and centrifugal forces in nature, and are probably both required for the attainment of a final stable equilibrium, though at times acting with a disturbing force, and just as changes and collisions continue in the natural world, while gravity, through the agency of the above forces adjusts the relations of matter; even so in the realm of mind, where the progressive and conservative forces are perpetually at work, each with its own defects and excellencies; the establishment of truth is attained through debate, contest and the friction of opposing ideas, which in their encounter each destroy the errors of the other, while all that either possesses of permanence and excellence remains unharmed.

In the comparison adopted "centripetal" clearly stands for "congregate," and "centrifugal" for "segregate," and as gravity controls the motions of atoms and worlds, so will the certain supremacy of enlightened charity determine the dominion of each of these two principles,

in the final development of the best attainable asylum.

The origin of this tendency to the breaking up of institutions for the insane into more various parts is, in my opinion, a reaction against the undue ignoring in times past of their most important function, viz: close adaptation to the needs of the inmates, not only in the buildings themselves, but in the organization and administration of the asylum. And in speaking of the needs of inmates being ignored, I do not refer to an intentional denial of these needs, but rather to the fact, that the complexity, diversity and even contrariety of the requirements was so great, and the public lack of knowledge and apathy so profound, that a quarter of a century of earnest endeavor is but just bringing in the dawn of a happier day for the victims of insanity.

The original ruling motive in establishing institutions for the insane was not so much benevolence toward the unfortunate, as simply a desire for relief from a burden, and a hinderance to public comfort or prosperity. Here were masses of people presenting themselves incapable of self-care or maintenance, many of them dangerous, most of them forbidding and fearful in their aspect, supposed to be quite hopelessly afflicted; even at one time generally regarded as under the possession of the devil. Some sort of an abode must be provided for them, not only to shelter, but to securely confine, and this must be found with as little attendant trouble and expense as possible. It was scarcely suspected that the condition of the insane could be improved, and they were only exceptionally and rarely thought of with any solicitude; not that there were not always here and there philanthropic souls that remembered these outcast and oppressed ones "as bound with them," but in general they were regarded as beyond the reach of any redeeming influence, hardly possessing the attributes of humanity, and might with one voice have spoken in the words of Shylock to his adversaries: "Have we not eyes, hands, organs, dimensions, senses, affections, passions? Are we not fed with the same food? Warmed and

cooled by the same winter and summer? If you tickle us, do we not laugh? If you poison us, do we not die? If you wrong us, shall we not revenge?" This fact 'of the great general similarity and correspondence; in spite of insanity, between sane and insane, has never been sufficiently appreciated. The almost universal notion that insanity *reverses* all the conditions of sanity, instead of simply modifying or holding in abeyance natural activities, has been more mischievous in its effects on the progress and improvement in the management of the insane than any other one cause. It has naturally led to a *reversal* of the ordinary conditions of life, both in buildings and administration of institutions, whereas the accumulation of experience in the insane tends to show that, with certain restrictions and precautionary measures, all that the majority, especially of the chronic insane require, is an abode as near the domestic ideal as circumstances will allow. But in the first establishment of hospitals for insane, or "mad houses" as they were called, no special obligations to these unfortunates was thought of. It was simply attempted to be rid of them as easily as possible. Hence institutions for the insane sprung up as a part of the machinery of the State for relieving a public need.

The buildings were made massive and stately from an external point of view, as befitted the dignity of the State, and the honest pride of the people of the locality where they were erected. The external features were unfortunately more thought of frequently, than the comfort or welfare of those who came to occupy the buildings. The "centripetal" tendency predominated, as the center buildings put up usually amply illustrated, and not all the simplicity and frugality that the officers who occupied them could show, would serve to remove in the public mind, at times, the impression that their mode of life was lordly and extravagant, from the mere effect of the outward stateliness and elegance of their abode. The running of this part of the machinery of the State was regarded in the same light as the "running" of the other

"machines," only of less consequence; and, of course, it was to be expected that a "crazy" machine would be more or less "deranged" in its operations. Thus the little and base ambitions of those who were capable of seeking emolument or profit in the places that an asylum affords, or of playing the political game of bargain and sale upon so poor a commodity as the madness of their fellows, were allowed to feed upon misfortunes which were regarded with indifference and believed to be incapable of alleviation.

Need it be said that under conditions such as these, the places of confinement for the insane were at first destitute of almost every requisite for proper care and burdened with every hindrance to just or skillful treatment, to say nothing of the absence of sympathy and all the more kindly and refining influences? Is it not plain that the mutual action and reaction between the miserable insane, so miserably kept, and their miserable keepers must have been destructive to every better feeling?

But the gradual spread of enlightenment and humanity, of

"Sweeter manners, purer laws,"

and the recognition of insanity as a disease and a misfortune simply, led to the consideration of individual nature and necessities, and to a demand for the special environment and accommodation appropriate in every given case. It was gradually seen and has been coming continually into clearer view, that the evil conditions existing among the insane in institutions were in part the outcome of evil management and not necessarily a part of insanity. The long overlooked distinction began to be insisted on between institutions existing only for the public accommodation or convenience of free humanity; or to exemplify the glory and supremacy of the State; and institutions which were administered as places of confinement and control for human beings, who yet had no necessary voice in the management, and moreover from no fault of their own, were the forced inmates—dead, furthermore, in the eye of the law, and bereft by disease, in a

greater or less measure, of their power to act or judge rationally. It came at last to be understood that the most radical difference existed between the administration of an institution for the insane and that of any other institution whatever; that difference consisting in the obligation and necessity of dealing justly and humanely with persons held and controlled without their own consent, whose legal rights and reasoning power at the same time were dethroned by disease, and hence in the construction, a more simple, plain and substantial architecture has been gradually sought and introduced, and in the administration more emphasis has been given to that which is the sole cause of the existence of the institution, viz.: the best care of the patients.

Partly in consequence of the failure to reach and enforce the above principle, partly from other causes, these institutions began to give trouble and have continued to give trouble up to the present time, though a series of most important and beneficent changes have been gradually wrought out, notably the assumption of the care of all the insane by the State, and the remarkable advances made under the direction of ably philanthropic medical men in curative treatment, sanitary regulation and wise and humane administration; yet trouble has continued to accompany the management and care of the insane. Scarcely a single institution has escaped. Now in one form, now in another, attacks have been made; accusations have been brought; storms of personal and public indignation have raged, and though often shamelessly unjust, these various charges have found a ready echo and a hearty sympathy among the masses of the people, who, on the one hand were profoundly ignorant and indifferent to the condition of the insane, yet on the other were, for causes that cannot be entered into in the limits of this paper, full of prejudices against institutions and easily affected by sensational and often baseless stories.

Thus asylums and the men concerned in their management have suffered both justly and unjustly; but all the

turmoil raised and the contumely heaped upon our asylums, from good and from evil motives, have tended to bring into prominence *one point*, viz: that the condition and needs of the individual inmate were worthy of a better and fuller recognition than it had yet been possible to give them, and the law of humanity, so far as these accusations had any measure of truth, was newly enforced and illustrated, which ordains, that that which belongs to the individual man or to the class of men (however seemingly impotent in themselves and incapable of asserting their rights), shall never be ignored; never taken away by other men, or by the State itself, either through omission or commission without disaster, reacting upon the authors of the wrong, and often blindly, also, upon all who happen to stand in the path of the resistless process of readjustment.

Through the above means, as much as any other, the "centrifugal" or "segregating" tendency grew up. It represents among other things, the view that every individual inmate of any public institution is entitled to be considered upon his or her merits in all that affects the person, and it is this which brings into sharp prominence the difference between the two principles of congregation and segregation, of individuality, and (if I may coin a word,) "institutionality"—and the greatest problems that public charity presents to-day relate to the decision of the question between the personal needs of the inmates and the harmonious, efficient and economical working of the institution as a whole.

In the time when the insane were, by the general public view, regarded with equal ignorance and aversion, it was scarcely thought or recognized that differences existed among them. They were all considered equally unsafe; perverted in every thought and feeling, incapable of natural activity in any direction. Hence the requirements to be met by an institution in its building arrangements and administration must be all, nearly or quite the reverse of what ordinary, sane humanity requires, and they would be the *same for all*.

A close similarity was supposed to characterize all the insane, and they were all considered, for all practical purposes, equally distinct from the rest of mankind and totally "upside down" in their entire make up. Natural "feelings, senses, affections, passions" were scarcely credited to them, and even to-day there are few, except those who give special attention to the subject or are much in contact with the insane, who have any realization how closely the vast majority of them resemble the sane portion of the race, in all that pertains to ordinary every-day life, and except for some deficiency or some perversion of a limited mental area, are influenced by the same motives, and (with the throwing around them of a few safeguards) are adapted for the same surroundings as the mass of sane people in an equivalent station in life. Of course there are violent and hopelessly perverted lunatics, but they are in my opinion, less than one in ten of the whole number, and under judicious, skillful and liberal asylum management, but a small part of that percentage even, will show their worst characteristics and tendencies. Moreover, the endless variety and complexity of character among the insane are equal to, if not greater than in sane and well regulated humanity, make it evident that very great variations in domicile and style of living are necessary for the best results with different classes, while with the insane, as with the sane (only vastly more so), there are a thousand harmless eccentricities and vagaries, which, with varying resources for meeting them, give no trouble; but which make life well nigh intolerable for all concerned when a uniform and monotonous method is adopted for all. How vast, for instance, are the differences in treatment and surroundings required by chronic, harmless mania in a healthy subject, and suicidal melancholia with refusal of food; by acute delirious mania and terminal dementia; mild melancholia, and hysterical mania; the neurasthenic state and idiopathic insanity. General paresis, monomania alcoholic insanity; suicidal and homicidal mania, each present their special perplexities. Again, when the

classes into which the insane naturally fall, of private and pauper, recent and chronic, criminal and innocent, inebriate and epileptic, dangerous and inoffensive, are taken into account, will any one deny that great variation in styles, arrangements, location and surroundings of buildings are required to meet appropriately the wants of hundreds in any one institution, in which all or nearly all these varieties are to be provided for, and that an elastic adjustment with regard to privileges, employment and all the details of daily life will be needed?

The "rectilinear," "congregate" or "Kirkbride" form of construction has heretofore been called into requisition to meet all these wants. The idea of this construction was originally taken, perhaps, from the manner in which a cloister is built. The features of seclusion, strict oversight, concentration of all needed appointments in compact shape, and resulting convenience, safety and economy were appropriate to a considerable degree, and especially for recent and highly manical or violent cases of insanity, and the provision of hospital facilities, which this type of building secured to the disease insanity, was a great step in advance. This model was improved upon and brought gradually to completeness by the labors of successive physicians, architects or humanitarians, notably by Kirkbride, who combined in himself the excellencies of all these professions, and to whom be all honor for the incalculable benefit derived from his life-long labors for the insane. The linear model is, for a small number of insane persons—say not over 125 of each sex, needing close medical attention, and strict confinement—more admirably calculated than any building that has yet been put in operation. But the unexpected and unprecedented increase of insanity has led (as has heretofore been pointed out by Mr. Wines, of Illionis, the accomplished expert in all matters pertaining to public charity), to the enlargement of buildings on the above plan, until to-day, 700 or 800 patients on an average are confined in the congregate asylums of the country, taken together.

When such numbers are brought together in them, the defects of a building of this kind for universal use become apparent. It may be argued, that such large asylums should not be built, and I am not one to dispute the assertion; but the actual state of affairs must be met, rather than any condition of things we might prefer, and no one familiar with the subject would claim that any of the large and populous States of the Union, could be induced in the future, as they never have been in the past, to provide a sufficient number of asylums to accommodate only two hundred or three hundred in each, and provide enough of them for all their insane. And this is mainly on account of the expense, which is the first defect I will mention, as well as obstacle to the universal use of the "linear" plan. Scarcely any State in the Union could support the expenditure for full provision of the linear type, as the following figures will show: According to present information, every State with 1,000,000 inhabitants, has, or in the near future will have 2,500 to provide for, or one in at least every 400 of the population, and at the average expense of \$1,000, which is a reasonable *per capita* cost for every congregate asylum, \$2,500,000 would be the necessary appropriation for the first cost of buildings alone, or \$100,000 for every 100 patients provided for, and this figure would be greatly exceeded if each asylum was built only for 250, since the outlay for the "plant" is almost as great for that number as for 500. On the other hand very good and substantial detached buildings, generally two stories in height, and corresponding more to the house plan, have been erected for sums varying between \$200 and \$500, but on an average for about one-third the cost of the congregate asylum *per capita*.

Another defect, which is observable in the linear type of building, is the total dissimilarity which it presents to any other form of building, to which its occupants can ever have been accustomed previous to entering it. A fact which hinders homelike adaptation to surroundings,

and impresses with something like strangeness and artificiality all whom it is sought to domesticate beneath its roof, and in connection with this, the objection of sameness of internal arrangement and monotony of daily experience, need to be taken into account. Indoor life spent in a single long hall having barred windows and locked doors, with parlor, bedroom, closets, dining room, etc., all concentrated within its limits, is a reversal of natural and healthful conditions of life. The type of all domestic dwellings is totally different. These have an upstairs and a downstairs, doors with latches, windows to open, a kitchen and a pantry, a family room with stove or grate, a variety of bedrooms, and a door yard of their own, and as many of these things as can be safely secured for the insane are to be diligently sought. The corridor arrangement brings into a close and often irritating contact, all who occupy the same ward, and though one ward may be exchanged for another, all are practically alike, the difference being in degree not in kind, whereas with varying states of certain cases and for many insane persons, totally new and different surroundings are often of the greatest service in benefitting or curing the patient, while the ceaseless restlessness of some is quieted by frequent changes. The value of change in surroundings, in short, which we all appreciate for the sane, is not less, but rather more desirable for the insane.

The distinction in these things is one which is very hard to define, but scarcely any one, whether patient or visitor, ever sees and experiences the two without fully realizing that distinction, and it is, perhaps, after all the concomitants of the detached ward or "cottage," as much as anything in its construction which render the difference the most striking. The absence of the public institution air, and of some prison-like features, the sense of something familiar, private and simple in the house and its surroundings, the greater industry as well as freedom to which the inhabiting of these dwelling seems decidedly to predispose. Again the variety among the buildings

themselves, both in internal plan and in location, affords greater strength and security for those who need it; remoteness and seclusion from noise and disturbing influences for those who require this, and supplies graduation in every particular according to the needs of the patient, in medical and moral treatment, in employments, in amount of restrictions, in number of single rooms and associate dormitories, in food supplied, in recreations and in all associations. Furthermore, the increased risks and dangers that had been prophesied; escapes of patients or severe casualties; unfaithfulness or abuse on the part of attendants, after a somewhat extended experience, fail to present themselves.

All the above is one way of saying that there is, in smaller detached dwellings, more opportunity for a natural, domestic or homelike environment than in a large, congregate asylum. The "home" idea is to be as far as possible encouraged. It should be the standard set up to be striven after, however far below it we may fall,—for the true idea of home embraces all that can be conceived of contentment, comfort, cheerfulness, peace and plenty, while the asylum is itself a visible sign of defect, shortcoming and destitution in these particulars. To many public institutions the name of "home" is given. It is employed with a most praiseworthy motive, yet it often serves, after, all to emphasize the essential difference between a home and a charitable institution, since the latter exists for those who are deprived of a home of their own, either through poverty or from defect and disease. The institution ought, nevertheless, to secure as many as possible of the features of a home. Yet the problem to-day is to combine in the highest attainable degree the individual care and kindness, contentment and geniality which belong to a home, with the economy, safety, order and mechanical perfection, which are necessary in an institution. In these two things are represented the respective ideas of "congregation" and "segregation," of centrifugal and centripetal force in the realm of charity.

That institution, like that individual character, is the best which possesses most highly and in the greatest perfection the largest number of *opposite* good qualities: frugality and liberality; finished details, yet complete unity and adjustment of all the parts; kindness, geniality, generosity; even indulgence in non-essential matters; firmness, vigilance and unrelaxing integrity, wherever a principle of right is involved. It is in the line of "segregation" that the homelike qualities lie, of "congregation" that the institution virtues are found, and the equilibrium between these is what all are working toward. A more beautiful order is to be evolved in matters of public benevolence, in the same manner as the worlds are formed by the resolution of nebulae, and the administration of charity to-day is emerging in all departments from a nebular condition, by labors such as this conference, and the men and women composing it, together with multitudes of others the world over, are proposing to themselves and energetically carrying forward.

As the central sun controls every system of worlds, so is a central and indisputable control necessary in every institution. That control must give as much as it takes, must find an exact and appropriate sphere for each and every subordinate part, neither unjustly abridging nor giving unduly to any person or part.

Now, while control and supervision of a certain kind is easier in a congregate asylum, on the other hand, if unnatural and unfamiliar conditions, which it necessitates, can be replaced by such as are more natural and in accordance with the better inclinations of human nature, less control and repression and supervision will be required.

The building or buildings occupied for an asylum, in their form and arrangement, make just as much difference in the comfort, welfare and contentment of the occupants, as the same elements do in the abode of a private family. And although great comfort and happiness are often found in the most ill-arranged houses, and on the other hand,

peculiar miseries are often harbored within the most admirably-appointed residences (and hence, even the form and type of building is of less consequence than the *spirit* which pervades it), yet at the present time as a means of influencing the occupants of asylums in a desirable and excellent direction, the importance cannot be overestimated of the reaction upon them of a form of abode, which tends to foster their best impulses toward freedom in the right directions; cultivate the sense of accountability; appeal to sentiments of manliness and honor, and especially secure an atmosphere of domestic and social well-being and well-doing—things to which average humanity, sane or insane, never loses its susceptibility, but which it is more difficult to call forth in the close and artificial surroundings of a “linear” asylum, than in the precincts of a dwelling, which has an individual and private character of its own. The congregate asylum must be managed in every part as one institution, with strictness and uniformity; while many variations not injurious to discipline and promotive in themselves of welfare, contentment and domesticity are admissible in distinct and separate buildings. Furthermore the ready intercommunication and supervision, which the telephone places within our reach, simplifies the difficulties to a considerable extent, and electric lighting, cooking by gas, etc., also do away with objections which have had deservedly a considerable weight.

Again great institutions, which exist in one compact mass, are prone to militate by the very fact of their magnitude, against the careful consideration of humble personal needs, and this is a tendency against which those concerned in their management have to contend. Such institutions are, almost of necessity, conducted on a *wholesale*, instead of a *retail* plan, and when the unfortunate insane pauper comes in and asks to have his little personal needs and wishes considered, it is like the inexperienced rural visitor to the city, who goes into some great wholesale grocery house, and asks for

a pound of sugar, and one of coffee, and a quarter of a pound of spice. It is highly inconvenient to weigh out these commodities in small parcels, and there is apt to be much merriment among the clerks and salesmen at such a demand, as they refer the innocent stranger from one to another. So there is something exceedingly incongruous in a large close asylum, in the request of one patient to have his little personal wishes taken into account; a meal served at an odd hour, to keep his trunk in his own room, to be allowed his purse in his own pocket; for a dog or a cat or a bird to be permitted in the ward, and yet we all know that it is just such little personal privileges or comforts that make life agreeable, and the vast majority of insane people do not differ in appreciation of these matters from ourselves. Now consider an institution which possesses a number of different buildings for its patients; which has an infirmary ward for the sick and delicate; a parole ward for those who can be trusted; a refractory ward where all who need it can be more securely kept, and all of these separated and under different and specially adapted regulations, it will be seen that some patients can have a little change in their pockets, occasionally one can have a bite "between meals" if the doctor thinks best; even a dog or a "harmless necessary" cat can be kept in a building with a door yard and a basement, without demoralizing the entire establishment. I do not say that some of these things cannot be done in a close hospital, but that they are vastly more difficult in the latter, I do say from experience of both.

And it is according to the spirit of our institutions, to give even the insane pauper his just due; to supply him with the commodities which his individual condition requires, in small parcels; to provide for all reasonable needs and requests of the least as well as the greatest pensioner upon the bounty of the State. This is, at least, the sentiment of our laws and the desire of our people. The State, however erring, its agents permits no injustice or

partiality, but proceeds upon the theory of ideal and poetical justice for all, requiring this to be as nearly attained as human imperfections will admit. Hence, more is often expected than is, or can be performed, and censure unstinted often falls, whether undeserved or merited, upon those who assume these difficult responsibilities; while the difficulties encountered, and the vast, almost incalculable benefit which every institution, even if not ideally perfect, gives by succor to the insane, and relief to their families, by kind and careful custody, remain almost unappreciated. But hence, also, there is a never failing stimulus toward perfection, exceedingly great.

Separated or detached buildings for the insane in the United States have only come into use, to even a slight extent, at a comparatively recent period. An urgent popular call has been kept up for them for many years. The example of some foreign asylums and methods adopted began long since to be cited, in which cheaper and more homely structures were thought to render the insane more comfortable, and equally as secure, as in our especial type of linear asylum, and a demand for "cottages" for the insane was commenced and has continued. It may be admitted that this was, in some sense, an unthinking demand, and the popular clamor had an element of ignorance in it, but it had also an element of strength, because it had a truth in it, and this truth was that the insane did not all require the same surroundings or the same kind of a dwelling, but that there were great varieties and a vast diversity of needs represented among them.

Another element was powerful in demonstrating that a new type of house was needed and could be employed for the insane. The immense number to be provided for, caused an overflow from various asylums into any cheap, simple, temporary buildings that could, by any means, be appropriated to their use and remodeled farm houses, disused factories and schools as well as wooden barracks temporarily provided, were appropriated to their use.

Finally numerous disastrous conflagrations led to the occupation of various odd and out of the way buildings, and the surprising thing about the use of all these was that the insane seemed to like them better and to be more comfortable often in the merest wooden shed than they had been before in the well built, completely and even elegantly furnished "corridor" of the three or four story main building, and while more of contentment was obtained, there was no counteracting increase in expense or danger—so that many such buildings meant to be only temporary were retained and fitted up for permanent use.

Thus the force of "segregation" came into marked operation, and is at the present time moving to considerable modification of asylums already built, and to the selection of plans embracing detached buildings for the insane in many States, as for example in the fitting up for permanent occupation of the barrack erected at the Southern Illinois Hospital for the insane, after the destruction of one wing by fire; the recent adoption of plans for new institutions with detached buildings, both in Indiana and Ohio, as well as addition of provision of this kind to a large number of older institutions in all parts of our country.

Now to briefly recapitulate—the line of thought which it is sought to present in the foregoing pages, is somewhat as follows:

1. Institutions for the insane were at first only founded for public relief and without the idea of benefit to the insane.

2. It has always been a too general impression that the insane were essentially different from the sane in everything; instead of the fact being recognized that they possess natural traits and activities, which are however modified through the agency of disease, wrongly directed or held in abeyance; and this mistake has been very mischievous in its effects upon the provision for them, preventing the supplying of a natural and domestic abode, adapted to the varying severity of different degrees and kinds of insanity.

3. The essential difference between an institution for the insane and all other institutions; in confining and controlling those who are held as prisoners, without being guilty of any offense, and who are entitled to the utmost privileges and consideration of their wants, without possessing in the eye of the law or in the exercise of reason, the ability to enforce their claims, was long overlooked, but has come to be more fully appreciated.

4. Gradually insanity has come to be recognized as a disease, hospitals have been founded, mainly for curative treatment, and the congregated asylum has been developed; admirable for its purpose, but not adapted for universal application to the entire body of the insane.

5. Finally the infinite variations among the insane, in the manifold forms of the disease; in the degree of reason and self-control possessed by different individuals or characterizing different groups of the insane as a whole; in the various classes of private and pauper, criminal and innocent, epileptic, inebriate, etc., are beginning to be more fully understood by the public and the medical profession, and a variety is being introduced in the erection of buildings, as to location and internal arrangement, by which an appropriate environment for each and all is sought to be attained, while at the same time the opinion gains ground that the domestic or "segregate," as contrasted with the "congregate" or "institution" idea, should prevail for a large proportion, in providing for them economical and substantial buildings, with as much of the house-like and home-like character as in each instance the fact of insanity would permit.

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On the Insanity of Doubling with Fear of Contact.

*SULLA PAZZIA DEL DUBBIO CON TIMORE DEL CONTATTO
(MISOFOBIA, RUPOFOBIA, ecc.)*

By Professor A. TAMBURINI, Italy.*

HAMMOND in 1879, and Verga in 1880, have designated, the former under the term mysophobia, and the latter under that of rupophobia, a particular mental disturbance, which, though not insanity properly so-called, as it wants the true characters of delirium and hallucinations, and the patient always preserves entire consciousness of her own state, yet constitutes a true and proper psychopathic state, consisting in the fear of being contaminated by touching objects which the patients regard as dirty or nasty; for this reason the affection has been called the "insanity of contamination, or melancholia with dread of filth" (*mania contaminationis*). Melancholy with filth dread.—*Russell*. Vide ALIENIST AND NEUROLOGIST, 1880.

The cases reported by Hammond to the Neurological Society of New York, in 1879, were ten in number; but he gave only a minute description of three, as typical cases, and these were all of women. In the first case the characteristic phenomenon was an imperious desire to wash the hands, in which occupation the patient spent a great part of her time; the fear of being polluted produced great anxiety and suffering, and though she recognized the complete absurdity of her fear, still it tormented her in the most painful manner through every hour of the day.

In the second case the fear of contamination was

*Translated by Joseph Workman, M. D., from the *Revista Sperimentale di Freniatria*, Anno 9, Fascicolo 1, 1883. Reggio-Emilia, Italy.

even more intense and grave, and the patient washed her hands more than two hundred times daily.

In the third case, which was rather less grave than the preceding, the patient could not, on entering the house of the physician, be induced to touch even the door knobs, so greatly was she in dread of contamination.

The treatment adopted was simply symptomatic: the bromides, opium and tonics.

After Hammond, a case of mysophobia was described by Seguin, 1880. It was that of a lady of eighteen years, who had menstruated regularly; she was of excellent character; a maternal uncle had suffered under senile dementia; a brother was hemiplegic, epileptic and imbecile; an uncle had died of cancer in the nose. Three years ago, after having suffered under leucorrhœa, she was seized with the fear of having cancer in the nose, and on this account she was continually washing, through fear of infecting herself and others. She washed her hands carefully every five minutes, remained in the bath an hour, used a dozen of towels, and spent an hour in dressing her head; she avoided touching plates, doors, etc., and she constantly wore gloves; she stood a long time in the middle of the room, to avoid touching persons or objects. She suffered from sleeplessness, headache and pains in the dorsal region; there were no hysterical symptoms, nor any hallucinations, etc. She admitted the absurdity of her fears, and all the more since a distinguished specialist had assured her that her nose was quite sound, yet she could not free herself from the ungovernable necessity of continual washings. Seguin prescribed prohibition of permission to wash at her pleasure, opium, cannabis indica and iron. After about three months of treatment she was much improved, but I predicted a relapse, or a change into a more grave psychosis.

Russell in the same year described another case quite typical, in a man of forty-seven years. It occurred in a physician, who, being rich, did not follow his profession; a sister had committed suicide; a brother was a man of eminent

genius. The first symptoms dated from a day on which one of his brothers died suddenly in his arms. This impressed him deeply; he began to be sad and sleepless, and very soon to fear that his hands were always dirty, so that he washed them continually and avoided touching any object whatever, because he feared they would be more dirtied. When he went to bed he commenced his preparations at ten p. m., and he did not enter his bed until two hours after midnight, being all the time occupied in washing, whenever he had to touch anything, and on every occasion he washed three times, and used more than twenty towels; in the morning he took up three or four hours in dressing. He acknowledged fully the absurdity of his fears, but they were stronger than himself, and he was constrained, despite himself, to perform the absurd acts. He was placed under treatment in Dr. Russell's institution; the bromides, opiates and tonics were administered; the moral treatment consisted in inciting him to lessen daily the number of his washings; appealing to his reason and his power of will, for absolute prohibition, made his state worse. Under this treatment he improved, but he determined to leave the establishment too soon, and immediately on return to his own house he fell into even a worse state than before. Having returned and remained a long time under the treatment, he was freed from his fears, and he made the tour of Europe; it appears that he has not relapsed. Dr. Russell defines the case as a form of melancholy.

Dr. Shaw, 1881, reports another case, in a boy of fifteen years, who feared that by touching any objects he would be poisoned; he therefore avoided touching any thing or person whatever, and finally, even his own clothing, and when he could not help doing so, he washed his hands; he did the same ten or twelve times before going to bed, using as many towels. His physiognomy had somewhat a dull expression, yet he would give a full account of himself; he could not, however, explain why he feared that the objects he touched could poison him.

He frequently suffered from pains in the head, sometimes in front and sometimes behind. He belonged to a decidedly neuropathic family, and his maternal grandparents had suffered psychopathic disturbances. Dr. Shaw does not state what treatment he advised, but he expressed the opinion that more grave mental disorders would be developed in this boy.

The cases described by Verga under the name of rupophobia, are four in number, three were of women, and one of a boy of fifteen years. The most grave case was that of a lady of thirty years, in whose family there had not been any cases of mental disease; the mother died of cancer. Fourteen days after her third labor, this patient became strongly impressed on hearing that a relative had touched a corpse; from that time forward she felt the necessity of washing every object which that person touched, and of continually washing her own hands when she touched any thing, were it even belonging to her own person, *e. g.*, her own hair.

Having become again pregnant, she felt this mania still more urgent; she knew the absurdity of it, but it was too powerful for her; if she tried to restrain herself, or if others prevented her running to the water, she had oppression of breathing, palpitation of the heart, dizziness, headache, noises in the ears, and they had to let her have her way. Verga advised tonics, and in its proper time hydropathic treatment; in fact, in the following summer, she underwent this treatment at Oropa, and she felt much relieved, but instantly on returning to her home she fell back into her first state.

The second case, also grave, was that of a youth of fifteen years, belonging to a family in which cases of mental and nervous diseases had been abundant; the boy had a rather scrofulous constitution, but a clear mind, musical habits and a great memory. For some time at the first he was constantly on his knees, from religious scruples; afterwards he was taken with a dislike to all objects; he made no end of cleaning and recleaning his

hands, the plates, forks, spoon, and even the keys of the piano-forte before running over them with his hands. He sometimes urinated in bed. Hydropathy was prescribed, but the result is not known.

The third case was that of a young lady who had separated from her husband; she was very extravagant; she had conceived a real abhorrence of a person who had tried to win her hand, and she entertained a hatred of everything that had been touched by him, so that one day she heaped them all together in a room and set fire to them, with great risk of burning the whole house. When Verga called on her, he never could go in a carriage, for she would have been assailed with the fear that the hated individual, or some one accustomed to be near him, might have been in it a little before.

The fourth case was that of a famous poetess, who could never begin or end any work, however simple and neat, without washing her hands, which she kept constantly gloved, because of her strong dislike to touch anything with her bare hands. Verga regards the affection as an anomaly of the sensibility and instincts, and he thinks hydropathic treatment is indicated.

In the cases yet described we find the following characteristic and important facts:

1st. That side by side with a fixed idea which is accompanied by fears more or less distressing, and an overpowering impulsion to certain acts, consciousness of the absurdity of such acts usually remains complete.

2nd. That in all there is an almost absolute impotence of the will, not only to control the absurd ideas, but also an irrestrainable tendency to those acts.

3rd. That in almost all the cases there was a very conspicuous hereditary predisposition to psychopathic disorders.

4th. That of ten cases, seven were in females, and two in boys, in the period of puberty. The patients in general belonged to the cultivated and respectable class.

Not only as regards these characteristic traits of the malady, but also from many other points of view, of which

I shall speak hereafter, and above all from the accurate and eloquent description, written by the patient herself, of her own inmost sufferings, the following case, which has passed under my clinical observance, appears to me of very great importance :

History.—The subject was a lady of thirty-three years, wife of a physician ; she had a maternal aunt who died in paralytic dementia ; a maternal cousin suffered from morbid excitability. Her mother was affected with grave squamous herpes on the hands, a disease with which the patient herself was affected in her infancy. A brother died of tabes abdominalis. Her menses appeared at sixteen years, but the quantity was always rather scanty, and the process was often preceded by violent pains. In other respects her physical constitution was sound ; her character good, mild, but somewhat obstinate ; her education and training careful ; some hysterical disturbances observed. At the age of twenty-three she married and left her own country, to take up residence in a small district, which, as she wrote, being “sufficiently dirty,” made a sad impression on her. Having become pregnant she suffered during the first half of gestation from great sleeplessness, and other not well determined nervous disturbances. It was at this period she began to show the signs of that mental disturbance, which now so greatly afflicts her. Whenever she saw patients with cancer, *scabies*, sores, etc., coming to consult her husband, and from the little attention they gave to cleanliness, “really filthy,” as she said, she found a painful impression, a true loathing, which, by degrees begin to generate the idea that “all the objects touched by them had been polluted,” therefore, when they entered the house she kept her eyes on the objects touched by them, and after their departure caused the things to be thoroughly washed and rubbed. It appears that these fears were increased by certain words spoken to her by a physician of the country, who told her he caused the eggs and cheese brought to him in lieu of fees to be washed ; one of her

servants too had told her that she had caught the itch by contact.

In the last days of her pregnancy she underwent fright from strong shock of an earthquake (1870); labor soon followed, which required the aid of the forceps. Early in the puerperal stage she had the twofold grief of seeing her infant severely affected with sclerema, and of being obliged to stop lactation after having commenced it. Strong uterine pains followed, and the existence of a uterine displacement was discovered, from which she suffered for two years.

Having become a second time *enceinte*, she was freed from those troubles; but in her seventh month of gestation, one day (1873) a sister-in-law, uttering a scream, fell fainting into her arms, because a rat had got under her dress. Our patient was strongly impressed by this misadventure, and signs of threatening abortion were given. The house in which she then resided was new, but unfortunately it was infested with many rats, and she frequently saw the traces of their fæces and urine. A thorough loathing of these animals, and the fear that every thing was befouled by them, began to tryannize over her; because of which she continually, through the day, caused the furniture to be rubbed clean, and had it covered with cloths in the night. She was safely delivered, but the infant died on the thirteenth day following. This death grieved her very much, and she fell into such a state of melancholy, that for six months she would not go outside the house; she thus writes: "during my puerperal period, I had the misfortune to see in the house a great many rats, and one day I found one crushed in a pantry; the sight produced such a repugnance, that for two months I would not taste flesh meat." Fearing now, that the rats might fall into the water, she kept it in corked-up jars, which she took care to have well covered over, especially through the night. At this time she showed hysterical disturbances, and it appears she was also cataleptic.

During a third pregnancy, she underwent severe mental sufferings, in consequence of the serious illness, first of her son, and then of her husband; both of whom seemed to be at the point of death, and during their sickness she fatigued herself both day and night. Towards the end of her pregnancy she labored under grave nervous disturbances in the form of agitation, and tremors especially in the night. Her labor was, however, normal. After some time (1875) she changed her district, but to find herself in another, still more dull and cloudy, where she suffered severe neuralgias in the head and ear. Here again, she had entered a house in which rats abounded, and in which she followed not only the before mentioned measures of precaution, for the cleaning of objects and the safety of the water, but she also began to feel the overpowering need of washing her own hands everytime she touched any thing, and she desired that her husband, her son and the servants should do the same. Having been advised, with the view of freeing herself from her neuralgia and her fears, to go back to her early home for a time, she did so, and found herself quite well; on her return to her own residence, she found the house well-cleaned, and for some months, she did not suffer her former disturbances. But too soon, the neuralgia in the head and ear returned, and also the fear of being befouled by the urine of rats, which fear this time assumed proportions greater than before, obliging her to wash herself very often; to run from time to time to ascertain whether the chest that contained her linen was well-locked, and to put to the wash every new dress.

In 1879, having returned with her husband to her own county, some hope was at first entertained, that she might be freed from her troubles; but although the rats no longer appeared in her new residence, her fears still overpowered her, indeed, they became even stronger, and forced her to new and more strange acts, such as fasten-down the bed coverlets with pins, lest the rats might get

in, doing herself the washing of her personal linen and those of the bed she slept on, etc., etc.

Through the whole day she did little more than washing her hands, and urging all the family to do the same. Her friends often urged her to restrain herself, but she would then begin to weep and evince despair, so that they let her have her way. "It was not a desire," she writes, "but an imperious necessity, of which my reason and will disapproved, but which must be satisfied. Then," she adds, "there arose in me a great confusion, so that I often doubted whether I actually had washed, and why I had done so; and every day, though I wrote only briefly, I covered more than fifty pages of letter paper; but I ended by not believing even my own writings." Afterwards the doubt came that, instead of having washed in her own basin, she had washed in those of other persons of the house, and then every time she washed in her own basin, she made certain marks with charcoal, etc., which should remain as evidences that she had not washed where she feared; but she very soon began not to place reliance in these marks, and she frequently broke the basins in which the others, especially her husband, washed. Finally, everytime she merely heard dirty things mentioned, though she did not see them, she felt constrained to wash herself. Things having reached this pitch, so exceedingly painful, not alone to herself, but also to the rest of the family, she was advised to go under treatment in an asylum, which she actually did, but following there her wonted course of life, she left it in a month in the same state; indeed, her fears and morbid tendencies were still worse, so that she would no longer tolerate in the house the chest in which she had put away all her under clothes, which she did not wish to wear, and she wept bitterly for this, though, at the same time she said she was *ashamed of having wept*. The family having been advised by a physician not to humor her in her desires, but to oppose them even by violence, she realized the most grave consequences. "I

then," she writes, "began to see enemies in all my dear ones, to think that I was illtreated by them, and that I received insults from them, for example, that they had washed in my basin, and had used my towels, etc., and it was then the thought came to me of keeping my bedroom door always locked, in order that no persons might enter." She had reached such a dread of her friends, that when she merely heard the voice of any of them, she was taken with palpitation, and choking in the throat.

The family then decided on leaving her to do as she pleased, but the morbid symptoms ever increased in intensity, and to such a degree, that the tenor of her daily life was reduced to that condition which she has herself described in the following abstract from her history, which is the most typical description that could possibly be given of this singular malady:

The moment I awoke (about five a. m.) my first thought was to observe whether all was locked, and as I wished, and having awaked my husband, I desired that he would enable himself to tell me whether all was really closed. He assured me all was so, telling me that my own sight, being good, ought to show me that all things were as I wished them. I replied that it was too true, I could not believe my own eyes. Having risen and washed himself, he went out, and the servant brought me my coffee, but she did not enter the room, for I would not permit it. I came out of bed, opened the door just a little, and she poured the coffee into a cup and departed. I then locked the door and drank my coffee, after which, I washed myself, because I believed that in opening and closing the door, I had befouled myself, and I put the soap into the cup, as a remembrance of having washed.

I then put on my under-dress, fastening it well, pinning and stitching it around my person, lest that during the day I might lose anything.—And as I was doing such things, I would say to myself: I have lived so many years without doing these ridiculous things, and why am I now obliged to do them? So, having put on my clothes I washed again, in order to make the bed, selecting soap of a different color, and writing on it with a pin: *washed at such an hour to make the bed.* If for example, whilst I was making the bed, I heard sweeping in the other rooms, the broom came into my mind, and I thought it a dirty object, and though I had not touched it, nor even seen it, yet I was forced to wash me. And so if I heard the fruit-seller on the street calling out his fruits or herbs, which he wished to sell, I was forced to wash myself, through fear of having touched these things, and yet I said to myself, these fruits are on the

street, therefore I do not see them or touch them, and I will not wash myself. Afterwards would say to myself, is it perhaps because I have no water, that I do not wash? But, afterwards, I know not by what, I was forced to wash, otherwise, I would have no peace. I have often counted that I washed myself twenty times for making the bed alone. I pinned the bed all over, for example with ninety or one hundred pins, to prevent the rats getting into it.

"Having at last finished with the bed, which in pinning, and in washing myself, took up at least three hours, I put on my frock and dressed my hair; and before leaving the chamber, I went round it ever so many times, to assure myself whether the drawers, etc., were all locked, and being insufficiently convinced by my own eyes, that every thing was as I wished, I tried all again, and carried with me certain proofs of the security.

"I left the chamber about mid-day, locking carefully the door, and I examined many times whether it was locked. I then went to the dining room, and there I examined the sideboard and then the pantry, to see if they had been locked; after this I proceeded to dress my sister's hair, and then both of us went to wash under the tap in the dining-room, where we must have soaps of different color from those I had in my chamber, in order that I might be sure that we were not still in my bedroom, and while we were washing, I often asked my sister, if we were really in the dining-room.

"While the family were dining, I every now and then arose to go and see whether my bedroom door was locked, and I shook it very strongly, asking my parents if it was indeed locked. They replied that it was, but notwithstanding this, I would have them to rise from the table and go and try it. Then we would return to dinner, and I would say to my parents, weeping: What a fatality! I have good sight, a strong memory, and yet I cannot persuade myself that all is locked as I wish. They and my husband entreated me to have faith in them, for, loving me dearly, they were incapable of telling me an untruth, and they exhorted me to change my course, and then both they and I would be happy. I replied that any such change was impossible, because I was dargged to the precipice by a force superior to that of my own will, were I even certain to die in the act.

"The dinner of my parents being finished about four p. m., I went to wash the vessels in my room,—the pitchers, basins, etc., not permitting this to be done by the servant nor any others of the family, who must stand aside, and see that no one should come where I was doing this work. After this, I would examine many times, and try again whether every thing was locked, and again lock my bed room door.

"Our own dinner-hour was about seven p. m., and before eating, my husband and the children, and my mother who was in our company, and myself all washed our hands, and then dined. I mention here, that I had then to go many times to see whether my bedroom door was locked. Dinner being over, I went to my bed chamber, intending to go to rest at ten p. m.

"I then washed my hands in order to unpin the bed, and I washed again in order to undress myself. I then looked around again to see

whether all was well-locked, and if the towels were properly placed; if my dress was properly hung up, and as I repeated these observations many times, I took up much time; then I washed my hands again, and my arms and face, and got into bed towards midnight.

"I have to observe that my husband must not come to bed before me, nor enter the chamber before I was in bed. He washed his hands, and undressed himself, for I would have it so, before entering the room; then he washed his hands and his face again, before getting into bed; and putting out the lights, I begged of him to look whether the drawers, etc., were locked. Sleep gave a truce to my anguish, and I had rest for about five hours.

"Those days in which I did my washing, and those which I chose for ironing, etc., were *giorni d' inferno*, both because I feared I should not succeed in doing my prefixed work, and because of the numerous hand-washings whilst I was ironing, etc., for I was forced to wash myself every time any thing dirty came into my mind.

We now add that for a long time she had worn only a few articles of linen and other clothing (which she always washed by herself), and that these were reduced to a state almost of rags, and whilst she had so great a dread of dirtiness, and such necessity for frequent washings of her hands, she never made general ablutions of her person; on the contrary she wore her under-clothes a long time very dirty, as no other person, though very poor, but of sound mind would have done.

Being no longer able to bear so very painful a life, she was advised to betake herself to our asylum, which she entered on the 2nd of June, 1881. On her entrance she presented the following conditions:

Present state.—Constitution weak, color pale, nutrition defective, cheeks hollow, physiognomy contracted as that of a suffering person. Type of cranium brachycephalic (ceph-index 88.5); cranial volume normal (m. m. 530); bregmatic region depressed.

Functions of relation.—Motility, quite normal. As to sensibility, she has the sense of smell extremely exquisite, so as to detect odors unperceived by others, and to prove to her nauseous and emetic, and she is able to reproduce the olfactive impressions. She, however, asserts that she has never had olfactory hallucinations, *e. g.*, of the urine of rats, and she also says that when she has been thinking

of the dirt and urine of rats, it was not a disgusting sensation that drove her to wash, but merely her own idea of filth.

As to tactile sensibility, this, in common with the electric and dolorific, is exquisite; muscular sensibility alone is somewhat obtuse. The other senses are normal.

As to subjective sensations, she never had fornications, nor paræsthesia of any sort, unless frequent shiverings and a continual sensation of cold, even in the hottest period of summer. She assures us that when she was obliged to wash so often, it was not because she found in her hands the sense of viscosity or dirtiness, nor itchiness or any other tactile sensation which incited her, but it was her own idea, and the fear of dirtiness that came over her and forced her to these acts.

Dolorific sensations she has not experienced even in the gravest periods of her malady. In those times she was seized with a distress, a tightness and oppression in the epigastrium, which lasted a long time, and was accompanied by a painful feeling in the crown of the head. These painful sensations were exacerbatic during her menstrual periods. She has also frequent pains in the lumbar regions, which radiate to the front of the abdomen and descend to the knees.

Vegetative functions.—Sounds of heart normal; she has frequently experienced fastidious sensations in the heart, but objective examination has never revealed any anomaly; under emotions, however, she has palpitation, and distress in ascending stairs.

As to the digestive functions, her appetite is very poor, she eats very little; she has on the contrary, intense thirst; the intestinal functions are very irregular; sometimes constipation and again diarrhea, and frequent abdominal pains. Is obliged to void urine very frequently.

Ever since she has been gravely affected with her aberration, the normal secretion of sweat has been absent; but her hands are always cold and clammy.

Menses always abundant, sometimes menorrhagic; they

usually continue from seven to nine days, and are always accompanied by a sense of weight in the epigastrium, nervous disturbances, especially in the exacerbations of her psychical distress. She has never suffered from uterine pains.

She is often sleepless, and she passes many hours of the night constantly dominated by her doubts and fears.

Psychical functions.—As respects her mental state, it is as exhibited in the historical details and in her own description hereinbefore given. She reasons well on everything; analyzes perfectly all that has passed and is passing in her mental life; she recognizes the erroneousness of the ideas and fears by which she is dominated; she knows they are superfluous, futile, ridiculous and morbid, but despite all her efforts to drive them away, and her strongest determination to employ all her will force to drag herself from such morbid acts, she fails, and is forced, even whilst blushing over them, to accomplish them every moment, and is afterwards tormented by the doubt of not having done them properly. She asserts that she is herself the best proof of the non-existence of freedom of will, because her fixed ideas overrule her, though she has full consciousness of them, and they are contrary and superior to her will; as are the insensate acts performed by her in relation to those ideas. She is compelled by a most potent fatal force, for which she can give no reason, but against which her will struggles in vain to fight, and now at last she needs fight no more.

The affective faculties appear sufficiently normal, very strong towards her husband, rather less so towards her children and the others of the family. At certain times, however, the thought of being unable to attend to her duties as a mother and a wife, and of being the cause of so much unhappiness to all her family, is to her a source of desperation and even of aversion to life.

Her inmost character is susceptible and somewhat pre-tentious, she evidently evinces a basis of morbid egoism,

which frequently renders her unreasonably exactive, and deaf to all that does not tend to the satisfaction of her own strange requirements.

The psychometric examination made by the distinguished Dr. Buccola, in the early period of her residence in the asylum, gave, in twenty-five experiments by acoustic stimuli, a mean of 0.119; by tactile stimuli in thirty-five experiments, a mean of 0.154; and by visive stimuli, in sixty experiments, a mean of 0.195, figures which show a perfect integrity of perceptive aptitude.

Course of the malady.—The patient entered the establishment disposed to try every means to obtain a truce to the moral sufferings that affected her, and willing to undergo any manner of treatment.

The results of the physical examination being as stated, we promptly took into consideration the state of nutrition and sanguification, for she was manifestly wasted and anæmic, and the digestive functions were seen to be abnormal. A tonic and restorative treatment was ordered, with general cold bathing. Bromide of potassium in ascending doses was administered inwardly.

As to the moral regime appropriate to her peculiar morbid tendencies, we found her disposed to break the compact with them and to do every thing to frame a new life, by adopting habits altogether new and regular. We contended ourselves, however, with a graduated regulation of them, and so we proceeded restricting by degrees the quantity of water to be left at her disposal. But, perhaps, the change of her surroundings and her deliberate submission to the governing will of the establishment, rendered this process more easy. It was only when the quantity of water was brought down to the minimum that she had much to contend about. "I found that anguish," she writes, "which the richest one on earth must realize when he finds himself all at once reduced to poverty." Yet she ended with contenting herself with even this small quantity.

By little and little progressively improving in her phys-

ical state, not only did the fear that all objects that were dirty no longer arise in her, nor consequently the tendency to wash often, but she could look at dirty objects without, as she assured us, the desire of cleaning herself arising in her mind; from time to time her underclothing was brought to her, which she had not put on for years, and she now had no difficulty in wearing it. Her appetite constantly improved; indeed, in the beginning of her treatment it was truly voracious, but it afterwards became normal. Nutrition notably improved, the subcutaneous fat became obviously abundant; the physiognomy became open and serene; her aspect became almost unrecognizable. The other functions became regular; sleep, normal; the tendency to palpitation and anguish ceased; the intestinal functions, very regular; secretion of sweat was re-established, and the continual sensation of general coldness passed away. Only in the menstrual periods did she experience a reverse, but this became continually less intense and durable.

After six months of treatment, that is, at the end of November, her physical and mental state was so very satisfactory as to warrant the hope of at least a durable improvement. She herself, however, thought she felt quite well, gave no other name to her state than that of improvement, not cure. "Rest assured," she wrote to her friends, "that I am both physically and morally much improved. * * * * My improvement is real, for in examining myself I find that I have reacquired such force of will as will render me capable of driving away the tortures of the past. My doubting has properly disappeared, and consequently also the fear of being persecuted by you. How many times, when recalling the past, does it appear to me impossible that I should have been capable of seeing enemies in you. And I would bitterly reprove myself for it, did I not know that it was disease which made me think in such a way."

Nothing better certainly could have been desired than such reasonableness and firmness of purpose; and when,

on the 30th of November, she was restored to her family, who wished to comply with her strong desire to return to them, and had fitted up a new residence in which she would no longer find herself in her former surroundings, all full of water-taps and pumps, and above all with painful remembrances,—everything gave the hope for, at least, a long duration of so happy an improvement.

When she returned to the family she appeared to have completely lost every morbid idea and every strange habit. But only a few days had passed when now one and then the other of her old tendencies came back. She heard the milkman on the streets crying his milk, and the fruit-seller his fruit, and she felt the necessity of washing herself; yet at the first she was able to restrain herself for a time, but afterwards her wonted fears and ideas again presented, and she relapsed into the same fear of dirt and the same acts as formerly; indeed, within the latest dates it appears they are more grave, for on merely being reproved for her fear of dirt she runs to wash, and any occupation whatever, besides that of washing and obliging others to do the like, fatigues her and tires her mind. She now lives almost continually shut up in her chamber, into which no one is permitted to enter excepting her husband late in the night. She occupies herself with nothing but her continual washings. She reads not, she writes not, she will see nobody; she cares not for her children. She speaks very little to others of the family, and she often talks to herself in a low voice, hardly moving her lips. Continual fears and doubts persecute her. To this are to be added notable physical wasting and some excesses of evening fever.

From the description of this case it is evident that it represents a classic type of that morbid form which Hammond has named mysophobia, and Verga, rupophobia. But if we analyze the description given by these and other authors herein cited, which corresponds so exactly

to ours, it is easy to believe that we have now in hand a form never before noted or described, but that, as Buccola has observed in his fine work on "Fixed Ideas," mysophobia or rupophobia is no other than the "insanity of doubting with delirium of the sense of touch," described, in 1875, by Legrand du Saulle, who merely collected into one delineation the cases before described by Falret, Sr., under the designation of "Malady of Doubting," and those described by J. Falret under that of "Partial Alienation with Fear of Contact." These forms then belong to the great category of those psychical affections which have been contradistinguished by the Germans (Krafft-Ebing, 1867), by the very expressive word *Zwangsvorstellungen*, which, having no exact corresponding equivalent in Italian, may be denominated "fixed ideas," or constrained, impulsive affections, so well studied by Griesinger, Berger, Krafft-Ebing, Meschede, Westphal and recently by Buccola, Claus and Wille.

That the cases of mysophobia or rupophobia are identical with the "insanity of doubting with tactile delirium," illustrated by Legrand du Saulle, is readily understood when we recall the general traits of the delineation of it furnished by him in his work, in which, in addition to various cases observed by himself, he cites many others, met with in medical literature, or communicated to him by others, and even one case described by Esquirol, which was truly typical.

In this malady, which is characterized in all its stages by the full consciousness which the patients have of their morbid state, there is a primary period which is ordinarily distinguished by the spontaneous, involuntary and irresistible production of a certain series of thoughts on indeterminate, theoretical, and sometimes ridiculous subjects, without either illusion or hallucination. This series of thoughts is exhibited in inquiries and questions by the patient put to himself, by a sentiment of profound and constant doubting, a species of monotonous, obstinate and oppressive rumination over the same ideas, and sometimes

a mental representation of certain images which awaken persistent pre-occupations.

A unique exterior effect of this inward conflict is the necessity of frequently repeating certain acts, on which they evince doubts that are never satisfied. They are, therefore, in a state of continual hesitation; they are unable to divert the incessant worry of their thought, which withal never reaches any definite result; they are unquiet, impatient and always involved in a conflict that is destined to prove fruitless. Hence they become gloomy, susceptible, egotistic and exactive. They have no confidence in themselves, they test numberless times what they do, they negative their own words. They read and re-read what they write, and for every act performed by them they take numerous precautions. The ideas by which the mind is tyrannized vary according to the person, their education, and their surroundings, etc. With some the questions are continually on metaphysical objects (the so-called metaphysical insanity), as, on the existence of God, the creation, the general and fundamental theories of physics, mathematics and other sciences, and sometimes on futile and inconclusive subjects. With others there is a necessity to multiply all objects they see or think of (insanity of calculation); in others again the sole doubt is that they have not done something right—for example, that they have not counted their money correctly, or have not made a good choice of something, etc., etc., and this obliges them to repeat the same act over and over; or the doubt and pre-occupation may be whether events shall be realized which are not even possible (insanity of doubting, properly so-called). In the first period, in which we have observed some truly typical cases, a few of which have been communicated by Buccola, the patients ordinarily conceal their trouble from all persons, and confide only in the physician or some very intimate friend.

In the second period, which is usually initiated by an uncontrollable desire to reveal their sufferings in long

details, the malady is characterized essentially by the fear of touching certain objects, lest they should be dirtied, poisoned or in any other way injured. They avoid contacts, and protect their hands with gloves, handkerchiefs, etc., if obliged to touch the feared objects; there appear palpitations, anguish, cold sweats and sometimes convulsive phenomena, which may even eventuate in syncope. The patients call this their crisis. This fear often originates from an instinctive aversion or loathing towards certain animals, as rats, cats, dogs, etc., and the dread of the last named may even reach the pitch of real terror, from the idea recalled by them of canine madness, and it commonly forces the patients to all those acts which have been characterized as mysophobia, as in a case described by Morel, 1866, in which the woman, through the fear that every object might have been contaminated by the froth from a rabid dog, not only took care not to touch, but would not bring into contact with her person any fabrics unless such as were fresh from the manufacturer. And in another case even more typical, described by Marcè, as far back as 1862; that of a young female peasant, who through this fear, every time she touched any suspected object, passed whole hours in washing her hands with soap, and if the members of the family would not do the same, she would not venture either to touch or approach them. By little and little her delirium so much increased that she ended by regarding as dangerous, not only the contact of objects, but their very exhalation.

These strange and characteristic acts by such persons are accompanied by continual monologues and doubts, whether the washing may have been sufficient, whether every trace of dirt has disappeared, whether they have again touched dirty objects, etc., etc.; and not content with their own affirmations, they seek for assurances from others around them, and oblige them to repeat those stereotyped phrases which alone have the power of momentarily satisfying them.

But with all this they are never really convinced and satisfied, for the doubt always reappears with equal force and intensity.

They admit the absurdity of their fears, and they cast on themselves frequent invectives, because they have not strength to govern themselves. They are, therefore, in a continual and painful inward conflict that sometimes prompts the idea of suicide, which, however, they never commit because of the irresolution enslaving their minds.

Another doubt that frequently assails them is that of "being insane;" and then they worry the persons around them and the doctor with demands that they shall reassure them, and whilst they all the time only repeat that they are in the enjoyment of perfect integrity of their own reason, yet they will give no peace until they have obtained the most explicit and assuring replies.

These psychical disturbances are most frequently accompanied by physical symptoms, as sense of pain, of epigastric distress, sometimes a true aura with deep hysteralgic radiations, and sometimes through the whole cerebro-spinal nervous system, with headache, backache, sleeplessness, anorexia, palpitations, hyperæsthesias, spasms, sobbings and faintings.

The deportment of these patients is in strict accord with the ideas and overpowering wants which dominate them. There is not an act of their lives, not a movement of their bodies, but is intimately linked with those ideas. Legrand du Saulle had already noted that the patients who felt impelled to continual washing of their hands, though they spent whole hours in making their toilet, all to preserve them securely from contact with feared objects, yet were dirty in their persons, did not change their linens, and ended by being clad in a few squalid rags.

In this period remissions are frequent, especially from change of surroundings; some times there are real phases of complete suspension, which may last for months, or even years. But ordinarily, after one of these phases,

more or less long, which may have inspired so many hopes, from the very slightest cause, and very often because of return to the old surroundings, all the morbid phenomena reappear with their primitive intensity. The exacerbations often coincide with the menstrual periods.

In the third period of the malady the phenomena are yet worse; and they become permanent. The patients, appreciating with perfect consciousness their situation and the strange anomalies of their acts, lose every instinct of sociability, shut themselves up in their house or their own chamber, and live only in their own fixed ideas and fears. But the circle of ideas is limited, and it becomes rather confused, whilst the sufferings increase; the patients are the prey of continual agitation, they neither read nor write, they pass the greater part of their time in the midst of timorous irresolution and vague apprehension, which hold them in a state of almost complete inertia; they are readily tired, even with speaking to others, and they make frequent soliloques in a low voice, or merely moving their lips in a faint whisper. But despite these symptoms, which might appear to indicate a complete debilitation of all the mental functions, they never, or almost never, fall into true dementia, and their state remains quite unchanged, even through long years, until the end of their very sad life.

It is easy to perceive that this picture of the so-called "Insanity of Doubting, with Tactile Delirium," perfectly corresponds to the case herein described by us, and to those treated of under the names of "mysophobia," "rupophobia," "mania of contamination, etc.," by Hammond, Verga, Russell and others; with this difference, that in these last cases, as in our own also, the first period,—that which has been called the metaphysical,—is ordinarily wanting, whilst in many other cases described precisely by Griesinger, Westphal, Berger, Marchal, etc., under the names of "metaphysical

insanity," "the insanity of the why-so, arithmetico-mania, etc." the second period is wanting,—that of fear of contacts, and their strange and impulsive related acts,—and the disease is permanently characterized by the single phase of the morbid picture delineated by Legrand du Saulle. But that which is never wanting in every case, be the disease limited solely to metaphysical ideas, or solely to fears and impulsive acts, or be it mixed with both, is the state of doubt that invades and holds the mind of the patient in a continual anxiety and agitation, and that is, therefore, the characteristic, constant fact in all these morbid forms.

We have said that these diverse cases all belong to the great category of the so-called fixed or impulsive ideas, so well illustrated by the German authors, and recently by our Buccola, also. We should be extending our article to too great length were we but to summarize the studies of the authors who have more or less recently treated of this important subject. We shall, therefore, limit ourselves to the mention of only the principal ones.

Of the results arrived at by the various German clinics, especially Griesinger, Meschedes, Berger, Müller, Stricker and Westphal, in their studies on these singular anomalies of ideation, we may consider Emminghausen and Krafft-Ebing, in their recent treatises, as faithful interpreters in relation to the classification and nature of these affections.

With respect to the classification, Emminghausen, who places the fixed ideas in the class of the "partial anomalies (hyperactivities) in the course and association of ideas," distinguishes three principal groups:

1st.—Fixed ideas in interrogative form, or a morbid necessity to put questions; which comprehends the manias of the "why-so (*perchè*)," and the first stage of the insanity of doubt (Legrand du Saulle).

2nd.—Fixed ideas of multiplication, or the morbid necessity to calculate: Arithmo-mania, insanity of calculation.

3rd.—Fixed ideas, with painful hypotheses; which form comprehends: Agoraphobia and all the analogous forms of fears, and the second stage of the insanity of doubt, which Legrand du Saulle has especially described under the appellation of “delirium of touch.”

Krafft-Ebing places the disease of fixed ideas in the class of the “degenerative psychoses,” beside the “primordial psychoses” in form of “systematized delirium,” and he institutes between these two groups a very interesting parallel, which it is here opportune to introduce:

1st.—The constitutional origin—especially hereditary—of the malady.

2nd.—The primitive development of the morbid ideas, from the inconscient, without any affective basis.

3rd.—Their importunity and tyranny over the mental activity.

4th.—Their chronic advance, sometimes remittent, sometimes progressive, but most frequently stationary, without ever reaching perfect recovery.

5th.—Their almost never terminating in a state of mental debilitation.

The essentially differential characters of the two groups are as follows:

1st.—That whilst in the systematized delirium the ideas are, from their nature, delirious, on the contrary, in the fixed or constrained ideas, we have only simple formal alterations of the process of ideation.

2nd.—That whilst in delirium the morbid ideas are speedily received and assimilated by consciousness, on the contrary in the fixed ideas, these remain always more or less completely, as strange, intrusive, and opposed to consciousness, which, however, is quite lucid, and also opposed to the reason and will, which are dominated by them. Hence, arises the state of pain and anguish to which the patients are a prey, and this state proceeds, in part, exactly from the sad consciousness of the formal disorder of ideation, in part from the nature itself of the fixed ideas, almost always painful (and sometimes dangerous

to themselves and others), and in great part from the impossibility of driving away the ideas, and the acts to which they impel.

In these cases, according to Krafft-Ebing, the following facts, on which he especially insists, are characteristic :

1st.—The original morbid psychical excitability, because of which certain even futile exterior impressions leave a deep and lasting trace.

2nd.—The exaltations of the fancy, by reason of which the images and ideas persist with morbid tenacity in the field of consciousness.

3rd.—The increased activity of the association of ideas, from which the most distant relations immediately recall the morbid ones.

4th.—The enfeeblement of volitive energy.

5th.—The spontaneous organic origin of the ideas themselves, which come forth as if projected from the bottom of the insensient.

6th.—The coincidence of their first appearance with somatic disturbances or causes (menstruation, pregnancy, the puerperal state, self-abuse, protracted virgins, neuralgias), or with psychical causes (mental sufferings, misfortunes, etc.), causes all, and always, of neurasthenic action; observing, however, that it is some exterior event that furnishes the point of departure and the occasional momentum of the anomalous ideation.

Krafft-Ebing concludes that from the spontaneous and organic mode in which the fixed, constrained ideas arise in the mind, they constitute the most clear demonstration of the mechanism of insensient psychical life.

Buccola, in his beautiful and profound study on fixed ideas, after having very exactly exhibited the studies of various authors on this subject, and after making clear the physiological conditions that determine the formation and duration of ideas in consciousness, comes to the conclusion: that in order to explain the genesis of fixed ideas it is necessary to admit, that these, through a morbid excitement that falls on the central psychical

apparatus, possess a very high degree of intensity, whilst at the same time, the associative processes are only partially accomplished, and the attention reaches its highest grade of concentration, the ultimate limit of the inhibiting faculty; and he concurs in the idea of Westphal, who considers the morbid affection of fixed ideas as an abortive systematized delirium, that is, as pathological mental representations which have not reached the point of delirium.

After Buccola, Wile has accurately studied this subject, and has, above all, insisted on the necessity of distinguishing the cases in which the contents of the fixed idea are natural and intelligible, from those in which they are absurd and insensate, and on the physical disturbances, which are wont to accompany this malady, as he had, with much frequency found states of anæmia, disturbances in sleep, augmented excitability of the cardiac nerves, abnormal sensations in the epigastrium, in the head, and the articulations, etc.; but all these are symptoms that, however frequent, cannot be held as characteristic of the malady. He also admits the passage of the fixed ideas into true melancholic systematized deliriums.

Recently Ball also has been engaged in the study of these morbid forms, but rather trippingly culling its flowers; first in an article on intellectual impulses, next in a lecture on the insanity of doubting, he has reported a few cases which enter more or less into the morbid delineation drawn by us. He distinguishes the patients thus:

1st.—The metaphysical, those in whom the morbid preoccupation turns on the most grave sentimental problems.

2nd.—The realistic, those whose preoccupation relates to questions more or less trivial, requiring no elevation of thought.

3rd.—The scrupulous, those who always doubt themselves and their own acts and, therefore, overhaul and repeat them continually.

4th.—The timorous, those who are always fearing to compromise themselves even in the most simple acts.

5th. The calculators, those who must be continually multiplying.

6th.—Those who fear the contact of exterior objects. For this form Ball disapproves of the name, delirium of touch, which would better apply to tactile hallucinations than to an emotional delirium, as he calls it, which frequently coincides with the insanity of doubting, without necessarily making a part of it.

In all these cases he notes that a common characteristic trait is that of intellectual inquietude, which causes the malady to resemble, in the intellectual sphere, lypemania in the affective sphere. Other common characters are: the co-existence of consciousness with delirium; the constant absence of hallucinations; the cravings of the patients to have their doubts removed by the affirmations of others.

But when Ball is required to give an idea of the genesis of these singular affections, he finds no better terms for defining it, than a certain sort of cerebral pruritus (brain itch) which nothing can satisfy; and he says that the repetition of the same thoughts, the same questions, and the same acts, is an organic phenomenon which is ever bringing back the same impressions.

More recently still, since this memoir was communicated to the Medical Congress, at Modena, Luys, in a work on pathological obsession, has turned his attention to this subject, explaining the genesis of the phenomena detailed, by the morbidly prevalent action of the "cerebral automatism." In this work, however, (to which we shall return hereafter), he places fixed ideas, properly called, along with persistent hallucinations and the delirious ideas that arise from these, which, if they have, in common with the first, persistency and fixity, yet constitute a psychological fact of a very different nature.

Paretic Dementia in Females, with Report of a Case.

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THE frequency of paretic dementia among women, as compared with its occurrence among men, is given by various investigators as follows:

Boyle, "Récherches sur les Maladies Mentales,"	1 to 8
Calmiel, "De la Paralyse,"	1 to 4
Hoffman, <i>Günzburger Zeitschrift</i> , 1858,	1 to 8
Duchek, <i>Prager Viertel-Jahrschrift</i> , 1857,	1 to 9
Esquirol, <i>Maladies Mentales</i> ,	1 to 8
Parchappe, "De la Folie Paralytique,"	1 to 5
Laségue, <i>Annales Medico-Psychologiques</i> , 1859,	2 to 9
Foville, "Dict. de Méd. et de Chir. Prat.," p. 505,	2 to 7
Falret, <i>Archives Générales de Méd.</i> , II., 1858,	1 to 6
Bucknill, "Psychological Medicine,"	4 to 13
Boyd, <i>Journal of Mental Science</i> , Jan., 1865,	2 to 9
Griesinger, "Mental Pathology and Therapeutics,"	1 to 10
" at Prague, and at Stephansfield,	1 to 4
Luys, <i>Maladies Mentales</i> (higher classes only),	1 to 12
Marce, <i>Traité Pratique des Maladies Mentales</i> ,	2 to 25
Krafft-Ebing, "Lehrbuch der Psychiatrie,"	1 to 8
Lange, <i>Hospitals Tidende</i> , 1883,	1 to 13
Jung, <i>Allg. Zeitschrift</i> , Band XXXV.,	2 to 7
Riva, <i>Riv. Sper. di Fren.</i> , Anno VIII.,	
Tamburini, <i>Riv. Sper. di Fren.</i> , Anno VIII.,	2 to 9
Buccola, <i>Riv. Sper. di Fren.</i> , Anno VIII.,	1 to 5
Regio, <i>La France Médicale</i> , 1882,	1 to 6
Mickle, "General Paralysis,"	1 to 6
Kiernan, "Lectures on Insanity,"	1 to 6
Shew, Conn. State Asylum Report, 1882,	1 to 42
Cowles, McLean Asylum Report, 1882,	1 to 30

Stearns, Hartford Retreat Report, 1882,	1 to 7
Fisher, Boston Lunatic Asylum Report, 1882,	1 to 5
Spitzka, "Insanity; Its Classification, Diagnosis and Treatment,	1 to 58
Schüle, "Handbuch der Geisteskrankheiten,"	4 to 10
J. P. Gray, Utica, N. Y., Asylum Report, 1882,	1 to 8
Voisin, "General Paralyse des Alienés,"	1 to 8
Mendel, "Die progressive Paralyse der Irren."	1 to 10
Sander, <i>Archives fuer Psychiatrie</i> , 1871,	1 to 12
Austin, "General Paralysis,"	1 to 14
Clouston, Report Royal Edinburgh Asylum, 1882,	2 to 11
Seppilli, <i>Riv. Sper. di Fren.</i> , Anno IX.,	1 to 3
Verga, <i>Archives Italiano per la Mal. Nervosa</i> , 1881,	1 to 3
Burman, West Riding Asylum Reports, Vol. I.	1 to 4
Sheppard, "Lectures on Madness,"	1 to 5

The average proportion calculated from these thirty-nine authorities is about one to eight. Doubtless fuller reports from European and American Asylums, would show very wide differences between them in their ratios. Neumann,* from not having seen a single case, denied the existence of parietic dementia among females.

Sankey† states, that the liability to this psychosis is in the following order: Males of the lower classes, males of the upper classes; females of the lower classes, females of the upper classes. He inclines to the belief that sexual excess plays a part in the production of the disease, but the cases cited by him, show that there were, in addition to the sexual excesses, great vicissitudes. Sheppard‡ agrees as to the liability, but is not certain about the sexual excess. Dickson|| favors the views of Sheppard and Sankey, but considers emotional mental strain as the great cause. Blandford§ concurs in this. Bucknill and Tuke,¶ take nearly the same

* *Lehrbuch der Psychiatrie*, 1859.

† *Lectures on Mental Disease*.

‡ *Lectures on Madness*.

|| *Medicine in Relation to Mind*.

§ *Insanity and Its Treatment*.

¶ *Psychological Medicine*.

ground. Luys* favors Dickson's statement, and says, that in existing social condition, the males lead a much more active life than the females. The social freedom of the male allows him to indulge in physical and intellectual excesses of all kinds, while females are limited in these respects, living more at home, and not being subject to mental and emotional overstrain. I do not think this point well taken, as the emotions preponderate in women, and even though carefully housed and cared for, nearly every woman has to bear at certain periods, considerable tension of feeling, more probably in proportion to her possession of other mental qualities, which confer endurance.

The researches of Buccola,† Tamburini,† Seppilli,† Verga† and Regis,† tend to show that among the rural classes the affection is markedly less frequent in females, than is the case among the civic population, and is much more frequent with the hand-to-mouth, the trading and speculative classes, where the wife takes an active part in the business, than among the classes where she is confined at home. Ashe and Lalor find paretic dementia rare among the female Irish in the south of Ireland; and the greatest proportion, of females to males in Ireland, was that given by Stewart, the superintendent of the Belfast Asylum. Griesinger and Austin agree in general with Luys. Mickle, Mendel, Spitzka, Kiernan and Voisin's results tend in the same direction. It would appear from the suggestions of Krafft-Ebing, Seppilli, Buccola, Boyd and Danillo,‡ that there is a marked relationship between the menopause and paretic dementia. The mental disturbance of this period, predisposing to the psychosis; but when we reflect how extensively the climacteric figures in medical literature, as a cause for every form of insanity and other diseases, it cannot be charged with specially inducing paresis in preference to other psychoses; then,

* *Maladies Mentales.*

† *Op. cit.*

‡ *ALIENIST AND NEUROLOGIST*, Jan. 1883.

again, this period is as liable to be cōincidental, as causative.

The prevalent type is the quiet form, which may account for the infrequency of its observation by some authors. The contrast between the Connecticut asylums is probably to be accounted for in this way, as the one having the fewest female paretics is tenanted by a lower class of females than the other, many of whom come from the rural population; but the discrepancy is too great to be thus fully explained. Seppilli found about one of the ordinary to three of the quiet type. One of the latter kind recently died in this hospital, and some peculiarities in her case justify its publication:

Kate M. (Case No. 238), age thirty-seven, Irish, married; was admitted April 12, 1883. Very intemperate before insanity was noticed by friends. October, 1881, furor appeared and lasted three weeks. She remained at St. Joseph's Hospital, in Chicago, till mania abated, when a remission occurred, lasting till December 25th, 1881; when, family state, she had "cramps" which lasted a week. She was sent to Detroit (Michigan) State Retreat, where she remained until the latter part of July, 1882. Little was elicited concerning the last remission, except that she was errabund. The first remission, friends claim, was complete. Just prior to entrance here, delusions of persecution were observed. Exhibited marked parietic symptoms, tremulous oral and lingual muscles, from the day of admission. Speech drawling, tremulous, felt extremely well and self-satisfied; had unsystematized delusions of grandeur; gave little or no trouble till Aug. 30th, 1883, when hemiplegia followed a convulsion, and next day she died without having been roused from stupor. It was ascertained that her father had died of "consumption of the bowels," and that her mother, at the age of sixty, died paralyzed; also that Kate had never borne children, nor had she ever menstruated. Any hereditary predisposition denied.

Post-mortem, eight hours after death: Uterus, very

small, resembling that of a child of sixteen; left ovary, atrophied; os tincae, imperforate; vagina patulous and large. A third nipple well developed below left breast.

The brain weighed thirty-nine ounces after preparation in solutions for microscopical examination, hence, weights as here given have a relative value only. I am sceptical as to any importance attaching to absolute brain weights, and of late years, often omit weighing until the tissue is hardened. Cerebellum weighed four and three-fourth ounces. Each hemisphere weighed within a few grains of sixteen and three-eighths ounces; the left side, then, can be considered under weight. Cholesterin, abundant, especially in occipito-basilar regions. Right antero-posterior diameter of medulla slightly less than left. Isthmus weighed an ounce. Vermis of cerebellum warped toward left side, causing left aspect of the organ to appear larger than that of the the right. Cortex did not pull with pia, loose from medullary substance as noted in some cases by Spitzka. But in many parts of parietal and occipital regions, the pial adhesions were sufficient to bring away the outer layers of cortex, imparting the ragged ulcerated appearance to which Rindfleisch called attention. Heterotopia found in anterior parietal region. Cortical pial adhesions occurred in the lowest extremity of right occipital lobe, with connective tissue proliferations filling widened sulci. This condition was extreme at base of first frontal convolutions on both sides, fibrous trabeculae clubbed and twisted, extended downward from pia covering four to five square inches; filling interstices left by shrunken gyri and atrophied gray substance. In the white substance, external to the right lobulus cuneus, a cone shaped area of yellow softening, with apex curved forward was found, measuring one inch in length, tapering from three lines in diameter. It was apparently the colloidal necrobiosis of a thrombosed terminal branch of the posterior cerebral artery. The gelatinous contents of the cone were mixed with detritus of the degenerated blood-vessel. Sections

microscopically examined afforded views of kinked and distorted vascular channels often twisted glomerularly. Knobbed vessels were frequent, and perivascular spaces more so; some clear, others dotted with granular masses. Evidences of capillary stasis, general and decided, while dark bodies, resembling embryo connective tissue corpuscles, abounded. No well defined Meynert "spider-shaped cells" were discovered. The ganglionic elements were shrunken and their processes illy defined; a few large nerve cells with granule contents were observed lying in clear spaces, as though contracted from areas they once filled. Sclerosed patches abounded in the sections examined. With the exception of the lesions in the bregmatic region, the post Rolandic parts were mainly involved. The ventricular endyma was nodulated in parts, affording Spitzka's "ground glass" appearance. Comparatively few healthy ganglionic bodies were discerned in over a hundred sections taken from different parts of the cerebrum.

Borderland Psychiatric Records--Prodromal Symptoms of Psychical Impairment.

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“PAZZIA DEL DUBBIO.”—In 1878, F. C., aged twenty years, began to complain of palpitation of the heart. Soon, thereafter, he took a notion that it hurt him to look at things, saying that the mental action, excited by what he saw, hurt him, and that whenever he closed his eyes a web formed over them, so that he had to open them again for fear the web would become permanent; consequently, he would alternately open and close his eyes all day, and at night, too, when awake. He constantly kept rubbing his head also, from before, backward, with one hand, while with the other he continually kept a handkerchief before his eyes, rubbing and wiping them. He insisted that he was not insane. Ophthalmoscopic examination revealed nothing abnormal within, and careful scrutiny of the eye without, discovered no foreign substance or disease of the eye externally.

His general appearance was fleshy; bowels were somewhat sluggish; his general movements were slow, and he did not sleep enough without hypnotics. His appetite was good; he disclaimed masturbation, and was more chilly than he ought to have been for the season and weather. He was a country boy and had been rather studious. No hereditary insane taint was confessed by relatives, but the father was markedly neurotic; his mother died of phthisis. He has since given more satisfactory evidence of his insanity to the writer's mind, but he remained in the above condition about eighteen months at least.

EPILEPTOID PSYCHOSES.

A. B., aged twenty-nine, is a merchant, tall of stature, broad chested, robust and of temperate habits as regards alcohol or tobacco indulgence. He is unmarried. His countenance is florid; pulse, full; bowels, regular; appetite variable and he sleeps poorly.

He feels an uneasiness in company, which is not natural to him; imagines his words come back to him. The eustachian via-urae were shown to be pervious on inflation. He has twice of late, in the darkness, seen subjective flashes of light in which everything about him appeared dazzlingly brilliant.

His mother was a very nervous woman. The case came under our observation two years ago. He remained in *statu quo* for some time, but under the use of bromides and the wearing of colored glasses, the disordered subjective sensation disappeared.

Urinary analysis revealed nothing significant in either of these cases. Neither of these patients are under medical treatment at present.

M. E. T., of Jefferson County, about seven years ago received a left parieto-temporal fracture from a violent blow with a cane, in consequence of which he was obliged to take his bed and remain in it for ten or eleven days. He says he was never comatose or unconscious from the blow. A habitually rapid pulse, constant headache and *muscae volitantes* followed. When he came under my observation, he also complained of frequently seeing a green spot before his eye, which gradually widened until he could see nothing else; he would then get dizzy and have to lay down. This subjective perception used to appear every day or so, "like the ague." He has had chills since and always has this same visual hallucination when the chill comes on. After the phenomenon passes off, he is nauseated and constipated. Tendinous knee reflexion could not be elicited after repeated trials.

The symptoms in this case are all on the left side. He has there increase of temperature, impairment of taste,

numbness, impaired vision and exaggerated tendency to hæmorrhage on slight injury to the left side, as from the scratch of a razor or the prick of a pin.

About four days after being struck he felt a roaring in his head, which persisted for several weeks. About two weeks after the injury he became suddenly incapable of motion, and was simultaneously overcome with intense pain in his head. He remained in pain and incapable of motion for two days. There was also severe pain in the left shoulder. He could get about on crutches in about two weeks after this injury, and in two weeks later, all these motor and painful symptoms passed away. Up to March, 1867 (date of case-book record), he would feel very hot at times and numb, as though frost-bitten in the left side of head and ear. All symptoms disappeared after a few months of treatment, and were kept abeyant for one year thereafter. The patient has reported no return of symptoms. He received cephalic galvanization and the bromides and arsenic with occasional courses of quinia.

MORBID DELUSIVE AVERSION,—VERDIPHOBIA, *mania contaminationis*, ("TOXIPHOBIA, MYSOPHOBIA, RUPOPHOBIA, PAZZIA DEL DUBBIO.")

In January, 1882, S. A., a slender but somewhat delicate, auburn-haired youth of fourteen years came under observation, suffering with facial choreaic movements and slight left ptosis. He had been tenderly and indulgently, and probably luxuriously reared. His mother and father were nervous and mentally somewhat peculiar, from a psychologist's standpoint, though not sufficiently singular to attract general attention or comment. The mental capacity of both parents was good—the business capacity and financial success of the father being above the average of his neighbors—his business now being that of a financier, but, after a severe business stress, he had himself been temporarily deranged, according to the statement of his son.

The habits of this youth were very studious, he being apt and advanced at school above his companions at the time this affliction befell him, and his moral sensitiveness was excessive for his years. He became interested in religious matters, and began to question the unfitness of some of his actions, which are not regarded as violative of the decalogue, or usually considered improper. In short, his mind at this time, had become overwrought from over-study—too little sleep possibly—together with neglect of physical recreation.

At the season of the year when the potato vines were infested with the potato bug, the youth accompanied some of the hands into the field, and saw them put "Paris green" on the vines to kill the bugs. At this time, also, a toy pistol was fired off close to his ear by a companion, producing a profound shock, and some cerebral disturbance. A short time after this incident, when potatoes were brought on the table, he took a morbid aversion to them, fearing they were poisoned and would not eat them. This aversion soon extended to those who had handled them, and to the clothing of those who had handled either the potatoes from the field or the Paris green. He importuned his parents not to eat the "poisoned" potatoes and avoided contact with them. Straightway he began the customary self-ablution process, so peculiar to these patients, which he performed every time, shortly after rising from the table, and after touching a member of the family. From a fear of potatoes, this delusive morbid aversion, passed to a fear of every thing that was green. The green wall-paper, table covers, book covers and carpets, were all regarded as poisonous, and his time was spent in avoiding these colors and in washing away imaginary contamination. He would wash his hands after handling any thing, that any of his family had touched, even letters and papers received through the mail. Paris green or arsenic were pigments in all green colors, he thought, and it could not be reasoned out of him. It was volatile, too, for he had read the reports of

the Massachusetts State Health Board, on that subject, and they proved it in regard to green wall-paper, because they showed that people were poisoned by sleeping in rooms which were papered with green wall-paper.

This boy was not melancholic. He enjoyed himself at play, and with the sights of the city, whenever nothing occurred to excite his morbid dread of green.

Under the dominion of this delusive, morbid aversion, this young man was in constant misery, wherever there was any thing green, except the green fields or plants. Our efforts at treating him were unsuccessful, because, unfortunately, the wall-paper, carpets and some of the table covers of our house had green shades in them. On other subjects, this boy's reasoning was rational enough, and he was bright and observant; but his conviction became intensified, his suits of clothing from home having to be cast aside and his trunks sold. He found something to keep alive the morbid feeling in the colors encountered by him, wherever we placed him in the city. Under such circumstances we continued our efforts to treat him but a short time. At the end of two months of fruitless endeavor, we advised that he should be consigned to the care of Dr. Ira Russell, of Winchendon, Mass., hoping that at such a distance from home and the knowledge of our profitless experience, would enable the doctor to do him more good than we had done. Dr. Russell had seen him at our house, however, which was an embarrassing circumstance, and may have interfered with his perfect recovery there. We have lately seen this youth, and the delusion, though in less demonstrative form according to the statements of father, still persists. The boy would not approach the writer for fear of contamination, and the writer considered it untherapeutic to insist on taking the boy's hand. These are the cases where "hands off" is the soundest therapeutics.

This record must terminate here for the present, as we have not time to add to it. The subject shall again engage our attention and be amplified from our case-book, in which are many cases illustrative of limited and

circumscribed mental implication, some of which have gone on to what would be generally recognized as insanity, and some of which have been cured. We use the term "borderland," in deference to Mr. Ball, who not long ago entertained us with a charming lecture on the subject, and to common medical opinion, since Forbes Winslow gave the profession his excellent treatise. Nevertheless, the last case may be certainly classed among the limited or partial insanities. The perverted reasoning of no lunatic was ever more obstinate or unchangeable. This case is probably the beginning of the end of complete cerebral break-down.

The last case can hardly be classed among the "insanities of doubting," for it was a positive conviction. Nor do we think the term is a sufficiently comprehensive appellation, for the majority of these cases are not doubtful, but positive. On none of the most realistic ideas of their minds are these patients more firmly convinced, than they are in regard to the reality of their delusive misconceptions. From our study of the last case, that boy would have fought to the death in resisting imaginary contamination, if he thought he could not have washed it away, and his distress was so great, at times, that he earnestly threatened to take his life to escape his misery. The first and last related cases are instructive as serving to demonstrate how a single morbid idea, as well as a delusion rationally reached, may dominate mind.

They have analogies in other forms of mental aberration which alienists might profitably recall, in reasoning upon the morbid possibilities of the mind.

The second and third cases we have placed among the epileptoid psychoses only conjecturally, and for want of a better place for them. The initial epileptoid movement in the second case probably beginning in the corpora quadrigemina, and in the third case starting at the color center, if there be such a center in the brain, and the writer thinks there is good reason to believe there is.

Cases like F. C. and S. A. would be categorized by our Italian and French confèrers, possibly as belonging to the insanity of doubting and touch, but they appear to be characterized not so much by morbid doubt as by morbid conviction. The first is an unique case—a real *insanity of touch*. The second also is an insane conviction, a true mania on the subject of being poisoned, and many of these *phobias*, though limited to a single subject, should be regarded as true *maniæ contaminationes*. So that we conclude, that some of these cases are really only morbid fears of the possibility of contamination or defilement—(mysophobias), while others are confirmed delusive convictions—fixed morbid aversions to things and persons that might defile by contact; true, but limited insanities concerning the touch of certain objects or persons.

The Relations of the Cerebellum.

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NOTWITHSTANDING the industry of numerous physiological investigators, and the voluminous registrations of pathologists, the evidence so far accumulated in reference to the functions of the cerebellum is vague and contradictory. The same, it may be urged, does to a certain extent apply to other of the great cerebral center. But here the difficulties in the way of experimental research are enhanced by the deep situation of the parts and the difficulty of producing limited injuries, difficulties not met with in the case of the cerebellum. And in the other instances, pathological injuries are rarely limited in their extent and their collateral effects to the center whose functions they are supposed to hamper, while with cerebellar lesions, the conditions of topographical limitation are generally complied with. I believe that the elucidation of the functions of the cerebellum must rest upon its demonstrated anatomical connections, rather than on its reaction to experimental and pathological injuries. And as in the case of every other center, a study of its anatomy in the adult human brain is advantageously premised by a brief review of its relations in lower animals.

The great anatomical preponderance of the cerebellum in man is a late acquirement; its connections and its masses have been successively apposed on a very simple rudiment in the embryo. The chronological course of this apposition is a rather faithful reproduction of the phylogenetic phases (if such a term be permissible) observed in a series ranging from

the urodelous batrachia to man. The erroneous statement is to be found in the physiological text-books; as well as in certain semi-anatomical, semi-metaphysical treatises, that the cerebellum preponderates in lower animals, and becomes reduced in higher ones. Whatever guage of comparison be adopted, the absolute size of the organ, or its weight, relative to the body, or to that which constitutes the only approximatively constant element in the cerebro-spinal axis, the area of a transverse spinal section at the level of the foramen magnum, or its complexity of structure, it is found that the highest development exists in man and the anthropoid apes; the next highest in the elephant, cetacea and seals, and thence, it is less in the descending scale of vertebrates. As the scale is passed upward the cerebral-overlap more and more conceals the cerebellum, and the latter, therefore, becomes invisible in man and animals near man in their zoological or intellectual position; but that is not due to a lesser development of the organs in those animals. The cerebrum being *ab initio*, a more massive organ than the cerebellum, and both increasing together, say, at the same ratio in relation to the bulk of each, there must be a greater increase of the cerebellum at each stride made; hence, the progressively greater concealment of the cerebellum, notwithstanding the increased growth of this organ, as we pass up in the scale. The cerebellum, coarsely speaking, consists, in man, of a middle portion or *vermis*, two large *hemispheres*, and several lesser lobules of which the *tonsillæ* and *focculi* are the most important. All these lobes are covered by gray substance, the *cortex cerebelli*, and this cortex is arranged in richly corrugated folds, each of which is entered by a detachment of white fibers from the large central mass of the organ.

Within the white mass are several ganglia, bearing a similar relation to the cortex cerebelli as that borne by the corpus striatum to the cortex cerebri.* Two of these

* There is, however, this embryological difference: The cerebral ganglia are cut-offs, as it were, from the same gray mass which constitutes the cortex; the cerebellar nuclei are importations dragged into its substance by afferent fibers.

are large and well-marked in each half of the cerebellum; one lying in the white mass of each hemisphere is from the denticulations of its contour known as the *nucleus dentatus*; the other situated in the white mass of the vermis, and immediately above that base of the cerebellum facing the fourth ventricle, is known as the nucleus of the ventricular* roof: *nucleus fastigii*. The main structural elements are, therefore, a higher ganglionic expanse, *i. e.*, the cortex of the hemispheres, vermis, flocculi and tonsillæ, the lower ganglia or *nuclei dentata* and *fastigii*, and a white substance interpolated between these gray structures. All of these elements have important connections with other portions of the brain and certain cranial nerves; it is, hence, important to distinguish between them. The important fiber-masses connected with the cerebellum and entering its white substance, constituting processes of the latter as it were, are: 1st.—The *processus e cerebelli ad cerebrum* of older anatomists, the *brachium conjunctivum* of German anatomists, and for which, as it corresponds to the anterior peduncle of the cerebellum, I adopt the brief and expressive designation of Wilder: Præpedunculus. 2nd.—The *processus ad pontem* or *brachium pontis*, for which I adopt from the same source the term *pontibrachium*. 3rd.—The auditory nerve root. 4th.—The restiform column. 5th.—The trapezium. All of these tracts except the first and second are afferent to the cerebellum. About the last nothing definite is known. The first and second are efferent as far as the cerebellum, but afferent as far as the cerebrum is concerned. The important fact is thus seen, that, taking the brain as an entity, all the cerebellar tracts are centripetal as far as known, and a direct motor innervation can be entirely excluded from the functional possibilities of this organ.

The restiform column is chiefly derived from the posterior columns of the spinal cord through the remark-

* *De facto* the cerebellum constitutes a roof for the fourth ventricle. Morphologically, it is, however, a spurious roof, and a secondary one; the real roof, is continued under it from the valvula as a membranous expanse; the atrophic dorsal part of the medullary tube.

able decussation which is mediated through the olivary nuclei, described by Meynert. This derivation has been questioned by Flechsig, a scepticism, which, to my mind, is incomprehensible. Few things are clearer than this connection. It is supported by the well-known fact that the olivary nucleus gains in size and complexity in strict parallelism with the cortical folding of the cerebellum. In addition to this, the restiform column owes much of its mass to the direct myelo-cerebellar tract (*directe Kleinhirnseitenstrangsbahn*). The fibers of the restiform column go to the cortex of the cerebellar hemisphere. Derived as these fibers are from the columns of Clark through the direct lateral myelo-cerebellar tract on the one hand, and the posterior columns* of the spinal cord on the other, developing centripetally under pathological circumstances, we must look upon this tract as one conveying molecular oscillations determined in sensory end organs to the cortical expanse of the cerebellar hemispheres. The precise area where the restiform fibers abut, is the dorsal surface of each hemisphere. A small portion passes to the interior of the nucleus dentatus, according to Stilling. On the inner side of the restiform column proper, and reckoned by many as a division of that fasciculus, is a centripetal conducting tract, known as the inner division of the posterior peduncles. It seems to consist almost exclusively of fibers running in the ideal continuation of the column of Burdach, and recognized by Flechsig as a distinct tract in the embryo. Flechsig fails, however, to localize it accurately, as he fails to discriminate topographically in other parts of the oblongata in his great work. The fibers of this tract go in part or altogether to the nucleus fastigii (according to Stilling). It is not positively ascertained whether they are connected with the fibers of the posterior column. In area, the fasciculus represents only a fraction of the area of the column of Burdach; but this is not, as

* There is a want of clearness among authors on this head, even extending to as recent a text-book as that of Schwalbe.

Flechsig seems to infer a reason for doubting a continuity. The greater portion of the column of Burdach decussates through the olives before the origin of the fasciculus is reached. Thus, while the lateral myelocerebellar tract represents a direct uninterrupted communication between the sensory periphery and the hemispheres of the cerebellum, the decussating fibers of the column of Burdach, an interrupted projection of the same periphery in the same cortical expanse, the inner division of the cerebellar peduncle represents an interrupted (?) non-decussating tract to the *nucleus fastigii*.

The auditory nerve root sends fibers to both the nucleus dentatus and nucleus fastigii, in man more to the former. The fibers do not generally pass uninterruptedly from the nerve to the cerebellar nuclei, but are interrupted in the auditory nuclei, some decussate within the oblongata, some within the white substance of the cerebellum. One fact cannot fail to strike the observer as noteworthy, namely, that the fibers passing from the auditory nuclei to the cerebellar ganglia are far more numerous than those of the auditory nerve itself. This relation reminds one of the one existing between the great mass of the anterior half of the *corona radiata* and the diminished bulk of the continuing *pes pedunculi*, and points imperatively to an important connection existing between the internal ear and cerebellum. The trapezium joins the restiform column on its entry into the cerebellum; its fibers appear to me to be derived from the tegmental fibers of the oblongata; its development is centripetal, and the fibers abut in the vermis and nucleus fastigii.

In addition to these fasciculi which project the general sensory periphery and the auditory end apparatus in the cortex and ganglia of the cerebellum, authors describe a slender bundle from the pneumogastric nerve coursing to the flocculus. I have confirmed the existence of a direct cerebellar root of the sensory division of the trigeminus. The main tracts connecting the cerebellum

with the higher centers are the *præpedunculus* and the *pontibrachium*. There* is a third tract whose relations have not been clearly unraveled, but which merits a close study from its presumable relation to visual co-ordination. It connects the cerebellum, and especially its vermis with the corpora quadrigemina through the valvule of Vieussens. The præpeduncular tract runs from the nucleus dentatus to the nucleus tegmenti decussating with its fellow tract of the opposite side. The *pontibrachium* originates in the lateral edges and ventral face of the cerebellar hemispheres, and is continued to the cerebrum in the *pes pedunculi*.

Now, all the functional relations of the cerebellum are clearly expressed in these anatomical relations, and a supporting commentary is derived from comparative anatomy. The *vermis cerebelli* is the only lobe represented in reptiles, and is also the predominant feature represented in the brains of marsupial mammals. Here the transverse fibers of the pons are defective; those of the trapezium and the external arciform division, as well as the inner auditory root, are present and enter it. The vermis is really a cerebellum of low grade, perfect in itself; it is connected with nerve tracts of low organization, that is, such as are frequently interrupted by ganglionic matter, like the inner detachment of the post-pedunculus. The latter is well developed in lower animals, while the restiform column is absent or rudimentary. With higher development, the general sensory periphery and the auditory apparatus attain a more extensive projection, and this projection grows step by step with the cerebrum itself. Meynert has correctly pointed out the close, mutual relationship existing between the dimensions of the cerebral and the cerebellar hemispheres, and the number of anfractuositities of their dentate nuclei. The cerebral hemispheres, the cerebellar hemispheres, the dentated nuclei of the cerebellum and the olivary nuclei, hypertrophy in

*No extensive relation seems to exist between the columns of Goll and the cerebellum. Through the so-called sensory decussation of Meynert, this tract passes to the cerebrum via the stratum intermedium.

parallel order as we proceed upward in the scale of mammals.*

It is well known, that the *crus cerebri* contains those fibers which through the posterior part of the internal capsule convey sensory impressions to the cerebral cortex. These fibers can be derived only from two sources: The columns of Goll† through the piniform decussation and the stratum intermedium, and the transverse fibers of the pons, which are known to become longitudinal and eventually join the pyramidal fibers of the crura, after an interruption by gray substance. Since the restiform column derived from the sensory tracts of the cord is the only tract of lower derivation ending in the cortex of the cerebellar hemispheres and the transverse fibers of the pons, the only tract originating in that same cortical area, the restiform column, the transverse fibers of the pons and a part of the *pes pedunculus*, can be regarded as a connected system of fibers carrying sensory impressions to the cerebrum, and this after a temporary deflec-

* From this general law there is an interesting deviation which, however, is actually a strong support of the conclusions above stated. In the porpoise, with a highly developed cerebrum, and cerebellum, the olivary body is not proportionately well developed. The posterior columns are different from any other mammal studied by the writer. This shows, first, that there is an interdependence between the posterior columns and the olives; and secondly, that it is to be referred to the general atrophy of the cutaneous sensory end organs in these animals. A transitional condition of things is found in the sea-lion. Collaterally I may refer to the interesting topographical relations of the decussations in the isthmus. Taking the altitude of the great tracts as presented in the transverse section, the area of the Trapezium is most dorsal, the stratum intermedium lies just ventrad of this, but sinks below the level of the fibres of the inter-olivary decussation, and most ventrad of all, we find the pyramidal tract. The decussations of these tracts follow this law, that the most ventral tract decussates most caudad, the most dorsal tract, most cephalad. Passing caudo-cephalad we have, first, decussation of the pyramids; second, of the stratum intermedium (Olivenzwischenschicht Flechsig); third, of the olivary fibres; fourth, of the trapezium. With this, it is observed, that the angle at which the fibres decussate becomes more reduced as we go cephalad. In the case of the porpoise and seal, where, with a diminished cutaneous periphery, we find the olives reduced, while the cerebellum is luxuriantly developed, the part played in the architecture of the cerebellum by the olivary fibres, is supplanted by that of an enormous auditory nerve, and possibly by the direct lateral myelo-cerebellar tract. Kohon's case of microcephaly shows that the olive is a station of centripetal tracts, for it was well developed with a rudimentary cerebrum. In its earliest form the cerebellum seems to be a species of trigeminal accessory nucleus.

† This tract is interrupted in the nuclei of the posterior columns, and singularly enough the supranuclear segment—that is the stratum intermedium degenerates downwards, while the infranuclear segment—the column of Goll degenerates upwards. See American Journal of Neurology and Psychiatry, November, 1883.

tion of the current in the cerebellar cortex. Probably a large portion of those fibers of the pes, representing this tract, go to the lenticular nucleus, as was surmised by Meynert.

The auditory-nerve* root connected with the dentated nucleus, the præpedunculus originating in that nucleus, the ganglion tegmenti into which the præpedunculus enters and certain fibers passing thence, either through a thalamic interruption or the corona radiata directly to the cortex, constitute a parallel system destined to convey impressions originating in the auditory end organs to the cerebrum, after a similar temporary deflection. Now, what can be the object of this deflection? There is a direct tract from the sensory periphery of the body carried through the column of Goll and the *stratum intermedium*. Why should a luxuriant development of an interrupted by-tract be so prominent a feature of higher development, if interrupted tracts are less perfect as a rule than direct ones? The valvular cerebellum of the reptiles shows no marked relations except to the inner division of the auditory nerve root. The cerebellum simulates an accessory auditory nucleus, as it were, and as the only spinal fibers entering the reptilian cerebellum are derived from a column corresponding to the internal division of the post-pedunculus, we observe that already in this primitive stage with only the vermis, and that poorly represented, the cerebellum constitutes a meeting point for impressions originating in the auditory and the tactile end organs. This is carried out as the leading principle of the systematic architecture of that higher cerebellar organ found in man. The hemispheres, with their dentate nuclei, repeat the relations of the vermis and its fastigial nuclei, in this, that both auditory and spinal fibers meet there. They are brought into association by fibers radiating from the cerebellar cortex to the dentate nuclei. In other words, the cerebellum is a field where the impressions of touch and position are

*The auditory nerve encroaches on this field and changes the relation in higher forms. This is a significant fact in view of the close position of the tactile organs of the head, and the otolith sac in some invertebrates, where this sac is basi-antennal.

associated with those of time and space. Its main object must therefore be the fusion of these sensations, or their co-relation in some way, for the benefit of the cerebral hemispheres. It consequently assumes the position of an informing depot to the great head center, the cerebrum. Thus, on strictly anatomical grounds, the older view abandoned by many as uncertain, contradicted by some experimental physiologists and apparently by pathological experience, merits renewed consideration; the view that the cerebellum is not the center for, but the informing depot for the finer co-ordinations. It would be unphilosophical to attempt to study the function of the cerebellum, without bearing in mind that *per se* this organ can do nothing. Whatever molecular oscillations are determined within, its ganglionic substances must pass to higher centers for translation to skilled motor reaction.

If this is so, some may ask, Why is the cerebellum a special cerebral segment, for all the sensory tracts concerned in its building up, might just as well terminate in the cerebral cortex directly? The answer to this is, that the position of the associating ganglion of the auditory and tactile impressions was primarily determined by the positive and primitive termination of the auditory nerve-root, and as in the progressive development of nerve centers, increase in functional capacity is marked by increased apposition of structures to the primitive organ, all associations of a kindred nature become localized there. In this there is some similarity to the cerebrum. Just as the cerebellum may be considered at least in its higher form as a luxuriant hypertrophy superimposed on the auditory ganglion, so the cerebrum is known to be a supplantation of the olfactory lobe.

I have deemed it opportune to call attention to the anatomical relations of the cerebellum* as eluci-

* NOMENCLATURE. Professor Wilder proposes to call the anterior, middle and posterior peduncles of the Cerebellum præ-, medi- and post-pedunculus. In the same communication he suggests Pontibrachium for the older term Brachium pontis. But

dating its functional rôle, and as showing that in excluding this or that function on the strength of negative pathological experience, due attention has not been paid to the fact that, after all, the cerebellum is but a by-tract for impressions conveyed by other channels, and that only the finest co-ordinations of movement, with regard to space and time, are on anatomical grounds to be connected with the cerebellum. It may be very confidently asserted that a fine musical ear, the sense of rhythm and of time, and the ability to perform any fine feats of equilibrium, are not possible without an intact and well-developed cerebellum.

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the Pontibrachium and the Medi-pedunculus are identical. The principle of nomenclature exhibited in Pontibrachium being superior in every sense to a merely topographical one, I would propose the following: **TEGMENTIBRACHIUM** (Spitzka). **Præ-pedunculus** of Wilder; anterior peduncle or crus, **processus e cerebelli ad cerebrum**, **Brachium conjunctivum** of older anatomists. **PONTIBRACHIUM** (Wilder). **Medi-pedunculus** of the same author; middle peduncle or crus, **Brachium pontis** of older anatomists. **MYELOBRACHIUM** (Spitzka). **Post-pedunculus** of Wilder, equivalent to **internal peduncular division plus restiform column** of older anatomists.

Testamentary Capacity.

By ISAAC RAY, M. D.,

Author of "Mental Pathology," "Mental Hygiene," etc., etc.

TO the question, What shall become of a man's property after death? the law of our own and of every civilized people, in recognition of what was deemed by the old jurists as a *jus naturale*, replies, that he may dispose of it himself before he dies, under some limitations required by a regard for the rights of others. It only requires that when exercising this right he should be of sound mind; and this leads to the inquiry, What is meant by a sound mind? At first blush this would seem to be a strictly medical question, and, so regarding it, the physician considers it as a matter of health or disease, of normal or abnormal condition. The jurist, on the other hand, ignoring entirely the physical element implied in the question, considers it solely as a matter of mental capacity. As in cases that come into litigation both parties urge their views as the proper guide to the ultimate decision, discrepancy and conflict must naturally follow. Much of this diversity of views arose on both sides, undoubtedly, from a very imperfect knowledge of the subject matter itself, as the slightest examination will show.

From the earliest times the law has recognized insanity as a disturbing element in human conduct, and allowed it to modify, more or less, its administration of justice. Therefore, the question of questions on this subject is, how far, and in what manner, this disturbing influence really extends. To answer this question, resort has been

[EDITORIAL NOTE.—This contribution of the deceased alienist is so far superior to that of the average present utterances on the subject of testamentary capacity, that no apology is needed for giving it wider circulation than it has yet before had. We give it space, however, at the request of, and for the benefit of, several subscribers who are lawyers.]

had of two sources of instruction. One is, that observation of the insane which any one may make in the ordinary walks of life. While we admit that much may possibly be learned in this way, yet it is no less certain that impressions thus obtained are quite unreliable for any practical purpose. A very few cases only can come under the cognizance of any individual, and the notice taken of them must necessarily be hasty and superficial. The more demonstrative symptoms only will arrest the attention, while the less obvious, though, perhaps, more significant, may be overlooked altogether. Neither in this way is there any element of progress. No amount of attainment leads to fresh attainment. It lives and dies with him who makes it. Observers more sagacious than Shakspeare and Walter Scott can scarcely be expected. And yet the current ideas respecting insanity are chiefly derived from this source.

The other source of information is that where insanity is studied as a disease, in the spirit and methods of a scientific inquiry. Here not a few only, but all its phenomena are observed. Its various phases, as presented from day to day, from month to month, and from year to year, in the different grades and stages, are carefully studied, with the abundant facilities afforded by the modern hospital for the insane. The study of the physiological and pathological laws by which it is governed, of the ancestral defects in which it originates, and of the adverse influences by which it is developed, throws light on the character of each individual case, without which we can scarcely avoid mistake.

Ideas derived from this quarter have always determined, to some extent, the rules and practices of the English law, not, however, without great resistance, especially in modern times. The classification of mental diseases, the terms and phrases found in medical books, were freely adopted into the civil law, with such practical consequences as they would naturally suggest. The psychological relations of the different forms of insanity were but little

considered by the ancient physicians, and, of course, they could furnish the lawyers with little aid in the work respecting it which fell to them. Indeed it could not have been otherwise, for their means of learning about insanity were hardly better than those possessed by the world in general. Their ignorance of anatomy and physiology led to the crudest theories on the nature of disease, and their observation of its phenomena was directed by a false pathology, rather than by any methods of exact and patient inquiry. The only advantage they possessed over others in the study of insanity, consisted in the more close and continuous observation of individual cases which their professional duties required. Through the whole mediæval period, and long after the revival of learning, medical writers were content to abide by the notions of Celsus and Galen, and these were all they could offer to aid their law-giver in the administration of justice. By this aid, such as it was, the latter undertook to say how far and in what way insanity modifies the legal consequences of human conduct. To simplify the process, they found it convenient to consider the disease in its different forms, or, more correctly speaking, in its different grades of apparent severity. The first systematic attempt of this kind was made by Lord Coke, who recognized four descriptions of persons as being *non compos mentis*—viz: idiots; those who, by sickness, grief or other accident, have wholly lost their memory and understanding; those called lunatics, who have sometimes their understanding and sometimes not; and lastly, those who by their own vicious act, have deprived themselves for a time of their memory and understanding, such as drunkards. Rude as this classification is, it has some semblance of correctness; but, like the more elaborate rules and tests of more recent times, it labors under the defect of being difficult of application. It affords no help to settle the question whether, in a given case, the person concerned belongs to either of these classes. Regarded as a scientific formulary it is

quite defective, because it ignores completely some well-recognized forms of mental disease. Many years afterwards, Lord Hale, availing himself of the more advanced medical knowledge of his time, corrected this defect in some degree, and ventured upon some rules for the settlement of the practical question. But, with all their defects, and in the face of the better knowledge of our times, the doctrines of these men still govern, in a considerable degree, the decisions of English and American courts.

Unquestionably, they reflected and confirmed the prevalent sentiment which regarded the last will and testament as an instrument too sacred to be easily disturbed. And we know, as a matter of fact, how jealously it has been guarded from all assaults, and especially from such as were directed against the mental competence of the testator. Let us now examine the decisions of the courts in the new lights shed upon the subject by the progress of medical science during the last two centuries, for within that period have occurred the two great discoveries of the circulation of the blood and of the functions of the nerves. And the same period has witnessed the establishment of multitudes of hospitals for the insane, affording opportunities for the clinical study of the disease, and for the observation of the ways, manners, conduct and conversation of the insane never enjoyed before.

In that form of mental disorder called acute mania, in which the mental movements are continuously strange, wild and incoherent—madness without method—the testamentary incompetence of the patient has never been questioned. Indeed, the condition is one in which we should hardly expect any disposition to make a will, and I am not aware that such a one has ever been offered for probate. Lord Coke, you observe, speaks of a description of lunatics who have sometimes understanding and sometimes not. This statement has reference to a phenomenon once supposed to be a very common occurrence—I mean that of lucid intervals, as they are called.

So common were they thought to be, that in every case of alleged insanity, the question of a lucid interval was always raised as a matter of course. In fact, the practice has not yet entirely ceased. The idea is, that in most insane people reason returns at intervals, and with it their original competence and responsibility. The law not only supposes the probability of such a period, but the party availing himself of the plea of insanity was obliged to show—even though the burden of proof may not always have been put upon him directly—that there was no lucid interval. Considering how small a foundation this whole doctrine of lucid intervals has, it is difficult to account for its prevalence. Unquestionably, it sometimes happens that an insane person comes to himself, manifesting his natural propriety of conduct and conversation, his memory and perception apparently clear, the cloud returning after a few days as dark and dense as before. Exactly how far the mind in this condition is free from the influence of disease we never can know. Considering, however, the suddenness of the change, the brevity of its duration, and the long continuance of the disease when it occurs in chronic cases, it is not likely that the mind is restored to its normal degree of clearness. It must be borne in mind, also, that, as described by distinguished legal authorities, such intervals are of very rare occurrence. I have not seen more than half a dozen cases in all my experience. *All nervous diseases are subject, more or less, to a certain law of periodicity, by reason of which at intervals their regular course is changed,* and other incidents come and go in a certain order of succession. The change thus produced may sometimes amount to an entire disappearance of the signs of disease. This phenomenon is not unfrequently witnessed in the early stage of acute mania. Within the first month there may occur a rather sudden cessation of the manifestations of disease, in which the patient is calm, quiet, talks and behaves sensibly, though, if closely observed, there will be found some indistinctness of memory and confusion of thought, especially with

reference to the circumstances of the attack. This condition has often been confounded with lucid intervals, especially by lawyers, who find it difficult to see a distinction which can be visible only to the long-practiced observer. To the common eye, *any remission* in which the patient is tolerably calm after being violent, and answers a few questions rationally, seems like a lucid interval.

Admitting, as I do, that a valid will may be made in the lucid interval, it is likely that some shadow of disease may rest upon it, that any testamentary act during that period should be very closely scrutinized. Some qualifications for the act are required not otherwise needed. It should be shown that changes in the circumstances and conditions of those whom the testator is disposed to benefit, (having occurred when he was incapable of understanding and appreciating them,) were brought to his knowledge and comprehension, since such things would naturally affect the dispositions of the will. Because it must be borne in mind that the past, for months or years, may have been a complete blank, or filled with strange and deceptive images. In short, we may conceive of a case where every testamentary qualification was possessed; but certainly the fact must be of rare occurrence, and difficult of proof. I know of only one case reported of a will made in what was called improperly a lucid interval, and established, that of *Cartwright v. Cartwright*, 1 Philimore, 90. The testator was in an asylum, and so severe was the grade of her disease, that she had restraint on her limbs at the moment when she called for pen, ink and paper in order to write her will. This she did at last after writing one on several pieces of paper, which she tore up and threw into the grate, and walking up and down wildly, and muttering to herself. The will was established, the court deciding that it was made during a lucid interval, on the strength of the internal evidence, as it made a natural and consistent distribution of her property. This fact the court considered conclusive proof

that a lucid interval had taken place. The result may have been right; but it was reached by a sort of logic known as reasoning in a circle. The correctness of the will proves the interval, and the interval being proved, makes the will valid. *Had the court, while squarely admitting the insanity of the testator, declared that the character of, the act showed that she was still rational enough to make a valid will, it would have uttered good sense and good science.* Here we see the binding influence of the old law as expounded by Coke. It being proved that the testator was a lunatic, she was necessarily *non compos*, and could become otherwise only by recovery or a lucid interval.

This influence has not yet entirely lost its force, for I observe that lawyers are not content with proving competence sufficient for the act in question, but also labor hard to prove also perfect soundness of mind. In a case that came under notice two or three years since, an attempt was made to void the contracts of a person recently deceased, on the ground of insanity. It was shown that the transaction—the sale of coal lands—was just and fair in every particular; that he obtained a price pronounced by his neighbors and advisers to be a fair one; and that he sold, then and there, without waiting for a prospective rise in value, simply because he needed the money. That he was a lawyer in full practice, a leader at this bar almost up to the day of his death, and all the while the trusted counsellor of several large corporations—all this needed no proof, for it was seen by everybody, And yet, because of the admitted fact that this man had always been remarkably eccentric in his ways and manners, week after week was spent in endeavoring to show either that he was or was not technically insane. If the administration of the law has for its object the promotion of justice among men, we may venture to say that the means it used in this instance were signally irrelevant.

Farther examination of Coke's classification of the *non compos mentis*, furnishes fresh proof how little help

it gave the medical jurist in settling the questions that came before him.

“One class,” he says, “consists of those who, by sickness, grief or other accident, have wholly lost their memory and understanding.” The word *wholly* is probably used inadvertently, because it would refer to persons in the very last stage of dementia, whose acts would scarcely become matter of litigation; whereas he had in mind, no doubt, a numerous class, who, while moving about among men, and taking some part in the affairs of life, are, nevertheless, laboring under considerable mental infirmity. We have reason to think that this class was meant to embrace the subjects of senile dementia, of the weakness of old age, and of the damage inflicted by paralysis and other cerebral affections. His allusion to grief and accidents implies, probably, a mistaken notion he had conceived respecting the cause of the mental affections. Taken as a whole, this class, unquestionably, has always furnished the courts with a greater amount of litigation than all others put together, in the matter of wills. The more exact and well-defined are our notions of mental capacity, the more foundation they have in close personal observation of this class of persons, the better will be our admiration of justice. Much of the apparent conflict in the adjudication of their cases has arisen, I think, from a faulty appreciation of the mental qualities chiefly concerned; and therefore I invite your attention, for a moment, to this point.

Old age is usually accompanied by a certain enfeeblement of the mental as well as the bodily powers. This condition does not imply unsoundness or incompetence. It merely means a diminished power of endurance; an incapacity for those long-sustained efforts once comparatively easy; more difficulty in grasping obscure and remote relations. The mind has lost none of its characteristic tastes, and none of its fondness for its accustomed pursuits; but it is satisfied with easier tasks and welcomes longer intervals of rest. The only mental faculty obviously

involved in this condition is the memory, especially of recent incidents, even while old ones are well retained. The forgetfulness of young people comes from carelessness and a predominant interest in other thoughts. With the aged the new impression, however vivid at first, fades from a lack of power in the brain to retain it. It must be quickly and frequently repeated, before it will endure. So far the change may be considered as the normal result of old age, and destitute of any legal consequences. Occasionally, indeed, in the closing years, the mind displays even more than its wonted vigor and brilliancy. It was these exceptional instances that led the poet Waller to say:

“The soul’s dark cottage, battered and decayed,
Lets in new light through chinks which time has made.”

Sometimes the change here described proceeds still farther, and induces a condition that is abnormal, ending in *senile dementia*. The memory becomes less and less tenacious; the perceptions less exact and clear, one persons or thing being mistaken for another, and their relations misunderstood. Then the judgment—that is, the power of discerning the relations of cause and effects, of distinguishing between the specious and true, of taking in the remoter considerations germane to the case in hand, of weighing and rightly appreciating conflicting claims—loses its vigor, and is easily led astray by false lights. And so the process of decay goes on, until it reaches its utmost limit in virtual extinction of the mental powers. Now what we would like to know is, the precise point at which testamentary capacity ends; and this, of course, is beyond our reach. As to the effect of this condition, both in its earliest and its latest stage, there can be no diversity of opinion. It is during the intermediate stage that it gives rise to obscurity, doubt, conflicting evidence and abundant litigation.

To arrive at a correct decision, we must first understand what are the intellectual powers necessary to testamentary

capacity. In the first place, the memory must be active enough to bring up to mind all those who have natural claims on the bounty of the testator; to make him aware of the nature of his property, its location, the incumbrances upon it and his debts. If he makes bequests in certain sums of money, he should know with some degree of exactness the value of his property; and if he has made previous wills, he should be aware of their contents. Whether he actually had such a memory will generally be determined, for the most part, by the circumstances of the transaction. In most cases evidence is given respecting the general condition of the memory as manifested in the ordinary discourse, and this, coming, as it does, in a loose, detached, fragmentary manner, from persons usually unaccustomed to observe mental phenomena closely, requires to be carefully and intelligently examine. The *lapses* of memory exhibited by all old people must be distinguished from that *utter loss* of memory that no effort can retrieve, even for a moment. The former is chiefly in regard to recent things, which are readily brought back to mind and are retained for awhile. The latter embraces old as well as recent incidents, impressions customary as well as casual, ideas the most as well as the least familiar. The old man who is constantly mislaying his spectacles, forgetting the face of the person to whom he was introduced the day before, and marching up the broad aisle of the church with an umbrella over his head, may be found, when his attention is specially directed to a subject, to remember its prominent points, understand them well, and govern himself accordingly.

Let it be observed, in this connection, that many of those old people so forgetful of passing events and so careless of little proprieties, need only to have their attention fixed on the matter in hand to display no lack of memory or understanding. If, on the other hand, a person has utterly forgotten the events of his earlier age; if he cannot tell his own age, or the year of our national independence, is unable to tell how many six and six

make, and has forgotten whether his estate is in lands or houses or stocks, he surely has lost his testamentary capacity.

The mental infirmity most often the source of testamentary incapacity, is impaired judgment. To make an equitable distribution of his estate among those connected with him by blood or affection—such a one I mean, as he would have made while confessedly sound—implies on the part of the testator a variety of considerations that cannot safely be overlooked. He should be able to appreciate properly the nature of their claims, their present and prospective necessities and the favors they have already received; and all this, not to mention other considerations, requires a nice discrimination, and the power of looking before and after. If the bequests indicate any deficiency in these respects, it certainly furnishes ground of suspicion.

There is a large class, you observe, still unprovided for in the schedule of Coke. I refer to that of persons neither idiots, lunatics, nor the victims of sickness, grief or old age—persons having by nature a deficient mental endowment, and embraced under the general appellation of imbeciles. The wills of such persons often come into dispute, and though their disposal is determined by the same principles as those last referred to, yet they give rise to a larger range of speculation and doubt. In the one case, the question on which the result may depend is, How much mental power has been lost? while in the other the question is, How much was ever possessed? The difficulty of the question is increased by the fact that in many, if not most imbeciles, there is much inequality in the strength and development of the several mental faculties. The same person may be shrewd, even sharp, in some transactions, dull and foolish in others; at one moment uttering a pithy remark, at another leaving no doubt of his native simplicity. With shrewdness and folly thus displayed side by side, it is not strange that different observers are sometimes very differently impressed by what they witness. One who has sold him a gun or a fishing-

rod, or made for him some little article of use or ornament, and listened to his comments, is ready to pronounce him about as sensible as the generality of men. Another who has witnessed his conduct in affairs requiring some prudence and judgment, is strongly impressed with the depth and breadth of his simplicity. And this is a specimen of the evidence heard in our courts, when they are called to adjudicate in cases involving the persons or property of simple-minded people. It is also a lamentable fact, that the disposition to form positive conclusions on the strength of a partial, one-sided observation, is about as common among men of some culture as it is among those who are without pretensions to any. Until mental manifestations are better understood, we shall continue to witness these strangely conflicting conclusions in litigation involving the interests of imbecile persons.

To meet this state of things, the first thought was to fix upon some arbitrary, specific standard of mental power, by which the minds of imbeciles should be measured. I know of only one that has survived the test of experience, and even that is seldom offered now. It has been said with some show of authority, that to make a valid will one must have capacity sufficient to make a contract. Had these conditions been reversed, and the proposition been, that as much mind was required to make a contract as to make a will, it would have had as much support in the nature of things as the other, and that is none at all. Until we are satisfied as to the exact amount of mind necessary to make a contract, this measure will scarcely help us, even with the estimate I once heard given from the bench, that it is as much as is required in the ordinary business of life; which must remind us of that venerable measure of size with which we are all familiar, "As big as a piece of chalk." The only rule founded in reason and justice is, sufficient mind for the occasion. I hardly need to suggest, that to distribute a large estate equitably and judiciously among a considerable number of persons and institutions, must require a stronger and wider exercise of mind than would

be needed for the disposal of a small estate among the few legally entitled to a share of it. And as much may be said of a contract involving many contingencies, as compared with one disposing of a few acres of land.

Thus far, it will be seen, the elements of testamentary capacity are strictly intellectual, pertaining to the pure reason. A testament, however, is not always the product exclusively of the understanding. The moral part of our nature—the sentiments, affections and emotions—may be as potent an agency in its production as the intellectual. Hopes and fears, attachments new and old, a sense of dependence, a chronic habit of submission and deference, assiduous attentions, crafty insinuations—these may greatly prevail over the most obvious claims created by the law of inheritance. Inducements of this character are not excluded by the law. All that the law requires in feeble-minded people is, that they be not excessive, calculated to drive the mind from well-chosen, well-matured arrangements, and divert the course of property into channels it would not otherwise have taken.

In examining these cases, we must never forget that both the intellectual and the moral faculties may have been concerned in their production, because, if either of these factors are left out of the account, we are greatly in danger of being misled. Nor must we forget, while investigating their respective agency, that they may act with some degree of independence of each other. The same person who thinks correctly and sensibly so far as he goes, may readily yield to inducements strongly presented to his feelings. In a case lately tried in Massachusetts, this distinction was so sharply and so pertinently made, that it may claim a moment's attention. A man, never married, confessedly feeble-minded, and under guardianship, concluded to make his will, which he did without urging or hindrance from any quarter. In this he bequeathed his property—\$200,000—to various charitable institutions, and to a few intimate friends from whom he had received much care and kindness, completely ignoring his sisters, for the

reason, as it appeared in evidence, that they took no notice of him and were wealthy enough already. In making the will he was aided by a lawyer of the highest moral standing, and the whole transaction was free from suspicious circumstances. Two or three years afterwards, while in company of certain persons whose relations to him gave them much influence over him, he became so much excited by their reproaches and solicitations, that he called for the will and drew his pen through his signature. The will was offered for probate; but the judge declined to approve it, and an appeal was made to the Supreme Judicial Court, in which a trial ended in the establishment of the will. The jury virtually said the will was a rational act, rationally and calmly done, with memory and judgment sufficient for the purpose; but the revocation was done in a moment of passion, excited by the suggestion of others, and too strong for his feeble mind to resist. The verdict of the jury was approved by the court.

The question of testamentary capacity in feeble-minded people is generally connected with that of outside influence. Sound-minded people may and often do ask advice in the final disposition of their property, and the result is, very likely, all the better for it. Such advice may be needed all the more where the mind is weakened by nature or disease; but when obtained, it is always, and very justly, viewed by the law with suspicion, and the dominant question is, whether or not the testator has been subjected to what is called *undue influence*—because, sound or unsound, strong or weak, his will must be his own will, and not another's. If the influence is such, that the wishes and the interest of other parties, rather than the testator's, are represented, then the law supposes that the will is really not his will. In order to establish the fact of undue influence, however, a foundation must be laid by first proving the fact of mental deficiency. The attempt is sometimes made by lawyers, aided by physicians, to reverse the process. Unless the testator has clearly manifested

some mental unsoundness by his previous acts, the proof of undue influence should be strong enough to be unmistakable. It often happens that no such can be shown; that up to the moment of the making of the will, no indications of feebleness, of delusion or wandering have been witnessed. I do not say that even under such circumstances undue influence may not be exerted. When we consider the enfeebling effect on body and mind of a long last illness, of the many infirmities that often attend this period, and of the utter prostration of the will produced by pain and a sense of complete dependence, we can scarcely conceive of conditions better fitted for the exercise of an undue influence over testamentary dispositions. The courts of our time have become quite familiar with a certain class of cases presenting these traits. An old man marries a young woman, and within a year or two dies, leaving a will greatly in her favor, much to the disappointment of relatives who would otherwise have received the whole of the estate. These cases are exceedingly embarrassing, for we are often left without any clew to guide us to a rightful conclusion. We are sure it is such a will as the testator would not have made in the vigor and flush of health; while we hesitate to say, under the conviction that a man has a right to do what he pleases with his own, how far a sense of gratitude for kindness and service may be allowed to shape his decision. Fortunately, perhaps, it frequently happens that some circumstance sheds a little light upon the case, enabling the jury if not to decide according to its legal merits, yet to do what, in their rude estimate, "is about right."

You observed, no doubt, that Coke, in his classification of mental disorders, ignores entirely a form of the disease which is far from being very rare. The reason was, probably, that it seemed so partial in its operation—it left so much of the mind free, apparently, from its influence—that it was not supposed to impair the person's responsibility for civil or criminal acts. Nearly a hundred years went by before it was first formally recognized by

Lord Hale, as well as another hundred years after him before the law began to take it into the account as an element of excuse for human delinquency, or regard it as a claim on its protection. I refer to what is now called partial insanity, in which a person while entertaining some notions having no possible existence in all other respects talks and acts like other men. How to meet the difficulties, suggested by this form of mental disease, was a problem entirely beyond the reach of this luminary of the English law; and he passed it along to his successors, many of whom, even to this day, have been as unwilling as he to give it any practical effect in the administration of justice. The light shed upon the nature of disease, and especially of insanity, by our better methods and opportunities of study, has not been utterly disregarded; and though we are too often obliged to witness the display of the old ignorance, rather than the new knowledge, yet the time is coming, it is to be hoped, when the law will be in entire accordance with science.

It is somewhat curious, that up to the present century we hear nothing of partial insanity, strictly so called, in civil cases; and in criminal cases, where it was sometimes offered in defense, it scarcely received a respectful hearing. The common idea that the monomaniac had still reason enough left for all practical purposes, protected his testamentary privileges; and generally, it may be supposed, the rule worked no injustice. Had the courts been brought face to face with a will the manifest offspring of a gross delusion, they might have refused to sustain it. It is hardly conceivable that they would have approved a will devising a large estate to the building of a railway to the moon (though hardly more of a folly than many exclusively mundane that have been built), however prudent, sagacious and intelligent the testator may have been in the ordinary affairs of life. It was not until 1828 that this question of the legal effect of partial insanity on the testamentary capacity was squarely met and rightly decided. I refer, of course, to the case of *Dew v. Clarke*,

which came up for final adjudication in one of the English Ecclesiastical Courts, Sir John Nicholl presiding. The matter in issue was the validity of the will of a London surgeon, who bequeathed the bulk of his estate to his nephews, leaving only a life interest in a small portion of it to a daughter, his only child. The testator had, for many years, very creditably practised his profession; and though regarded by his patients and many others as eccentric and irritable, was never suspected by them of laboring under any kind of mental derangement. On the other hand, it appeared that he had always entertained the strongest aversion towards this daughter, describing her to his friends and strangers as prone to all manner of vice—as a perfect fiend, an imp of Satan—charging her even with impossible crimes. His treatment of her was almost incredibly savage, not only compelling her to perform the most menial offices, but he would often strike her with his clenched fists, cut her flesh with a horse-whip, and once when she was only ten or eleven years old, he stripped her naked, tied her to a bed-post, and after flogging her with a large rod inter-twisted with brass wire, rubbed her back with brine. It appeared that there was no cause for this extraordinary antipathy. The girl was described by all who knew her as amiable and docile in her disposition, and perfectly correct in her deportment. Against this will the judge pronounced an exhaustive and most elaborate judgment, untrammelled as he was by the precedents of the common law, and inspired by the larger spirit and freedom of the civil law. Remarkably well informed on the nature of insanity, he discussed its effect on the mind of the testator with a sagacity never before witnessed in a court of law, reaching to the conclusion that the mental disorder was fatal to the validity of the will. Against the doctrine there announced, novel and unprecedented as it was, no voice of dissent has ever been raised. It is one of the few things in the medical jurisprudence of insanity which may be considered as established.

Sir John Nicholl, be it observed, was careful to restrict the operation of the principle to the case before him. The mental disorder was sufficient to vitiate, not any will, but the will in question. Had the testator bequeathed his property to his daughter, he would probably, have established the will, insane as he was. The insanity would have been no bar to a natural and proper distribution of his estate; and so, I apprehend, the matter is now generally regarded. The objection arises only when the distribution is not deemed to be natural and proper by various relations, who find it for their interests to destroy the will. The principle being settled that insanity does not necessarily impair a man's capacity to make a will, any more than it destroys his power to do many other things as well as ever, its effect ought not to be determined by any arbitrary rule, but rather by that judicious consideration of the various circumstances of the case which is founded on correct views of the nature of insanity and the ordinary motives of human conduct. In accordance with these views, a case was adjudicated in the Court of Queen's Bench, in 1870, *Banks v. Goodfellow*, L. R. v. Q. 549, Chief Justice Cockburn delivering the opinion of the court. Here a will was established, notwithstanding the testator was proved to have entertained some gross delusions, for it was obvious that these delusions could not possibly have influenced the dispositions of the will. These two cases, I presume, have settled the rule of law in regard to the effect of delusions on testamentary competence, and thus, happily, brought the law of the land into harmony with the laws, physiological and pathological, of the mental constitution. And let me say in this connection, that the effect of mental impairments on the testamentary power is not to be estimated solely by their demonstrative symptoms, for it may be greatest when scarcely seen by the world at large. I have never met with worse wills than some made under such circumstances. I have known a will made shortly after an apparently slight attack of paralysis,

pre-eminently absurd, irrelevant to any worthy purpose, and almost if not quite impracticable of execution. And yet the testator seemed to have completely recovered, and continued his ordinary pursuits till prostrated by a second attack.

Wise and proper as the doctrine may be, generally stated, that a delusion should vitiate any testamentary disposition made under its influence, cases can easily be imagined where it would be exceedingly embarrassing to determine the exact range of its application. We readily admit that the will of a man disinheriting all his heirs-at-law—brothers, sisters, nephews and nieces—in the belief that they have been attempting to take his life, should not stand. But supposing this delusion referred only to a single relative, the rest of them being properly remembered, I think we should hesitate to break the will for that reason alone.

In pursuing the progress of thought on this subject, we meet at last one of the extravagances of opinion, which, coming from men of commanding intellect, produce surprise, if not admiration. Lord Brougham declared on one occasion, that partial insanity, however limited apparently, as well as the more general forms of the disease, should vitiate all the patient's civil acts. He regards the mind as a single, indivisible potency, and consequently that any impairment of it must be absolute, not partial. On this theory, of course, there is no place for the practice of dividing and subdividing the mind, some portions becoming unsound, while others remain sound. Lord Brougham's doctrine is not without warrant, certainly, in the prevalent metaphysical theories of the last century, and, accepting them, it would be easier to reject it with feelings of wonder and surprise, than to refute it. If inconsistency would furnish a conclusive argument against it, it may be found in the statement he once made, that a man might be so unsound as to be regarded by his Maker as irresponsible for criminal acts, while he might be justly held responsible by his fellow-men.

And here we see the injustice that might be committed by making insanity, abstractly speaking, incompatible with testamentary capacity; for if we say that a man who disinherits his heirs-at-law under the delusion that they have attempted to poison him, is thereby *non compos*, how shall we answer the question whether his will should be approved, even if he had bequeathed his property to those heirs-at-law, notwithstanding his delusions?

The effect on testamentary capacity of extraordinary beliefs, fanciful projects, or bequests for impracticable purposes, is frequently not very easily determined. Such things are suggestive of insanity, and the event has sometimes been made to turn on nice distinctions between insanity and eccentricity. In these cases the proper line of inquiry must depend on the circumstances of each particular case, and the decision should be governed more by the dictates of common sense, than any arbitrary rules of law. In some cases there can be little difficulty in arriving at a satisfactory conclusion. If a man noted for some oddities of thinking and acting, but otherwise correct and shrewd, believes that Brandreth's pills are a certain cure for all diseases whatever, and that everybody who would take enough of them would live to a good old age, this notion would hardly vitiate a will making unexpected and unjust bequests having no connection with and tracable in no way to it. If, on the contrary, he had devoted a considerable portion of his estate to the maintenance of a fund for supplying the poor with Brandreth's pills, this, certainly would be a good reason for breaking the will. Take another case. In Massachusetts, lately, an elderly gentleman in failing health, and with divers nervous ailments, was induced to try the movement cure, and came at last to conceive the most exaggerated notions of its medical efficacy, though it never helped him much. Indeed, some of these notions almost, if not quite, amounted to delusion. In this state of mind he made his will, by which he appropriated a

great part of his estate to the establishment of an asylum for nervous invalids to be treated by the movement method. I have no hesitation in saying that that will was the offspring of a morbid nervous condition, if not of delusion, and therefore not to be established. Whether certain mental manifestations are indicative of insanity or only eccentricity, is a point not always easily settled; and no splitting of hairs on the question will prove so satisfactory as the exercise of a little common sense. In many of these cases where, apparently, the mental twist is very limited and of doubtful character, a close scrutiny of the conduct and conversation will show here and there traces of a more extensive influence, thus shedding additional light on the matter in hand.

In presenting the subject of testamentary capacity in the way I have, it was for the purpose of giving to the pathological element the prominence it rightfully deserves, and which consequently ought to secure it a controlling influence in disputed cases. And let me say, in conclusion, that the administration of justice in this particular must often be imperfect, until the light of medical science is freely admitted and used,—not the light that has traveled down to us from the times of Coke and Hale, but that which we owe to the progress of knowledge during the present century—greater, far greater, indeed, than that of all other centuries together.

The Opium Psycho-Neurosis.—Chronic Meconism or Papaverism.

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

IN therapeutics as in surgery potent agencies for good when opportunely and skillfully employed, are capable, when injudiciously used, of doing great harm. The surgeon's knife or cautery may either kill or cure. The blade is much the same whether wielded by surgeon or assassin, but the result—how different! The soothing and tonic constant electric current is but a minimization and regulated dosage of the lightning.

Its indiscriminate use may and does wreck as well as repair. Alcohol, which sustains and saves in so many states of profound depression and exhaustion, destroys also by the irreparable changes its abuse causes in the brain and viscera.

And opium, the "king of pain," and so estimable an agent in many morbid states, obeying the same inexorable law, if too long and unwisely employed, becomes a very "king of terrors," seductively leading its unwary victims with delighted and enchanted feelings into realms of ultimate mental sufferings, where reigns the demon of despair. Link by link the "devils chain" of their thralldom is forged, such as Coleridge's desperate pen has so painfully portrayed; a slavery from which, unaided by the physician's art, there is no escape.

Of late years such terms as iodoism, bromism, ergotism, plumbism, alcoholism and morphinism have become familiar terms in medical nosology, as indicative of morbid states of the system induced by excessive quantities too long used of either of these medicinal agencies, constituting the basis of the respective designations of these diseased conditions.

Synonymous with the last we may with equal propriety use the term *meconism* or *papaverism*, to designate that altered state of the nervous system, which results from the prolonged and excessive use of opium. *Opium narcosis* being probably the best term for designating the poisoning by a single overdose of the drug in contradistinction from the *neuro-psychosis* which is gradually developed by prolonged and gradually increased indulgence in the poison. A gradual mental change undoubtedly occurs in most opium habitués, as well as the most decided mental aberration—mania and imbecility—which sometimes ultimate from opium excess. The propriety of employing the term *opium mania*, however, is extremely doubtful, since the insanities it causes, are not specific and peculiar forms. It more often causes moral, emotional and impulsive perversion, than violent intellectual derangement except in its extreme stages, and the form of mental perversion is not materially different from the characteristic mental derangement to which the affective insanities belong.

The term, opium mania, as applied to the irresistible appetite or habit of indulgence is not a proper designation. The insanity is not in the *appetite*, but in the conduct of the individual which has grown out of the effect of repeated indulgence superadded in many cases to an undoubted hereditary neuropathic factor, which makes insanity a possibility under any excessively prolonged vicious indulgence.

In most of these cases the habit of indulgence becomes resistless, long before any such change of character as entitles to the designation of *mania*, appears in the victim of opium, the opium in some instances even subduing or deferring a threatened outbreak of mania or melancholia, like a spree or "bout of drinking."

In many constitutions a somewhat characteristic delirium, in which specters of various kinds often appear, results from opium, especially in such as are known to inherit a neuropathic constitution, which is as much

entitled to be called *delirium a papavere*, as alcoholic delirium is to be called *delirium or mania a potu*, but neither form of delirium constitutes insanity as ordinarily or properly understood. Still, I believe, when either small quantities of opium or alcohol cause marked delirium, the fact is good evidence of latent psychopathic tendencies. The man who gets wildly drunk on a few drinks of whiskey, or keeps awake all night, seeing with closed eyes visions innumerable on a minimum dose of opium, has a morbidly impressible cerebrum more likely, than the average healthy brain, to respond more markedly and permanently to the ordinary causes of mental overthrow.

Hallucinations, especially of sight are quite characteristic of opium delirium from slight acute poisoning, but they are not especially prominent in the established more or less chronic insanity, induced by long indulgence.

The terms *oinomania* and *methomania* have been employed as well to shield the vicious and immoral drinker who has no disposition and never had, to refrain from drink, as to designate the real and undoubted dipsomaniac, whose ancestry, having dowered him with the evil heritage of an unstable nervous organism, are largely responsible for his weakness.

Opium takers are similarly misunderstood. Some of them are self-made and some are predestined like dipsomaniacs. Some drinkers abandon alcohol for opium. Some exchange the one for the other alternately. Some are to be pitied, others are to be blamed for acquiring the habit. Some, were they to remain exempt from opium, or alcohol indulgence, would tenant the lunatic asylums out of which their vicious indulgence alone keeps them, by satisfying, for a time, their morbid cravings, and thus diverting from other erratic and insane courses.

There are persons among those who take opium, as there are among those who take alcoholic beverages, who become tardily poisoned and enslaved by it, and those who fall speedily under the power of the drug. De Quincy confessed to eight years of happiness from opium, before

he felt its terrible pangs, but sooner or later most organisms are impaired by it.

The case of the distinguished Lord Wilberforce affords the most notable instance on record where adherence to very small daily doses of opium, not sufficient to be felt as a stimulant, were persevered in for many years without apparent injury to the health, though he never could abandon the habit; and an exceptional instance of a centenarian, was found in New York, who had taken opium in large quantities for half a century, without impairment of his physical or mental vigor.

A long-lived opium eater lives at Manchester, New Hampshire. He began in 1849 with minute doses, but slowly increased them until now he consumes a pound of the extract a month. Unlike most slaves of the drug, he is very fat, and has not become mentally a wreck. Certain of the English opium eaters have retained such excellent health, as to lead some physicians, from slender premises, to claim that opium eating, apparently, was not necessarily deleterious. I have known of one instance, where a person took half a grain daily for six months without increasing; but these are rare and exceptional in the largest experience.

I know also a lady, who for thirteen years took anodyne doses of morphia, dosing out the quantity each day herself, and repeating it sometimes as often as six times a day till relief came, who on the advice of her physicians, Drs. Laidly, Lemoine and others, six years ago, abruptly discontinued its use, without suffering much inconvenience and finding after ceasing its use, that she suffered less than formerly. The long use of opium in moderate quantities regularly has diminished hyperæsthesia. It was not usual for her to take a second or third dose daily, she only sometimes did so. Her physicians say she has a uterine fibroid.

There may undoubtedly be found, exceptional cases of habitual alcoholic indulgence for many years, without apparent harm to the organism. But it has not been proven

that the descendants do not suffer in impaired nerve stamina; on the contrary, insanity, idiocy, epilepsy, hereditary inebriety, and other forms of nervous disorder are the common congenital entailments of prolonged alcoholic indulgences. Similar disorders of the nervous system also, but more especially chorea, hysteria, and various intellectual eccentricities in the offspring, may have their starting point in the acquired nerve degeneracy of parents who have indulged long in 'opium. The data are too meagre on this point to make its further discussion profitable, but, I feel safe in saying, from what I have observed of chronic opium poisoning, during the past ten or twelve years, that its effects on the organism of the habituate and his descendants are not usually so profoundly structural as those of alcohol.

Marked changes in the brain substance of chronic alcohol habitués which are recognized by all competent authorities have not yet been demonstrated to exist in the brains of opium eaters. The increase and final shrinkage of interstitial tissue has not been found among the chronic opium poisoned, as they have been discovered in the brains of chronic alcoholics. Yet there are doubtless changes in intimate nerve structure, to be found in the brain and due to opium, quite as characteristic as those caused by the long continued excessive use of alcoholic beverages, though, as yet, undemonstrated.

The dominion of opium is much like that of alcohol. There are those who by reason of a perverted system, founded far back in ancestral disease, take to this drug, after having once felt its effects, as an aquatic animal seeks water. There are others who, after long indulgence and gradual damage to their system come by degrees to feel the need of it as they would of an anodyne or an anæsthetic for neuralgia. The gratification of the desire, after the morbid state of the system is established, is as natural as the withdrawal of the hand which, unaware, gets into the fire, and almost as instinctive in some persons after a certain time of use. The

disordered brain and sympathetic system cry out for help, and any relief in whatever shape it may come is welcome. The victim of opium will, in a case of necessity, take alcohol in lieu of his favorite drug and the drunkard will exchange his accustomed drink for opium. Anything in the shape of a stimulant, will, for the moment, suffice so that it be in sufficient quantities to appease the morbid feeling, deaden sensibility or give a temporary tone to the unstrung system.

Unfortunately the victim of these diseases knows of no succor outside of the original source of his disease. It is our duty to afford that relief.

It is our final purpose in this paper to briefly discuss meconism with special reference to its management and cure.

The parallelism between opium and alcohol ceases in the comparative ease with which the latter, and difficulty with which the former may be abandoned. Self-reformations of drunkards, though not so frequent as we would like to see them, do often occur. The chronic opium eater never reforms himself unaided by medical help, and when he says he is reformed or cured, his assertion should be verified by close observation, before being accepted as truth.

At least I never knew of any one shaking off the thralldom of opium without medical aid. DeQuincy says he finally did, but admits having falsely stated that he had, on several previous occasions, given it up when he had not. It is doubtful if he ever did.

After some months of indulgence in the use of opium, depending upon the rate at which the quantity daily consumed is increased, certain morbid changes in the function of the glandular and nervous systems appear. The liver and bowels become torpid, the stools dry, the skin grows sallow and dry, and in the case of females, I have seen the mammæ lose their hemispherical shape, shrink and become so small and *conical*, with the nipple pointing upwards, as to excite the attention of the patient

and her female friends. Coincidentally with this change in the mammæ, and the progress of the habit, husbands have told me of the failure of all sexual desire on the part of their wives, and some men have confessed this failure of themselves. I have also seen the testes atrophy.

After each fresh dose, a preternatural brilliancy and transparency of the conjunctiva is manifested in some, especially in young persons who have not long taken the poison, followed, after the excitation stage of the drug has passed, by a dreamy look and somnolency, passing often into fitful sleeps in the midst of important occupations.

In nearly all chronic and excessive opium eaters whom I have known, an entire or modified indifference to the graver concerns of life and the ordinary daily affairs of the individual are manifest, combined with a certain unnatural imperturbability of temper, affability and complacency of disposition, and unnaturally impulsive and emotional displays, so long as the impression of the poison is regularly maintained; irritability of disposition and restlessness appearing only when the appetite is irregularly or inadequately gratified. But they are not persistent in any passion except in the pursuit of opium. The moral sense is generally blunted, especially in reference to the gratification of the morbid appetite, but a sense of shame and degradation also abides with many, in consequence of their resistless thralldom.

Any subterfuge or plea to get the drug is resorted to; a simulated neuralgia, diarrhœa or toothache, a cephalalgia, or cough, or pleurisy, in the hope of securing a prescription containing an opiate. These cases in hospitals become adepts, sometimes, at feigning disease for their purpose. They have a powerful motive for becoming acquainted with the symptomatology and nosology of painful affections for the relief of which opium is a *sine qua non*.

The poison of opium after a time undoubtedly paralyzes the sexual appetite and many of the baser passions, such

as anger, malice, revenge, envy, etc., while for a time, at least, it exalts the better feelings. Stimulant doses of opium impel less to motor activity than alcohol, and the movements are better co-ordinated while the intellect remains longer stimulated and secondary prostration is less extreme in the early stages of papaverism.

Alcohol more frequently excites conflicting emotions, often violent and pugilistic, while the psychical impressions of opium in the beginning of the habit, are always pleasant, if positive insanity be not excited or unsound and fitful sleep be not caused by it.

It is a singular fact in connection with the poison of opium, that while it often exalts the better feelings, and makes its victims kind-hearted and well disposed towards mankind, it should obtund the moral sense and the conscience. I never knew one of its victims to be at all scrupulous about the means he or she would employ to get the drug, and I have found them in general to be unreliable in all that pertained to their appetite.

The morbid changes which take place in the nervous system in consequence of slow opium poisoning are rather inferable from symptomatic evidence than demonstrable by discovered pathological changes of structure, and they appear not to be so great or permanent as those of alcohol. Recovery takes place sooner after long use of opium than after confirmed inebriety and is generally more permanent. Alcohol is undoubtedly more destructive to the blood vessels and structure of the brain, and to the structure of the stomach and liver than opium. I never heard of a consumer of pure opium dying of apoplexy or cerebral softening, though laudanum drinkers and mixed inebriates do.

Laudanum drinkers are mixed cases, and their post-mortem lesions would not be particularly instructive.

Precisely what microscopic changes take place in the cells, meninges or neuroglia of the brain, if any, from chronic meconism, have not been demonstrated.

Here is an unexplored but very difficult field in neuro-

pathology, for the reason that deaths directly traceable to chronic meconism are difficult to determine.

The kidneys in gradual meconism in the early stage secrete more water and salts as the excretory function of the skin becomes more paralyzed, and in some cases I have detected excessive quantities of albumen, but opium eaters often die of dropsy. It would be premature to assert that Bright's disease may result from meconism, but I have seen cases in which these conditions co-existed. It would not be unreasonable to expect this degenerate change in the kidney structure in long continued opium poisoning, though the effects of the drug appear mainly in altered function of organs.

In most cases the albumen secretion, when found, has been transitory. Only repeated post-mortem observations and careful microscopic research will reveal the definite and invariable lesions of opium if there are any.

The withdrawal of opium has revealed in different persons almost every conceivable lesion, from cancer, neuralgia, gastralgia, cephalalgia, gallstones and other painful affections and psychical suffering preceding its use, to ulceration of the bowels, insanity, convulsions and dropsical affections which had not existed before.

A druggist in the interior of the State had convulsions and delirium, when he suddenly and greatly reduced or stopped taking opium; they ceased when his physician restored the accustomed poison. He finally died of dropsy.

An actor who consulted me, fell over unconscious during a performance, in consequence of his suddenly withholding his thirty-grain daily dose of morphine.

One of my patients at Fulton died of intestinal ulceration, notwithstanding she got opium regularly, nitrate of silver, turpentine, nutriments, tonics, and a nutritious and unirritating diet. Another in this city, whom I saw a few times, but who was not under treatment for opium poisoning, died of cardiac dropsy and general anasarca; she used thirty grains of morphine, hypodermically, a day. Dr. Elsworth Smith had been attending her.

A medical gentleman came to me for treatment, saying he had been taking a grain a day in two half-grain doses; his symptoms soon showed that he had not told me the truth, for he became quite insane without any further reduction; after upwards of six grains daily of morphine were restored to him, he recovered. I subsequently learned from a physician who had before attempted, but failed to cure him, that he had been taking eight or ten grains daily. A number of other persons mostly medical men have come under my care as "very moderate partakers of opium," when in fact they had used enormous quantities and went through an attack of insanity in consequence of the too sudden withdrawal and deception.

Some time ago I saw at St. Luke's, with Dr. Prewitt and others, a patient whom I knew had too suddenly withdrawn his opium, from the peculiar mental state he was in, and restored him to sanity by gradually restoring his opium. A case of hystero-mania and emotional insanity recovered in two months after being cured of opium. The insanity was evidently caused by the opium. She had previously been successfully treated by a very skillful physician of St. Joseph, for a chronic and painful uterine affection, rendering anodynes necessary.

A case of periodical maniacal excitement from a distance, caused by sciatica, the abortive and poisonous effect of opium and previous malarial poisoning, recovered under treatment of all three conditions, but on his return home and re-exposure to malarial poisoning, he relapsed and died from the injudicious attempt of his druggist to treat him by my prescriptions, which at certain stages of treatment consisted in part of very large doses of aconite and gelseminum, quinine and chloral.

A patient in a neighboring State, who recovered, found himself afflicted by the return of an old gastralgia, and a cough that had never appeared before.

Sequelæ of this kind often present themselves to tax our skill and ingenuity, in devising anodyne substitutes

for opium as well as plans of treatment for the cure of painful maladies, from which opiates must be excluded.

Opium holds its victim no less firmly but with less speedy fatality than alcohol.

Of the vices, habitual and excessive use of alcohol or opium, it is difficult to say which is the most detrimental.

Many a drunkard has abandoned alcohol for laudanum and valerian and made in consequence, for a brief time, a more agreeable and useful member of society, but it was but the exchanging of a miserable reality for an agreeable delusion. The delusion proving in the end a snare and a mocker.

The imperious character of the thralldom of opium, in the advanced stage of the habit, has an important medico-legal significance, which it is the duty of physicians to understand.

The friends and family of an opium habituate are most familiar with the degrading character of the slavery of the mind and nervous system which opium entails. They realize how lost to the family circle as a real member of the household he or she has become, and whether it be father or mother, sister or brother, it is but natural that they should strive to reclaim that which is lost, or if not lost, at least estranged in many of those familiar mental traits with which are blended family love, esteem and reverence. Wholly inexperienced and ignorant, and taking counsel of their desires for what they regard as the welfare of the stricken one, well meant but unwisely devised obstacles to the successful gratification of his habit are contrived.

If the victim of the habit happens to be an old man who has a will to make and an estate to devise, he may, after successfully circumventing the irritating opposition of his kindred, through the assistance and connivance of a designing or ignorant servant, unduly remember the latter and unjustly pass over the claims of the former. I was once called upon to give my opinion in such a case involving a bequest of many thousands of dollars.

In obscure cases of chronic meconism, the diagnosis is easy enough if we have opportunity to enforce, for a time, a deprivation of the drug. Thirty to sixty hours without the accustomed opium will suffice to fully reveal the uncontrollable morbid restlessness or ill-at-ease feeling, the indescribable *malaise* and undone and relaxed state into which these unfortunates fall when their artificial daily support is withheld. Then follows the darting pains in the joints and back, and the pains and aches in the arms and legs; in fact, almost everywhere the general *hyperæsthesia* of the skin; what DeQuincy called (not very scientifically) the "*electric condition*."

The colliquative diarrhœa, at first often quite bilious, the foul tongue, feeble pulse, sense of constriction in the epigastrium, nausea and vomiting, the profuse, cold and clammy perspiration, the extreme sensibility to cold and sound, anorexia and loathing of food, subsultus tendinum, abdominal and muscular pains, borborygmi, insomnia and delirium, present an indescribable picture of suffering (if no medical aid is at hand) when the opium is withdrawn. Medical men know not what they do when they suddenly and entirely take from an habitual user of opium the drug to which he has become enslaved. No cruelty could be greater and no man with much experience with the pitiable victims of this terrible slavery could advocate such a plan of management. No physician who has ever tried the total withdrawal or abrupt weaning plan with the sufferer under his own eye, day and night, could advocate its repetition, that is, when the quantity taken has reached three or more grains daily and the habit has lasted from three to six months or more. I doubt, if even a grain and a half daily could be abruptly withdrawn from a feeble patient who had not taken more, without peril. The tyranny of opium is bad enough without a tyrant physician to "minister" to its enthralled subject. "Whatsoever ye would that others should do unto you do ye even so to them," is the sacred duty of the physician in treating these most pitiable of all of the slaves of morbid

appetite, unless it be the dipsomaniac. Medical men of violent therapeutic proclivities, who advise abrupt abandonment of all opium, overlook the fact that a shattered nervous system is to be reconstructed, which never was, perhaps, strong; a system in which the *Vis medicatrix Naturae* is not and may never have been very strong; a system in which nutrition is and may have been for a long time below par. To throw upon such a person the painful burden of entire withdrawal, is to unmask a battery of Horrors which many constitutions can not endure.

It is culpable malpractice and unpardonable cruelty to so treat an opium victim. At this stage, if the complete withholding of the drug be further persisted in, insanity or convulsions may result, or neuralgia that can not be borne, or fatal heart failure.

The prompt rising and falling of the pulse as opium is restored or withdrawn is quite characteristic, and it is quite singular how a full dose of opium repeated at short intervals and increased as rapidly as seems safe, will arrest the gravest symptoms, just as chloral and valerian will arrest hysteria. In fact, with the undoubtedly real disease which opium engenders, its sudden withdrawal reveals some involuntary simulations of the gravest maladies.

We sometimes in general practice, encounter patients who, having indulged for a long time secretly in small quantities of opium, attempt to break off the habit, and being ashamed to confess it, send for a doctor in the midst of their distress, expecting him to afford relief without knowing the cause.

In one or two instances, years ago, when I knew less about meconism than now, I was much surprised at the tolerance of opium and the promptitude with which this agent relieved and dissipated what appeared to me to be most alarming symptoms in certain patients, never suspecting that I had unwittingly restored a needed and accustomed prop to the system.

It sometimes happens that patients who for the first time stop their daily opium are alarmed at their enteric symptoms and, mistaking them for cholera morbus, are really ignorant of their real cause.

Patients after stopping opium have told me before I gave them anything to relieve their feeling, that they felt as though they were completely broken up and would "just fall to pieces," that "they must die," etc., not seeming to appreciate the real cause of their misery.

It may be that sudden deaths of soldiers on the march, of sailors at sea, and other persons there and elsewhere, where opium could not be had by those secretly habituated to its use and suddenly deprived of it, has been due, sometimes, to the deprivation; and I have no doubt that some sudden deaths in hospitals and asylums are sometimes due to this cause.

To medical men the question: To what extent may an opium habituate be suddenly deprived of opium and what are the invariable consequences of such deprivation, is an important and unsettled question. But one thing is certain, complete, sudden deprivation is generally hurtful and unwise.

While ordinarily it is not safe to take away opium at once and completely, yet many a poor wretch has had to do without it, after being reduced to the alms-house; and many violators of the law have gone to jail and been totally deprived of it, but these are most usually among the irregular users of the drug.

If sudden death, probably from the cause not being suspected, has thus resulted, it has not in these persons often been attributed to this cause.

Not all insane asylums supply the drug to those made insane by it, though opium was a chief reliance before bromide of potassium and chloral, for insomnia, etc., and of course much used.

These unfortunates deserve our sympathy; and whether the sudden deprivation kills or not, it certainly inflicts tortures which have to be seen to be appreciated, and

all physicians who encounter the victims of this poison, should invoke for them the charity of gradual reduction, whether they find them in the asylum for the insane, the alms-house or the prison. If it be inhuman to deprive them of food, it is no less cruel to suddenly take away all opium. The gradation of reduction should be according to the strength and undoubted recuperating powers of each individual, looking well to the function of food assimilation. As we would be treated ourselves so we should treat the unfortunate opium slave. We should reason from ourselves, well, to the patient, sick.

I would not at once withdraw and persistently withhold even a grain daily dose of morphine from one long accustomed to its use, for what Burns said of toothache, more fitly describes the suffering of one suddenly bereft of all his opium: "It is the hell of all disease." When DeQuincy came to record the pains of abandoning opium he said: "I am arrived at an Iliad of woes."

The causes of meconism are many, among actors and professional men especially.

DeQuincy's overdrawn picture of the pleasures of opium, notwithstanding the assurance which he couples with the "beatific vision" of the "immortal druggist" who was the unconscious minister of celestial pleasures," that, "nobody will laugh long who deals much with opium," and the final farewell he bids "to happiness, to smiles and laughter, to peace of mind, to hope and tranquil dreams, and to the blessed consolations of sleep," is largely responsible for the spread of this insidious curse and disease.

Aside from this, the generally known anodyne and narcotic properties of opium have led the brain weary, the heart burdened, and the conscience smitten in all walks and conditions of life, to resort to it. Its Lethean charms have soothed to rest and sleep the wounded in spirit and the broken-hearted; the weary and the heavy laden with the burdens of life's cares and sorrows, all unconscious that its concealed venom would at the last "bite like a serpent

and sting like an adder." To the medical mind, whose mission it is to soothe and heal both mental and physical pain, it is a sad reflection that a *Nepenthe*, so charming as that of opium, should be capable of entailing sorrow so much greater than it soothes. When one considers how opium impairs the sensual appetite it seems singular, at first view, that so many prostitutes use it. They probably take to its use, for the reason they give, viz:— To relieve the *tedium* and *ennui* of their lives, and in the beginning, to supplant the sense of shame and feeling of abandonment which comes to many of them, and to temporarily obliterate the painful memory of better days.

The most frequent cause of chronic meconism is probably the often and unauthorized renewal by patients and druggists of physicians' prescriptions containing opium or its salts, and this leads to two practical suggestions:

1st. The importance of concealing from certain patients upon whom the drug makes a pleasing impression and on whom we are obliged to use it long, as in melancholia, some surgical procedures, etc., the cause of their exhilaration.

2nd. The necessity of forbidding the renewal by druggists of such prescriptions without our order, and of some legal enactment to enforce our wishes.

No physician's prescription containing opium or any other poison ought to be re-filled *ad libitum* without the physician's renewed directions; opinions of courts that these directions are *bona fide*, the absolute property of the patient, to be used as often and on whom he may wish, to the contrary notwithstanding.

Under such ruling a quack may take an eminent physician's prescription and put it to the basest of uses.

TREATMENT.—In treating chronic meconism it is of the utmost importance in the very beginning, to become as thoroughly as possible acquainted with the patient's idiosyncrasies and tendencies to disease. It is essential also, to ascertain for the relief of what disease, if any, the use of opium or morphine may have been resorted

to, in order that a proper plan of treatment may be devised for the pre-existing disease, should it be found persistent, on the withdrawal of the habitual anodyne; a state of things not invariable, though not common.

Quite frequently those gastrodynias and other not profoundly organic, but painful affections, which have led to the use of opium, are found on its withdrawal to have disappeared, the long abeyance in which the painful affection has been kept, having accomplished its entire subjugation. If they return we must treat them.

In incurable affections like cancer, and the last stages of phthisis and the very aged, I should not attempt to entirely withdraw opium, but simply to so regulate its employment as to least impede the secretory and excretory functions, and I believe the opium poison to be positively antagonistic to the rapid progress of scrofula.

I have never yet seen a confirmed meconophagist (if it be lawful to coin such an expression) who began opium in early life, and was a victim of progressive scrofulosis.

After ascertaining the patient's physical condition, it is of great importance to find out if there exists any latent hereditary tendency to insanity or the allied neuroses.

If it be satisfactorily ascertained that the patient is quite healthy and free from inherent predisposition to profound cerebral disease, the process of reduction may be at once begun by cutting off two-fifths or less, of the daily dose of morphine, and substituting for each grain of morphine withdrawn at least two grains of quinine, and for each grain of opium or its equivalent in laudanum, one grain or less of quinine; but in any case not giving less than twenty grains of quinine daily during the patient's waking hours.

In cases where twenty grains of morphine have been daily consumed, after reducing the daily allowance to ten or twelve grains, it is best to wait a few days, usually, before proceeding further, taking care that the

patient eats, exercises and sleeps well, and that the quantity of quinine substituted be sufficient to supplant the morphia withdrawn.

When the further reduction is begun, say in three or four days, it should be commenced and should proceed at the rate of one-half to five-eighths of a grain of morphine daily, and cautiously continued until the last atom is withheld; and this should be at first taken off one of the doses (not from all the doses), from the dose least relied on by the patient for his daily support.

The elixir of the valerianate of ammonia, combined as occasion may require, with drachm doses of the fluid extract of valerian, will come into requisition in two or three-drachm doses, two or three times a day, so soon as the gradual reduction is begun; in some cases the valerianates may be deferred for several days, or dispensed with at first.

In the beginning they should be used as sparingly as possible, as they will invariably be required in large quantities towards the end. The patient should take exercise, and in the morning a sponge bath, with bay rum or whiskey, rubbing the chest and limbs daily, and at night before retiring, a valerianated hot bath.

The case will not progress far before chloral, in from thirty to fifty-grain doses will be required at night, if the hot baths do not sufficiently tranquilize.

Bromide of potassium and bromide of ammonium, repeated in full doses, with some muriate of ammonia and the compound syrup of the hypo-phosphites in full doses, several times during the afternoon and evening, and an ounce and a-half of whiskey or half an ounce of tr. valerian at bed-time, may do for a while in the beginning.

The extract of malt, in one or two tablespoonful doses, will always be a valuable aid at meals; to this, pepsin, pancreatin and bismuth may be added, if desired. The diet should be highly phosphorized or some proportion of iron and phosphorus daily given in the food, if the syrup of hypophosphites is not prescribed.

When the inevitable nausea appears, the diet must be mainly lime-water and milk, orange and lemon ices, and ice cream, strong coffee and cream, or hot beef tea with a few drops of creosote, or such other nutriments and medicines combined, as may be acceptable to the patient's stomach.

Epigastric counter-irritation, of course, will not be amiss, and for this purpose the chloroform liniment answers better than mustard. I have often had the patient wear a plaster, of equal parts of picis burgund., extract of belladonna and ten or fifteen drops of oil of black pepper, over the stomach, and where there is spinal tenderness, over the spine also.

In the process of reduction no backward steps should, if possible, be taken; to this end when the patient tells you, "You are going too fast; that he must have more opium; that he will die if he don't get it," the cannabis indica in from xx. to lx. m. doses, combined with the ammonium, bromides and valerianates, tr. cinch. comp., once, twice or thrice a day, usually suffices to relieve the patient, with the hot baths and supporting diet.

Cannabis indica must not be continuously used for many days without intermission, but Hoffman's anodyne, the aromatic spirits of ammonia with the carminative and aromatic spirits, or an occasional half-drachm or drachm dose of chloroform in the yelk of an egg, should be made to take its place at times.

In extreme cases the patient may be allowed an occasional half-ounce or less of paregoric, with the full dose of tincture of camphor and Hoffman's anodyne added. Aqua camphora and aqua menth. pip., may be given ad libitum.

The best wines and malt liquors are of great service in many cases, especially at bed-time. I have given a pint of ale or beer and two or three drachms of tincture of lupulin, with the effect of sending the patient to sleep sometimes, but not often.

No remedies in the materia medica supplement opium like

quinine and cannabis indica, and as auxiliaries to the withdrawal of opium, chloral, valerian and the bromides, can seldom be dispensed with. In fact all of the calmative neurotics and reconstructive hæmastic tonics may be usefully employed by the skillful physician, excepting, perhaps, atropia or belladonna, which should not be used in chronic opium poisoning during the progress of the withdrawing process. It seems to let the patient down too precipitately, by neutralizing the little opium in the system. The recommendations of Bartholow and others in regard to belladonna in these cases, I do not approve.

Quinine is seldom rejected by the patient who has habitually used morphia by the mouth. It is best to give the quinine undisguised. So effectively does it substitute morphia in some cases, both in effect and taste, in the early stages of withdrawal, that the patient does not for many days discover that he has taken less than his usual quantity of morphia.

In withdrawing opium, we should make it an invariable rule to conceal from the patient the precise amount of opium daily withdrawn and not to disclose to him the precise day on which he is free. It is better to surprise him a week after his emancipation with the announcement of his freedom, than at the precise moment. When the consciousness of a whole week's freedom from the tyranny he has been under for years breaks in upon him, it is a tower of strength to him. Most of these patients have so often made the attempt themselves and failed, that they generally grow skeptical of ever being free.

For the pains in the limbs which sooner or later are sure to appear, the anodyne rubefacients readily suggest themselves, viz. : chloroform, aconite and opium liniments ; volatile, turpentine, and capsicum liniments, cosmoline and camphor, massage ; but *nothing equals sulphuric ether poured on the parts and allowed to evaporate freely*, except it be electricity, either Galvanism or Faradism, but preferably the former. It acts like a charm in every case. Hot clothes give great relief in some cases.

For the inevitable diarrhœa, the terebinthinate emulsion and aromatized castor oil should be first employed. After a few days the nitrate of silver and creosote, or carbolic acid,—and finally camphor and astringents. A diarrhœa of short duration is salutary and natural. A capiscum and camphor pill has been of great service in some cases,—two gr. each, four times a day.

The cardiac palpitation often encountered, is, like the diarrhœa, to be treated on general principles. The bromides generally relieve it, but digitalin, valerian and nux vomica may be added to them.

The irritable stomach and emesis, never absent in the latter stages of withdrawal, call for creosote, lime water, etc., as has already been indicated, but champagne and strong coffee will often answer in their stead.

Much more might be said concerning the treatment of chronic meconism, but our object has been rather to outline its management than to write a treatise.

Chronic meconism is no longer an *opprobrium medicorum*. It requires for its successful management only constant watchfulness and the judicious use of such resources as are abundantly found in neuro-therapeutics. It is surprising with what little real suffering, a patient who has tried so often in vain to relieve himself, can be conducted through the successive steps leading to the abandonment of this powerful drug, if it be not too precipitatively done.

The desire to abandon opium is usually so great with most of its victims, that institutions for the cure of the habit are not absolutely necessary, though they are great aids to weak-willed people, and when properly conducted by thoroughly competent medical men, fertile in knowledge and resources, should be encouraged by the profession, as a great amount of personal attention is needed by each patient. The best institution, however, is a thorough knowledge of the resources of our art, and skill and patience to apply them. A plucky patient may even be successfully treated at his own home, but in general these cases require to be under the constant eye

of a physician, who can encourage them by promptly relieving distressing symptoms and judiciously regulating the withdrawal of the drug. Here, as in other diseases, the greater skill, experience and judgment of the physician, the better it will be for the patient. We have reached a stage in neuro-therapy where chronic meconism must take its place with variola malaria and venereal, among our conquerable foes.

We have helped to forge the chains of opium; it is gratifying to be able to unshackle its pitiable victims. We can free them by the methods indicated, and by electricity. From the beginning to the end of treatment, the constant galvanic current should be employed from five to ten minutes, twice, daily, through the head (and down the spine, if needed) systematically and locally, according to the irritability and pain, and hot baths at bed-time, should be often given when convenient, valerianated if desirable.

The head will bear a descending constant current of six small cells (McIntosh) for one minute. In some cases a much stronger current will be agreeably borne, and with great benefit. The current may be applied longer and stronger, down the spine and to the painful extremities. To the limbs static or Faradic electricity may also be used.

The fluid extract of coca and the concentrated tincture of *avena sativa*, if relied upon exclusively, will prove to be a delusion and a snare. When cures are reported as performed by them in aggravated cases, the physician has generally been deluded by the misrepresentations of his patient.

What the wise man said of all men, is certainly true of many opium eaters in regard to the abandonment of opium, when they are not constantly under the eye and control of their physician, especially if reliance is placed upon a single remedy. The medical man who relies solely on erythroxyton coca, leans on a broken reed, and he who thinks any tincture of oats, however concentrated

and however valuable as a nutrient? tonic, will without other aid cure these patients, is deceived. The best reliance outside of the pharmacopœia, after electricity, is in hot baths, and to be constantly in the open air.

ADDENDUM: The above is an outline of the author's views and experience on the subject, at various times expressed before the St. Louis Medical Society, but especially as to the main points of treatment, in a paper read before the aforesaid Society in May, 1878. Subsequent experience has but confirmed the therapeutical procedures advised in the foregoing paper. The paper is given to the profession as a probable final contribution to an interesting and not yet sufficiently discussed subject, especially in its therapeutic, medico-legal and pathological aspects, as the author's engagements are now of such a nature as to preclude his devoting that special and undivided attention to the management of meconophagism, which many of these cases require, and which can really be best given in many instances by physicians who set apart their homes and their whole time to this subject.

Among the hereditary consequences of meconophagism, which ought to have been noted in the preceding text is the arrest of stature which is sometimes shown in the exceptionally stunted growth of members of families conceived and born after the habit has become confirmed in the mother especially.

Report on Bibliography.

CONTINUED.

IN the present paper it is proposed in acceptance of the request of the Committee, to make a few additions to the "Report on Bibliography" published in the October number of the *ALIENIST AND NEUROLOGIST*. The additions to be made are certainly not few, and it is intended that in making these additions, the researches of the reader in the literature of psychiatry shall be aided as much as possible.

GENERAL PSYCHIATRY.

Since the October number of the *JOURNAL* appeared, there have been issued from the press, works on the general subject of insanity by Clouston and Kräpelin. A work by Mascka, on "Forensic Medicine," is certainly the best contribution to this subject which has appeared for a number of years. Krafft-Ebing's work on "Criminal Psychology," is a valuable guide to those engaged in the practice of forensic psychiatry. Smeth¹ and Sutherland² have discussed the classification of insanity. Sexual perversion in its criminal as well as morbid aspects, has been discussed in a monograph by Bernhordi. Von Speyr has written a valuable monograph on "Alcoholic Insanity;" Grilli, one on "Insanity in Soldiers;" Lombroso, one on "Love in Insanity," one on "Genius and Insanity," and one on "Criminal Man;" Morselli, one on the "Clinical Method of Diagnosis in Insanity," and in conjunction with Buccola, one on "Primary Monomania;" Rambosson, one on "Nervous and "Mental Contagion;" Couton has written a monograph on "Sexual Perversion;" Buckham's work on the "Medico-Legal Relations of Insanity," also deserves attention.

1. *Annal. de l'Academ. de Méd., Bruxelles*, 1882.

2. *Medical Times and Gazette*, Sept. 8, 1882.

SPECIAL PSYCHOSES.

Epileptic Insanity has been analyzed by Roab,¹ Yellowlees,² Helming,³ Fränkel,⁴ Freyer,⁵ Botkin,⁶ Platonoff,⁷ Baker,⁸ Mickle⁹ and Wildermuth.¹⁰ Impulsive insanity, by Pohl¹¹ and Green.¹² Circular insanity, by Tonini,¹³ Kiernan¹⁴ and Kahlbaum.¹⁵ Moral insanity has been discussed from a standpoint favoring its existence, by Wright,¹⁶ Kiernan,¹⁷ Goldsmith¹⁸ and Ribaud,¹⁹ and from an opposite standpoint, by Hay²⁰ and Elwell.²¹ Primary monomania has been discussed by Morselli, Buccola, Kiernan²² and Bjornstrom.²³ Paretic dementia has been discussed from various standpoints, by Baillarger,²⁴ Dorr,²⁵ Camuset,²⁶ Régis,²⁷ Obersteiner,²⁸ Mabile,²⁹ Bechterew,³⁰ Négresco,³¹ Legrand du Saulle,³² Andruski³³ and Ball.³⁴ Communicated insanity has been discussed by Parsons,³⁵

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1. Wiener Med. Woch., No. 36-7, 1883.
 2. Journal of Mental Science, Oct., 1883.
 3. Diss., Halle, 1883.
 4. Allgemeine Zeitschrift fuer Psychiatrie, Band XL, Heft 1.
 5. L'Encephale, No. 4, 1883.
 6. Arkhiv Psikhatrii, etc., No. 2, 1883.
 7. Arkhiv Psikhatrii, etc., No. 2, 1863.
 8. British Medical Journal, September 29, 1883.
 9. British Medical Journal, September 29, 1883.
 10. Allgemeine Zeitschrift fuer Psychiatrie, Band XL.
 11. Jahrbuecher fuer Psychiatrie, Band IV.
 12. Journal of Mental Science, October, 1883.
 13. Archiv. per la Malattie Nervosa, July, 1883.
 14. Detroit Lancet, December, 1883.
 15. Irrenfreund, No. 10, 1882.
 16. Alienist and Neurologist, October, 1882.
 17. Detroit Lancet, October, 1883.
 18. American Journal of Insanity, July, 1883.
 19. Il Pisani, 1882.
 20. Journal of American Medical Association, October 22, 1883.
 21. Detroit Lancet, October, 1883.
 22. Detroit Lancet, October, 1883.
 23. Hygiea, October, 1883.
 24. Annales Medico-Psychologiques, July, 1883.
 25. Diss., Bonn, 1883.
 26. Annales Medico-Psychologiques, July, 1882.
 27. L'Encephale, No. 4, 1883.
 28. Wiener medizinische Wochenschrift, No. 33, 1883.
 29. Annales Medico-Psychologiques, July, 1883.
 30. Meschdunanodnoja Klinika, No. 8, 1882.
 31. These de Montpellier, 1883.
 32. Gazette des Hopitaux, September 11-25, 1883.
 33. Arkhiv Psikhatrii, etc., No. 2, 1883.
 34. L'Encephale, No. 30, 1883.
 35. Alienist and Neurologist, October, 1883.

J. T. Montgomery¹ and Rambosson. Delirium grave has been analyzed by Binswanger² and Majorfi.³ Acute Idiopathic insanity has been discussed by Gnouck.⁴ Melancholia agitata has been discussed by Schüle.⁵ Melancholia attonita, by Bechterew.⁶ Early dementia in young hereditary lunatics has been the subject of a paper by Gouthier.⁷ Transitory insanity has been discussed by Krafft-Ebing⁸ and Silvio.⁹ Phthisical insanity, meaning the type of cases grouped by Clouston, under that title, has been discussed by Green.¹⁰ Sexual hypochondriasis has been discussed by Loundes.¹¹ Congestive mania, which seems to be an ordinary type of acute mania, is discussed by Legrand du Saulle.¹² Doubting insanity is discussed by Ball¹³ and Cabarde.¹³ Puerperal insanity is discussed by Erlenmeyer.¹⁴ Insanity in children has been analyzed by Clevenger.¹⁵

ÆTIOLOGY.

Traumatism in its relations to insanity is the subject of papers by Brower¹⁶ and Wherry.¹⁷ Paralysis agitans has been discussed, as regards its relations to the causation of insanity, by Parout¹⁸ and Peeters.¹⁹ Post febrile conditions as a cause of insanity have been discussed by Kirn.²⁰ The climacteric as a cause of melancholia has

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1. American Journal of Neurology and Psychiatry, November, 1883.
 2. Charité Annalen, VI.
 3. Archiv. per la Malattie Nervosa, July, 1883.
 4. Irrenfreund, No. 2, 1883.
 5. Ibid.
 6. Meschdunanodnoja Klinika, No. 4, 1882.
 7. These de Paris, 1883.
 8. Irrenfreund, No. 8, 1883.
 9. Archiv. Ital. per la Malattie Nervosa, September, 1883.
 10. Journal of Mental Science, October, 1883.
 11. British Medical Journal, September 29, 1883.
 12. Gazette des Hopitaux, July 16, 1883.
 13. L'Encephale, No. 1 and 2, 1882.
 14. Centralblatt fuer Nervenheilkunde, 1882.
 15. American Journal of Neurology and Psychiatry, November, 1882.
 16. Alienist and Neurologist, October, 1883.
 17. British Medical Journal, April 13, 1883.
 18. Annales Medico-Psychologiques, September, 1883.
 19. Bull. de la Soc. de Med. Ment. Belgique, 1882.
 20. Allgemeine Zeitschrift fuer Psychiatrie, Band XL, Heft 1.

been discussed by Krakauer.¹ Cerebral pressure as a cause of insanity has been discussed by Schuller.² Lead as a cause of insanity has been discussed by Clark,³ and as a cause of parietic dementia, by Camuset.⁴ Rheumatism as a cause has been the subject of a paper by Heinlein.⁵ Alcohol as a cause of insanity has been discussed by Moeli,⁶ and as a cause of parietic dementia, by Dorr⁷ and Camuset.⁸ Syphilis, in its relations to parietic dementia, has been discussed by Obersteiner⁹ and Négresco.¹⁰ Variola as a cause of parietic dementia has been discussed by Mabile.¹¹ High temperature, in its ætiological relations, is the subject of papers by Deecke¹² and Victor.¹³ Misuse of chloroform has produced acute hallucinatory psychoses, according to Svetten. Iodoform has produced insanity in a case reported by Seeligmüller,¹⁴ whose results confirm those previously reported. Onanism has produced a species of melancholia in two little girls, aged four and ten, according to Zambaco.¹⁵ Heredity in its relations to insanity has been discussed by McBride,¹⁶ Spitzka,¹⁷ Madigan,¹⁸ DeMontyel¹⁹ and Ball,²⁰ and in relation to parietic dementia, by Régis,²¹ Rey²² and Ball.²³ Female diseases in relation to insanity have been

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1. Allgemeine Zeitschrift fuer Psychiatrie, Band XL, Heft 1.
 2. Allgemeine Zeitschrift fuer Psychiatrie, Band XL, Heft 12.
 3. Journal of Mental Science, October, 1883.
 4. Annales Medico-Psychologiques, September, 1883.
 5. Aertzl. Intell., No. 30, 1883.
 6. Charité, Annalen, J. VIII.
 7. Diss., Bonn, 1883.
 8. Annales Medico-Psychologiques, September, 1883.
 9. Wiener medizinische Wochenschrift, No. 21, 1882.
 10. Thèse de Montpellier, 1883.
 11. Annales Medico-Psychologiques, September, 1883.
 12. Journal of Insanity, July, 1883.
 13. Zeitschrift fuer Psychiatrie, Band XL, Heft 1.
 14. Berliner klinisches Wochenblatt, No. 19, 1882.
 15. L'Encephale, No 1 and 2, 1882.
 16. Alienist and Neurologist, October, 1883.
 17. Ibid, July, 1883.
 18. American Journal of Neurology and Psychiatry, November, 1883.
 19. L'Encephale, No. 4, 1883.
 20. Ibid.
 21. Ibid.
 22. Annales Medico-Psychologiques, Sep'tember, 1883.
 23. L'Encephale, No. 4, 1883.

discussed by Ellen Powers,¹ Peretti² and Vedeler.³ Fright as a cause of insanity has been discussed,⁴ and its relations to grave delirium, demonstrated in one case by Binswanger.⁵ General ætiology has been discussed by Arndt. Phthisis as a cause of insanity has been discussed by Clark.⁶

COMPLICATIONS.

Female diseases have been shown by Goodell,⁷ to be producible by psychical disturbance. Ear diseases have been found in a number of cases of insanity, by Fürstner.⁸ who believes that they only modify insanity, and may be even produced by it. Othæmatoma has been discussed by Madigan,⁹ who believes it to indicate a grave prognosis, and to be of central origin. Eye diseases. Borysiekiewicz¹⁰ has confirmed previous researches as to the relation of eye disease to the psychoses. Bone degeneration has been discussed by Neumann,¹¹ Wigglesworth,¹² Mickle,¹² Yellowless¹² and Ley,¹² who confirm previous results, to the effect that insanity does produce trophic changes in the bones. Glycosuria—DeWolf¹³ has discussed insanity and glycosuria, and Hughes¹⁴ melancholia and glycosuria, and Turner¹⁵ typhomania and glycosuria.

SYMPTOMATOLOGY.

Delusions and hallucinations have been discussed by Siemens,¹⁶ Jugel,¹⁷ Lechner,¹⁸ Gautier de Beauvallon¹⁹ and

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1. Diss., Zuerich, 1883.
 2. Berliner klinisches Wochenblatt, No. 10, 1883.
 3. Norsk Magazin fuer Læge-videnskabens, 3, Band XIII.
 4. Alienist and Neurologist, October, 1883.
 5. Charité Annalen, Jahrgang, VII.
 6. Journal of Mental Science, October, 1883.
 7. Medical and Surgical Report, November 10, 1883.
 8. Zeitschrift fuer Psychiatrie, XL, Heft 1.
 9. Alienist and Neurologist, October, 1883.
 10. Centralblatt fuer Augenheilkunde, 1873.
 11. Diss., Halle, 1883.
 12. British Medical Journal, September 29, 1883.
 13. Journal of the American Medical Association, December 8, 1883.
 14. Weekly Medical Review, October 20, 1883.
 15. Medical and Surgical Reporter, September 10, 1883.
 16. Neurologisches Centralblatt, No. 20, 1882.
 17. Bulletin de Soc. Med. Ment., 1882.
 18. Orvosi Hetilap, No. 20, 1883.
 19. Thèse de Paris, 1883.

Kiernan.¹ Paretic apoplectiform and epileptiform attacks have been discussed by Bechterew.² Pulse and respiration of the insane, by Ragozin³ and Grashey.⁴ Symptoms of psychical recovery, by Guillemin.⁵ Memory among the insane, by Bounaud.⁶ Cerebral localization in relation to the psychoses has been discussed by Lewis,⁷ Ross,⁷ Mickle,⁷ Beach,⁷ Horsley,⁷ Wigglesworth,⁷ Shattleworth⁷ and Ireland.⁷ Stupor has been discussed by Kowalewsky.⁸ Psychic symptoms of the vesanias, have been discussed by Gereute. Suicide among the insane has been the subject of a paper by Clements.⁹

TREATMENT.

Iodoform in insanity has been discussed by Eckelman.¹⁰ Untoward effects of hyoscyamine, by Schüle.¹¹ Baths in insanity, by Millet.¹² Treatment of bed-sores, by Reinhardt.¹³ Oöphorectomy in insanity, by Tauffer¹⁴ and Lafenauer,¹⁴ who regard it as at best, useless. The use of seclusion in insanity has been discussed by the *Medical Times and Gazette*,¹⁵ and the *American Psychological Journal*.¹⁶ Chloral hydrate has been discussed by Reneker.¹⁷ Education in the prophylaxis of insanity is discussed by Adriano.¹⁸ Paraldehyde is discussed by Guge.¹⁹

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1. American Journal of Neurology and Psychiatry, November, 1883.
 2. Meschdunanodnoja Klinika, No. 8, 1883.
 3. Diss., St. Petersburg, 1883.
 4. Archiv fuer Psychiatrie, Band XIV.
 5. Thèse de Montpellier, 1883.
 6. Thèse de Paris, 1883.
 7. British Medical Journal, September 29, 1883.
 8. Arkhiv Psikhatrie, etc., No. 2, 1882.
 9. Thèse de Paris, 1883.
 10. Allgemeine Zeitschrift fuer Psychiatrie, Band XL, Heft 7.
 11. Ibid.
 12. L'Encephale, No. 2, 1883.
 13. Allgemeine Zeitschrift fuer Psychiatrie, Band XL.
 14. Orvosi Hetilap, No. 21, 1882.
 15. September 8, 1883.
 16. July, 1883.
 17. Allgemeine Zeitschrift fuer Psychiatrie, Band XI.
 18. Archivio per la Malattie Nervosa, 1883.
 19. Zeitschrift fuer Therapie, August, 1883.

Acetal as a hypnotic, by Berger,¹ Hiller,² Stottenkoff³ and Peretti.⁴ Jamaica dogwood, Rey.⁵

FORENSIC PSYCHIATRY.

Simulation of insanity by the sane and insane is discussed by Siemens;⁶ by the sane by Fritsch;⁷ and Krafft-Ebing, whose case became insane from simulation; mimicry among the insane, by Bonnaud.⁸ Criminal lunatics, by Siemens.⁹ Orange,¹⁰ Sommers,¹¹ Zier,¹² Lellorain,¹³ Motet,¹⁴ Fränkel,¹⁶ Krafft-Ebing¹⁶ and Deckman.¹⁷ Child murderers, by Moreau. Legal status of demented and imbeciles has been analyzed by Jastrowitz.

ASYLUM MANAGEMENT.

Insane colonies have been discussed by Lione.¹⁸ Minor details of asylum management, by Clarke,¹⁹ Schläger,²⁰ Hurd,²¹ Schäfer²² and Fischer.²³ Rey²⁴ discusses the asylums of Austro-Hungary,

ALCOHOLISM, MECONISM, ETC.

Delirium tremens. Bumm,²⁵ has found glycosuria and albumenuria to result from delirium tremens. Roulet²⁶

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1. Breslauer ärztliche Zeitschrift, March 24, 1883.
 2. Deutsche medizinische Wochenschrift, No. 8, 1883.
 3. Centralblatt fuer Nerven., No. 6. 1883.
 4. Irrenfreund, No. 5, 1883.
 5. Annales Medico-Psychologiques, September, 1883
 6. Archiv fuer Psychiatrie, Band XIV.
 7. Wiener medizinische Presse, No. 38, 1883.
 8. Thèse de Montpellier, 1883.
 9. Allgemeine Zeitschrift fuer Psychiatrie, Band XL.
 10. Journal of Mental Science, October, 1883.
 11. Allgemeine Zeitschrift fuer Psychiatrie, Band XL.
 12. Friedreich's Blätter, Heft 2.
 13. Thèse de Paris, 1883.
 14. L'Encephale, No. 4, 1882.
 15. Allgemeine Zeitschrift fuer Psychiatrie, Band XL.
 16. Friedreich's Blätter, Heft 2, Seite 100.
 17. Allgemeine Zeitschrift fuer Psychiatrie, Band XXXIX.
 18. Arkhiv Psikhatrii, No 2, 1883.
 19. Journal of Mental Science, October, 1883.
 20. Allgemeine Zeitschrift fuer Psychiatrie, Band X.
 21. Alienist and Neurologist, October, 1883.
 22. Ibid.
 23. Ibid.
 24. Op. Cit., 1883.
 25. Berliner klinische Wochenschrift, No. 25, 1883.
 26. Wiener medizinisches Blatt, No. 53, 1882.

discusses alcoholism. Hereditary alcoholism, or a condition in which the nervous system predisposes to alcoholism, is discussed by Geudron,¹ Rowlet¹ and Comtesse.¹ Dipsomania is discussed by Lasegne² and Ball.³ Inebriety, by Régis,⁴ Crothers,^{5,6,7,8,9} Hughes,¹⁰ Wright^{11, 12} and Howard.¹³ Meconism is discussed by Burkhart,¹⁴ Landowski,¹⁵ Tambaco,¹⁶ Blanche,¹⁷ Obersteiner¹⁸ and Madigan.¹⁹ Chloroformism is discussed by Svetten.²⁰ Etherism is the subject of a paper by Legrand du Saulle.²¹ Absinthism is discussed by Gauthier.²²

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1. Centralblatt fuer Gesundheitspflege, No. 8, 1883.
 2. Archives Générale de Médecine, September, 1883.
 3. L'Encephale, No. 3, 1882.
 4. Ibid, No. 2.
 5. Alienist and Neurologist, July and October.
 6. Medico-Legal Society Proceedings, 1882.
 7. Journal of Nervous and Mental Disease, April, 1882.
 8. Quarterly Journal of Inebriety, January, 1882.
 9. American Journal of Medical Sciences, July, 1882.
 10. Alienist and Neurologist, January, 1882.
 11. Alienist and Neurologist, April, 1882.
 12. Detroit Lancet, 1882-83.
 13. Quarterly Journal of Inebriety, July, 1883.
 14. Zeitschrift fuer Psychiatrie, Band XL., Heft 2.
 15. Progrés Méd., No. 35, 1882.
 16. L'Encephale, No. 2, 1882.
 17. Annales Medico-Psychologiques, September, 1883.
 18. Brain, October, 1882.
 19. American Journal of Stimulants and Narcotics, Vol. I.
 20. Wiener medizinische Presse, No. 47, 1882.
 21. Progrés Méd., No. 35, 1883.
 22. Annales Medico-Psychologiques, September, 1883.

SELECTIONS.

NEUROPATHOLOGY.

CHARCOT ON APHASIA.—These lectures, previously unpublished, have been reported (*Gazz. degli Ospitali*) by Dr. Rummo, with the consent of the author. Aphasia is divided into four varieties, depending upon the elements of which speech is composed. Two are motor, and two sensory. The motor forms of aphasia are: first, loss of memory of the processes used in articulating; and, secondly, loss of memory of the processes used in writing—agraphia, or aphasia of the hand. There is no paralysis; other kinds of movement are performed without difficulty. The motor memory for those special movements is alone destroyed. The sensory forms of aphasia are: first, visual aphasia or loss of memory for written signs (*word-blindness* of Kussmaul); and, secondly, auditory aphasia or loss of memory for spoken words (*word-deafness* of Kussmaul). Prof. Charcot has had the good fortune to see the two motor forms and the visual absolutely separate and uncomplicated. One patient was unable to speak, although he could read, express himself in writing and understand what was said to him. One instance of pure agraphia was observed. The patient could speak, read and understand what he heard. Another patient could speak, understand what was said, and, though able to express himself in writing, was unable to read, and it was only by retracing the characters that he was able to spell out even what he had himself written. The cases of word-deafness that have been recorded have been very rare, and the author does not think that they are at all conclusive. In regard to the localization of the visual center, experimental research is put aside for two reasons. In the first place, it is not safe to argue from dogs and monkeys to men; in the second place, the results obtained by different investigators are at variance; Ferrier, for example, placing this center in the *pli courbe* (angular gyrus), Munk in the occipital lobe. The center for the motor memory of articulation is fixed by necropsies for right-handed persons in the foot of the third left frontal convolution. One case is

on record in which the island of Reil was alone affected. The motor memory for writing is ascribed by Exner to the foot of the second left frontal convolution. The visual and the auditory memory for words are seated respectively above and below the horizontal branch of the fissure of Sylvius; the visual center being in the *pli courbe*, the auditory in the first temporo-sphenoidal convolution. It may be added that the author and Pitres are preparing a work to establish their view, that all the motor centers of the cerebral cortex are grouped in the two vertical convolutions respectively in front of the fissure of Rolando and behind it; namely, the ascending frontal and the ascending parietal. It should be mentioned that hemiopia or more of less narrowing of the field of vision usually accompanies word-blindness (loss of memory of written signs); a fact generally unobserved. Hemiopia is, therefore, sometimes due to a cortical, and not to a basilar lesion or affection of the optic tract. It may be added that the honor of having sown the first germs of the theory of word-blindness and word-deafness is assigned to Broadbent. Although that author did not coin special names for these disorders of speech, he and Bastian must be considered forerunners of Kussmaul and Wernicke.—*London Medical Record*.

NERVOUS CORYZA.—Dr. Joseph Hertzog relates the case of a young lady, of nervous temperament and family, who nearly every day had paroxysms of sneezing. The nasal mucous membrane became swollen and the nose was obstructed; there was a serous, and sometimes a purulent discharge from the nostrils, lachrymation, and diminution of smell; flushed face, frontal headache, aural tinnitus, and burning sensations in the throat and external ear. The entire attack lasted two or three hours, and was usually shortened in its duration if the patient placed her back to the fire. During the menstrual periods the attacks were more severe. Nothing abnormal was to be discovered in the throat or nose during the intervals between the attacks. A weak soda solution into the nostrils was ordered with good effect. The author observed the same condition, which he denominates *rhinitis vasomotoria*, in a child two years old. And whenever the child took a nap in a hammock in the garden, it would be awakened by a strong fit of sneezing accompanied by a nasal discharge, lachrymation, and all the other symptoms of severe coryza. The attacks lasted

about two hours, and did not occur if the child was put to sleep in the house. Dr. Hertzog regards the affection as a vasomotor neurosis, and thinks that it arises in individuals of nervous disposition in consequence of some peripheral irritation, which, by reflex influence, excites the vasomotor nerves of the nasal cavity to greater activity. As a consequence, there is increased afflux of blood to the parts, giving rise to swelling of the mucous membrane and increased secretion. The author states incidentally that hay-fever is also a nervous coryza, and that the asthma accompanying it is of reflex origin. In addition to the commonly employed remedies, the author recommends the vasomotor remedies, aqueous extract of ergot (9 to 13 grains per diem, in pill form), atropine, and especially Fowler's solution (3 to 10 drops three times a day). Other drugs may be used, as quinine, cannabis indica, iron, zinc, bromide and iodide of potassium, and the salicylic preparations. Sea-baths, cold water applications, and electricity may sometimes be of service.—*Allgemeine medicinische Central-Zeitung*, October 24, 1883.—Abstract from *New York Medical Record*, Dec., 1883.

CHLORAL SOMNAMBULISM.—IN THE PRACTICE OF THE EDITOR.—Among the singular and exceptional effects of chloral in neurotic subjects, the writer has lately observed the active development of a phenomenon long latent in a patient under treatment for a cerebro-spinal affection. The patient in early life was a somnambulist, having often performed various feats of sleep-walking in boyhood, and once having fallen down stairs. His sleep-walking propensity has been abeyant for thirty years and more, until within the past few months, when, under the use of a thirty-grain night-draught of chloral hydrat. and bromide of potassium, or under chloral hydrat. alone in similar doses, the propensity has invariably returned. The patient would get up an hour or so after appearing to go to sleep under the chloral, take off his shirt and walk to the bath room and other places, go back to bed again, and fall into a profound sleep for a short time, to repeat the process in an hour or so. The shirt performance has been invariably repeated whenever chloral has been given, and the other somnambulistic acts are always about the same. The patient has cerebral arteriole hyperæmia with vertiginous sensations, unsteady gait, femoral hyperæsthesia unilateral, the latter especially when sitting down, and other evidences of unequal intracranial blood pressure,

the intellect not being disturbed. This case and others like it, serve to confirm the view that somnambulism is caused by incomplete sleep, or sleep of the brain only in part, *i. e.*, a comparative quiescent, perhaps anæmic state of limited areas in which sleep is perfect, while an imperfect wakefulness, and greater vascular activity persists, as in the waking state, in other portions of the cerebrum.

TUMOR OF THE PONS.—Prof. Fischel lately presented to the St. Louis Medico-Chirurgical Society a small tumor taken from the anterior portion of the pons Varolii. The patient, aged twenty-nine, had been ailing two or three weeks with a continuous headache. He was pale and cachectic when the doctor saw him, five days previous to his death. He said that he had continuous pain over the entire head, and his physician said he had a malarial trouble. The stomach was irritable, and vomiting frequent. There was no tenderness in the region of the stomach; the tongue was clean; there was desire for food, but inability to retain it. The patient did not suffer from any want of sensibility, or suffer mentally; his mind was clear. He did not go down to business, but his affairs were reported to him daily, and given due attention. This irritability of the stomach, which the doctor was unable to ascribe to any stomach trouble, made him suspicious. The temperature was normal. The pulse was between sixty and seventy. Prof. F. thought it was more serious than malaria. The cause of the trouble was not diagnosed, and till two days previous to death there was little change. The pulse and temperature remained normal; the stomach continued irritable. Forty-eight hours before his death he became comatose, and remained so till he died. There was no apoplectic attack. No paralysis was found. The white matter at the base of the brain exceedingly soft, pultaceous. It simply fell apart if touched. The ventricles contained a great deal of serum. On cutting through the pons the tumor was found. The substance of the pons seemed normal. The tumor was imbedded in it, but came out easily.

NEUROTHERAPY.

PROGRESS IN NEUROTHERAPY—The therapeutic value of the salts of nickel has been investigated by Dr. DaCosta, of Philadelphia. Of the chloride, bromide, acetate, sulphate, and phosphate, the sulphate and bromide

proved the most useful. In obstinate diarrhea excellent results were obtained from one to two-grain doses of the sulphate four times a day. In one such case, associated with valvular disease of the heart, it succeeded after other remedies failed. The tonic effect so much spoken of was not marked. It is slightly sedative and anoydne and was found serviceable in chronic catarrh of the stomach. The bromide was found to allay headache, convulsive movements, and to act satisfactorily as a sedative to the nervous system. In epilepsy it acted quite as well as any of the potash bromides, and in one instance it succeeded after the others had failed to afford any relief. It lowers the temperature and reduces the pulse slightly. Five to ten grains were sufficient to produce the desired effect. The value of rhus toxicodendron as a remedy of the greatest certainty in rheumatism, has been brought to the notice of the profession by Dr. Gifford, of Indiana. He prefers the freshly prepared alcoholic extract, which he gives in small doses night and morning.

Dr. Flint has recently tried oil of wintergreen in rheumatism in Bellevue Hospital. He gives ten drops several times a day in flax-seed tea or milk. The results have been better than with salicylic acid. Among the remedies for sea-sickness proposed from time to time, may be mentioned the hypodermic injection of from one-third to one-half a grain of acetate of morphine, which Mr. Vincent, of the Cunard Royal mail service, claims is by far the most useful of all remedial measures. A substitute for morphine has been discovered in a leguminous plant called piscidia erythrina, which grows in the volcanic soil of Jamaica. It takes its name from its property of narcotizing fishes—a property taken advantage of by the natives. Its properties have been investigated by M. Landowsky (*Gaz. Hebdom*, August 31, '83). He used the alcoholic extract of the bark, the administration of which in forty-minim doses, was followed by a calm sleep of twelve hours. The advantages claimed for it are, that it does not cause headache, or malaise, and does not constipate. Paraldehyde, the new hypnotic, has been made the subject of investigation. In physiological action it strongly resembles chloral. A dose of forty grains produces quiet refreshing sleep for from four to seven hours. It strengthens the heart's action, gives rise to no unpleasant symptoms, and it is believed that it will to a large extent take the place of chloral.

A case of chorea which resisted all other remedies, was shown recently, at the medical clinic of Prof. Da Costa, cured by hyoscyamine. The drug was given *ter die*, in doses sufficient to produce very slight characteristic effects, beginning with gr. one-two-hundredths. The latest remedy for the relief of neuralgia, says the London *Lancet*, is hyperosmic acid. It is administered hypodermically, in the strength of one per cent. solution of the acid. Billroth injected the above remedy, between the tubercischii and trochanter, in a case of chronic sciatica, and within a day or two the pain was relieved and eventually disappeared.—Abstracted from Canada *Lancet*.

SURGERY AMONG THE INSANE.—Schuele has discussed (*Allg. Zeitschrift fuer Psych.* Band xxxiv.) surgery among the insane. Depillation occurred automatically in anæsthetical idiots or induced by delusions. One patient tore out the hairs of his beard singly, in the supposition that he would become an angel and receive for each hair a feather. Cephalhæmatomata frequently occurred in consequence of blows on the head. Not rarely, nails, broken pieces of glass, and needles were pushed under the scalp. One melancholiac drove a nail through his temples. Others tore out eyelashes, or rubbed sand into the conjunctivæ. In consequence of continuously rubbing his eyes with his arm sleeves, one patient was attacked by double-sided iritis, cataract, and finally complete amblyopia. Another pushed long, sharp-pointed splinters into his ear, till otitis interna, and at last deafness, set in. One hallucinated patient cut his tongue off at the root, with an extremely dull pocket-knife, the edge of which was notched. The enormous wound gradually healed by granulations, which pushed themselves so far forward, that at last speech became intelligible. One patient tore a living toad to pieces with his teeth and swallowed it. Glass was swallowed often, without any damage. The fæces in one such case looked as if they were covered with trachyta. One chronic maniac tore, during one night, several yards of a thick woolen carpet off, and swallowed the same *in continuo*. Coprosthesis was the consequence. With the aid of fingers and long forceps the corpus delicti appeared, gradually unrolling itself, like a huge ribbon. In another case the two-third ctm. thick and fifteen ctm. long spoon-handle was swallowed. Some months later some small pieces of it, thickly covered with blood, made their appearance in the fæcal discharges. There was much hæmorrhage,

accompanied by colicky pains. A year and a half later the rest of the handle was extracted from the bottom of a large abscess in the ileo-cæcal region. The wound healed without leaving a fistula. The gravest injuries of such character generally healed far more favorably than in the sane who have met with similar accidents. The nipples were frequently cut off by females. Very often injuries were inflicted on the genital organs and the anus. One patient extirpated his testicle, having lost the other in a battle. Others again amputated the penis. One female idiot pushed a comb so far and with such force into the vagina, that its teeth penetrated the rectum and rectal mucous membrane. Most injuries were committed during the night.

BARIUM CHLORIDE.—This drug is much used by certain neurologists, for purely empirical reasons. Dr. S. Ringer and H. Samsborg, have found (*British Medical Journal*, August 11, 1883,) that: barium chloride resembles digitalis markedly in its action on the circulation. It retards pulse-rate, increases length and force of the cardiac systole, causing ultimately systolic arrest, decreases arteriole caliber, and increases blood pressure. All these effects continue when the circulatory system is freed from central nervous control, and must therefore be due to the direct action of the drug on the heart. The excised heart was arrested in full systole by feeding it with blood containing barium chloride. The local application of a dilute solution of the salt, caused local spasm at the point of application. It was impossible to affect the caliber of the vessels through the nerves apart from the direct local action. The therapeutic value of barium chloride yet remains to be determined. The drug is clearly a very powerful one, and in this respect is widely separated from its chemical analogue, calcium chloride. As to the direction in which clinical observation should extend, a clear indication is to be found in the digitalis-like action of the drug.

TREATMENT OF EXOPHTHALMIC GOITRE.—From upward of seventy cases, and fortified by the observations of Von Dusch, Eulenburg, Meyer, Erb, and others, Dr. Chvostek regards the rational employment of galvanism as the most important part of the treatment of Basedow's disease. He recommends the ascending constant current applied to the cervical sympathetic, on each side, one

minute or less, to the spinal cord (the anode at about the fifth dorsal spine, the cathode high up in the cervical region); through the occiput (one pole at each mastoid process), and in certain cases also through the temples, for one minute or less, and weak, the patient feeling but slight sensation. Local galvanization of the thyroid gland for about four minutes, the current to be reversed at the end of each minute. The applications should be made every day if possible. Good results were obtained. In the most severe cases cure or marked improvement being recorded. In three cases death resulted from excessive anæmia or complications.—*Centralbl. fuer klin. Med.*

AN ACID SOLUTION OF THE HYPOPHOSPHITES.—Dr. George S. Gerhard, of Ardmore, Pa. (*Philadelphia Medical Times*, November 3, 1883). ℞ Calcii hypophosphite, Potassii hypophosphite, Sodii hypophosphite, āā gr. j.; Quinina hypophosphite, Mangani hypophosphite, āā gr. $\frac{1}{4}$; Ferri hypophosphite gr. $\frac{1}{2}$, Strychnina hypophosphite gr. $\frac{1}{120}$, Glycerini minim iij., Liq. acidi. hyposulph. minim ij., Aq. ad. f. ʒ j. "The hyposulphurous acid prevents the precipitation of at least two of the salts (those of iron and manganese)." The solution is clear, slightly fluorescent, and pleasantly acid. It increases the desire for food, and agrees with the most sensitive stomach.

ANATOMY.

SEMI-DECUSSATION IN THE OPTIC CHIASM.—Deutschman has recently (*Archiv fuer Ophthalmologie*, Band XXIX. Haftel I,) reported a case, which seems to confirm the view that there is a semi-decussation of the optic nerve in the chiasm. The patient was an inmate of a local hospital for the insane, who had lost one eye forty years before, the other remaining intact. There was found on autopsy atrophy of optic nerve on the injured side, and atrophy of both optic tracts. The optic nerve degeneration close to the chiasm was not complete. It was partial in both tracts, being more marked in the tract on the opposite side. The most decided atrophy was in the optic nerve on the injured side in the inner, upper, and supero-temporal segments, and less so in the lower and infero-temporal segments. The most marked degeneration was on inner side of the left optic tract.

CLINICAL NEUROLOGY.

MASKED EPILEPSY.—A treatise on this complaint, by E. Hjertstrom, is reviewed in the *Nordkist medicinskt Arkiv*, vol. xv., No. 8. The author defines masked epilepsy as a form of acute relapsing mania—or of mania becoming chronic through relapses—without convulsive seizures, but to which an epileptic character is imparted. His principal object is to offer an explanation of the disease from an anatomical and physiological standpoint. Basing his conclusions upon Nothnagel's investigations and the opinions of Meynert and others, Hjertstrom assigns as the cause of the psychical phenomena in the latter, spasm of the nutritive vessels of the cortical layers, produced by an irritation of the vaso-motor center. All the symptoms can be explained by the pathological condition of the cerebral vessels during the paroxysm—but particularly the loss of consciousness, or amnesia, which is more complete in proportion to the severity of the spasm. The alternation of psychical symptoms and convulsions is regarded, in accordance with Nothnagel's theory, as due to the co-ordinate and yet independent relation subsisting between the vaso-motor and the convulsive centers, the minimum of irritability at the latter point being considered to exceed the minimum of irritability at the former.—*N. Y. Med. Journal.*

PATHOLOGY.

RELATION OF THE NERVOUS SYSTEM TO ANEURISM.—As the result of the careful clinical observation of a number of cases of aneurism, Dr. Botkin came to the conclusion that in these cases certain parts of the nervous system had become diseased, and that the diseased condition of the arterial wall, which led to the production of the aneurisms, was a secondary result. With a view to ascertain whether injury to nerve-trunks affect the structure of the vascular tissues, Levascheff undertook the following investigation:

The sciatic nerve of a dog was exposed close to its exit from the pelvis; and, in order to keep up irritation of the nerve-fibers, a thread, soaked with a dilute acid (sulphuric) or saline solution, was drawn through the nerve. In this way, a continual stimulation was kept up; and, whenever the effect was about to pass off, a new thread was drawn through a part of the nerve on the peripheral side of the former injury. The

process was repeated for months. For comparison, the sciatic nerve on the opposite side was exposed in a similar manner, but no thread was placed in it. This method was adopted, as the simple section of the nerve produced sensory and motor paralysis, which interfered with the result. After a certain time, the blood-vessels became dilated and pulsated strongly, and there was a rise of temperature. The dilatation of the blood-vessels seemed to be due chiefly to the stimulation of the vasodilator nerve-fibers, and not to paralysis of the vaso-motor fibers. Subsequently to these hyperæmic changes, the sensibility of the limb underwent a marked change. After two to three days, the dog raised its leg, kept it in a semi-flexed position, and carefully prevented it from coming into contact with anything. Touching or handling the limb even gently gave rise to pain, and the increased sensibility was chiefly in the area supplied by the anterior crural nerve; while, in the region supplied by the sciatic nerve, the sensibility was normal or diminished. This hyperæsthesia occurred in all the successful experiments, *i. e.*, in those where the nerve was strongly stimulated, but where there were no signs of paralysis. The hyperæmia increased until the second or the fourth day, and afterwards remained nearly constant for three to four or five months.

After this irritation of the nerve-trunk had been kept up for many months, the dogs were killed, and the blood-vessels examined microscopically. In sections of blood-vessels, where the nerve-trunks have been stimulated for a comparatively short time, there are marked structural alterations in the tunica adventitia. Numerous new blood-vessels—*vasa vasorum*—have been developed. These vessels are greatly dilated, and filled with blood-corpuscles. In some cases they penetrate into the middle coat, so as to push its layers asunder. Thus, openings are formed in the middle, and it may be also in the inner coat. The number and size, of these newly formed vessels vary in different parts and in different layers of the same blood-vessels. In later stages, the vessels in the media become surrounded with fibrillar connective tissue, which contains a greater or less number of cellular elements. Thus, greater and greater structural defects occur in the middle coat; the muscular fibers disappear here and there; and the substitution of connective tissue for muscular tissue proceeds from without

inwards, but not necessarily in an uniform manner. Gradually bundles of muscular fibers come to be surrounded with connective tissue, and the muscular fibers finally disappear. One might not inaptly compare the process to a kind of cirrhosis of the middle arterial coat. In the final stage, almost all the muscular tissue disappears, and its place is taken by connective tissue, which at first contains numerous cells and blood-vessels, but these also gradually disappear. The inner membrane of the vessel ultimately becomes affected, and appears to be united with the adventitia, while the folds of the elastic lamina may disappear. The first structural changes were observed in from six to eight months, while the highest degree of generation occurred after eighteen months or two years. The blood-vessels of the opposite limb were quite normal after these periods.

These results are most important, as being the first definite experimental proof of the influence of the nervous system on the structure of the blood-vessels. They seem to be due to stimulation of the vaso-dilator nerve-fibers, causing dilatation of the blood-vessels, and also of the vasa vasorum, which latter seem to be the starting point of the subsequent changes which occur in the arterial walls. When the stimulation is continued, new vasa vasorum are formed, which penetrate the middle coat and become surrounded with cellular elements, which ultimately form connective tissue. This, in its turn, displaces the muscular fibers, until the inner coat is reached, and thus the nutrition of this coat suffers.

These experiments show how the various processes which lead up to the formation of an aneurism take place. The production of the aneurismal dilatation itself will largely depend upon the pressure to which the vascular tissues are subjected by the blood-pressure from within; and this in its turn, depends upon the well-known nervous factors. Not only were these structural alterations observed, but here and there in the course of the vessels there were dilatations comparable to aneurisms. These experiments afford a solid basis for future observers, and clearly prove that marked structural changes occur in blood-vessels, as in certain other tissues, after injury to the nervous system; and they go to show that some aneurisms at least—perhaps those of the cerebral vessels—are really nervous in their origin.—*British Medical Journal.*

SYMPTOMS AND POST-MORTEM OF LESION OF THE SYMPATHETIC IN THE NECK.—Abstract of a case reported by Drs. Samuel Gee and John Abercrombie in "St. Bartholomew's Hospital Reports," Vol. XVIII., 1882.

A boy aged four years and seven months, had ptosis of the right eye, right hemiplegia, right pupil about one-half the size of the left and absent knee phenomenon. Later the right pupil did not dilate so fully under atropine as the left. Two weeks later the leg became paralyzed also, and persistent fever developed; the temperature, however, not rising above 100° . One month after the paralysis of the left leg there were pains in the left shoulder and arm, and non-expansion of the chest, respiration being wholly diaphragmatic. A strong induced current was needed to obtain action of most of the leg muscles, though all acted fairly well to the constant current; cutaneous sensibility of the legs was diminished; movements of the legs caused priapism. About three weeks after this both pupils responded to light, and contracted to the same size under eserine; patient could not move his legs and did not feel the prick of a pin; the sphincters acted involuntarily; the head was held carefully and a little to the left, and he did not lie on the left side as formerly. During sleep the head perspired profusely. After another week, he perspired only on the left side of the face, though both sides perspired after an injection of pilocarpine; the temperature in the right ear was three degrees higher than in the left. Death ensued about ten days later.

Pathological appearances: In the upper part of the right pleural cavity were two irregularly lobulated, rounded masses, bulging into it at the apex from the vertebral column, of a yellowish-white color, spotted with purple and very soft on section. *On examination of the vertebral column, a similar growth, continuous with the above, was found, apparently attached to the right side of the bodies of the lower cervical and upper dorsal vertebræ. The inferior cervical sympathetic ganglion on the right side could not be found.* Within the spinal canal the growth was found on the inner aspect of the bodies of the same vertebræ on their right side only, pushing the cord forward and to the left. Here the growth was more purple than elsewhere. At this point the cord was small, was very soft throughout, and on section it was seen that the gray matter was very pale and ill-defined. The growth

proved, on microscopic examination, to be an alveolar sarcoma. Examination of the cord showed that in the cervical enlargement on one side the gray matter was healthy, on the other side there was a marked swelling of the large motor cells; in many instances neither their nuclei nor processes were visible. The most obvious changes below this region were turgescence of blood-vessels and increase of neuroglia corpuscles. This case was very naturally mistaken for Pott's disease, during the life of the patient. The enterprising *New York Medical Record* gives the case more at length, with comments. *Vide Record*, Jan. 5th.

MICROSCOPICAL EXAMINATION OF THE SYMPATHETIC GANGLIA IN A CASE OF EXOPHTHALMIC GOITRE, by Dr. William E. Hughes: The cervical ganglia were to the naked eye enlarged and grayish, but not hard. On microscopical examination, they were found densely infiltrated with small round cells, which pushed the nervous elements apart and pressed upon them. The tubules were compressed, distorted, and in some places destroyed. In some places they were infested with a pseudo-membrane of small round cells, looking as though there might have been a slight inflammation of the tubules. The cells were in places indistinct, shriveled, and compressed, their nuclei not discernible; in other places they were granular, with indistinct nuclei; in other places they were crowded with brown pigment cells and granules; and, finally, some of them had entirely disappeared. The walls of the arterioles were thickened. The lymph spaces were dilated.

In the semi-lunar ganglia the cells were indistinct, taking staining very poorly, and some of them seemed to have undergone a slight amount of peculiar hyaline change. The nuclei and nucleoli took staining well, and were perfectly distinct. The structure was otherwise normal. There was no infiltration of cells, nor any enlargement of the vessels. The supra-renal capsules were normal.

SPINAL LESIONS IN ERGOTISM.—Tuczek (*Archiv. f. Psych.*) reports 15 cases of spasmodic ergotism which came under his notice during an epidemic of the malady, all of which presented symptoms of spinal disease. The most frequent symptom was absence of the patellar tendon reflex. This was observed in every case. Other symptoms

were paræsthesiæ, ataxia, diminished sensibility to pain, &c. These symptoms showed themselves months after the acute intoxicant stage, when the patients were in a condition of marked cachexia. In four of the cases (one was only nine years old, another sixteen) a post-mortem examination was made, and in all there was found sclerosis of the external division of the posterior columns. Pathologically, the cases differed from tabes solely in the rapidity of the development of the morbid process. He finds an analogy to the appearance of tabes in ergotism in acute primary disease of the posterior columns in exceptional cases of pellagra, lepra, absinthe-poisoning, scarlet fever, and diphtheria.—*Brain*, January.

A CASE OF APHASIA, with integrity of the third left frontal convolution, but with damage of the subjacent white matter, is recorded in the *Gaz. Medicale de Paris*, November 24th.

PSYCHIATRY.

EARLY SYMPTOMS OF PARETIC DEMENTIA.—Dr. W. B. Goldsmith (*Archives of Medicine*, August, 1883) comes to the following conclusions: 1. That the striking and characteristic group of symptoms ascribed to the disease by Calmeil in 1826, and having greatest prominence in most text-books, since, is to be found only exceptionally in the cases of to-day at the time when the diagnosis is most important. 2. That physical and mental symptoms usually appear nearly synchronously, so that the physician has the presence or history of both to aid him when called upon for a diagnosis, and it is probable that most of those who report cases of paretic dementia without mental impairment are not sufficiently expert to recognize a moderate degree of dementia. 3. That their observations agree with those of most writers in making defective articulation the most frequent and characteristic early motor symptom. 4. That changes in the pupils and disorders of gait are less frequent and have less value in diagnosis than is usually ascribed to them, and that given pupillary changes are no more frequent in one stage of the disease than in another. 5. That the patellar-tendon reflex is found markedly supra-normal in nearly twenty-five per cent. of paretic demented, and that the presence of this symptom is of strong corroborative value in diagnosis, though its absence has none, and that no peculiar condition

of the patellar-tendon reflex can be associated with any given stage of the disease. 6. That hallucination or impaired function of the special senses is very rare as an early symptom; hallucination (auditory) having been noticed first in but one case, and impaired vision but once in a syphilitic case. The diminution in the sense of smell, which Voisin thinks very frequent in the early stages, was not noticed in any of my cases, though it may have been present and escaped attention in some, as slight failure is difficult to recognize. 7. That it is of great importance in the case of a patient showing mental symptoms to inquire carefully for a history of convulsions or loss of consciousness, as these were the first motor symptoms in twenty of my cases.

SELF-RECOGNIZED INSANITY.—Dr. Morandan DeMontyel (*Archives de Neurologie*, July, 1883,) concludes: That by the term "self-recognized insanity" (*folie avec conscience*) is meant the mental state of that class of patients who having meditated on their psychic troubles, analyze them, and then recognize their morbid nature. This condition is found at the outset of all the vesanias, and of a large number of cases of parietic dementia. It is met with sometimes in the course of parietic dementia, in melancholia often, and acute mania very frequently. It is relatively rare at the termination of the vesanias. Self-consciousness of insanity is sometimes a constituent element of mental alienations, sometimes merely super-added. It is a constituent element of hypochondria, agoraphobia and impulsive insanities. It is super-added on mania, lype-mania, erotomania and allied states. The insane who recognize their insanity usually belong to the intelligent classes of society, and have an insane heredity. Parietic dements are conscious of mental defect at the outset, but rarely during the course of the disease. The epileptics are not conscious.

Self-recognition of insanity may be complete or incomplete. The first is most frequent. Consciousness is most frequent in general insanity than in partial insanity. The first class are, as it were, spectators of mental troubles whose morbid nature they recognize, but which they are powerless to prevent. The preservation of consciousness in stupidity (melancholia with stupor and stuporose insanity) is an argument in favor of the clinical existence of this form. Semi-consciousness is usually present in partial insanity. Hallucinations and megalomaniacal ideas

are rarely if ever recognized as of a morbid origin, by the sufferer from them. While most of de Montyel's conclusions are justified, he has failed to differentiate hypochondriac ideas of being insane and cases of healthy conceptions, from the condition designated as self-recognized insanity.

LATE RECOVERIES FROM INSANITY.—Dr. Giraud (*Annales Medico-Psychologiques*, March, 1883,) cites several long lasting cases of insanity, in which he claims recovery occurred. The first cited, a case of thirteen years' duration, is said to have been a case of chronic mania, but the history of the patient subsequent to discharge is not given. The second case of chronic mania, of eight years' duration, has not returned to the asylum, but details of after life are wanting. The third case, of eight years' duration, gives much the same history. The fourth case, of sixteen years' duration, has been fifteen years out of the asylum, and conducted himself well. The fifth case of fourteen years' duration, was a case of remittent mania in a woman, which evidently ceased at the menopause. The sixth case seems to be a similar one of ten years' duration, but recovery is, even on Dr. Giraud's admission, not clearly shown. The seventh case was of eight years' duration, but the evidence of recovery is doubtful. The same remark applies to the eighth and ninth cases of equal duration. The history given in any of the cases is markedly deficient, and judging from it the majority of these patients were simply quieted down by the regular asylum life. Certainly the cases will not stand a critical examination as to their bearing on recovery of chronic insanity.

INSANITY AND DIABETES.—Snell (*Psychiatrisches Centralblatt*, Band XXXVII.) and Cotard (*Annales Medico-Psychologiques*, 1878,) call attention to the fact, that mania and melancholia may alternate with glycosuria. Santos (*Annales Medico-Psychologiques*, 1880,) states that diabetes sometimes alternates with insanity. In many cases of diabetes there exists a specific mental disturbance characterized by depression, and occasionally leading to suicide. The intensity of the symptoms is directly proportionate to the amount of sugar in the urine. Later in the course of the disease the patient sinks into a state of quiet apathy, talking to himself, but is without delusions; this condition often lasts until death. Madigan

(*Journal of Nervous and Mental Diseases*, April, 1883,) reports several cases of insanity in which glycosuria alternated with maniacal symptoms. In the cases of circular insanity, sugar was present in the urine during the sane interval and melancholic stage. Dr. J. Turner (*Medical and Surgical Reporter*, September 15, 1883,) reports a case in which the disappearance of glycosuria was followed by typhomania, from which the patient succumbed. Hughes, *Medical Review*, October 20, 1883, maintains that glycosuria and melancholia more often alternate or co-exist than has been generally supposed and records a case.

FOLIE A DEUX.—Dr. G. Lehmann (*Archiv fuer Psychiatrie*, Band XIV.) describes a case of this kind in two sisters, daughters of a neurasthenic mother; themselves neurasthenic, who became insane. The first suddenly manifested decided nymphomaniacal tendencies at the time of menstruation, accompanied with auditory hallucinations and illusions of taste and smell, leading to refusal of food, depression and attempts at suicide. A younger sister accepted the delusive ideas of her sister, was attacked by aural, olfactory and gustatory hallucinations, and deplored her misfortunes, but was also nymphomaniacal. The suppression of the menses, which occurred at the onset of the psychosis was treated with success in both cases, as regards the menstruation; but while the younger sister recovered, the elder remained a chronic case. It is obvious that the tendency to imitation so common in hysterical females, played a part in determining the insanity of the younger sister. The influence of imitation in the production of such cases, has been pointed out by Hughes (ALIENIST AND NEUROLOGIST, July, 1883), and DeMontyel (*L'Encephale*, No. I., 1883.)

ACUTE INSANITY FROM LEAD POISONING.—Möli (*Charite Annalen*, Jahrgang VIII.) has had under observation a twenty-eight year old painter, who, at the outset of an attack of lead colic, became anxious and excitable, and cried out that he was going to be killed. He had visual hallucinations of bugs flying around. He had also tactile illusions, which led to the delusion that he was being burnt up, for which reason he wanted water thrown over him. He recovered after fourteen days' anti-saturnine treatment. Three years after, he had a second attack, in which he complained of seeing giants attack him, and had the same emotional disturbance, tactile illusions and therefrom resulting delusions as before. He recovered

after the same period of anti-saturnine treatment. Möli claims that these psychical phenomena are due to vasomotor phenomena, caused by the pain of lead colic, and not directly due to lead.

DELUSIONS OF MEMORY.—Meynert (*Jahrbuecher fuer Psychiatrie*, Band IV.) cites the case of an otherwise sound man, who had the delusive remembrance of having seen a cleared space in a forest in which grew a flower. This was based on a hallucination, which was remembered as an actual perception. Meynert and Buccola (*Revista di Filosofia Scientifica*, II., F. 6.) believe that the hallucination which is remembered as an actual perception, results from an irritation which produces contraction of an arterial vessel leading to a diminution of pressure in collateral branches and resultant hyperæmia. When consciousness is regained the subjective sensation is reproduced in such colors under the influence of the hyperæmia, that the sensorium preserves the impression if it and the hallucination remains as a remembrance of an actual perception.

RECOVERY FROM INSANITY OF TWENTY-ONE YEARS' DURATION.—Dr. Howden (*Journal of Mental Science*, July, 1883,) reports the case of a man who entered the Montrose (Scotland) Asylum, in 1860. He was then in a deep condition of delusional melancholia. Two years after admission it was reported that he was demented and that "he rarely speaks." In 1864, he was "quite demented and dumb." In 1868, although seemingly in the same mental condition, he had begun to assist the attendants in house-work. In 1870, while suffering from colic or toothache he spoke; he relapsed into his usual condition on recovery. In April, 1875, he began and continued to speak in a whisper for several months.

HALLUCINATORY DYSPNEA.—Dr. Benj. F. Westbrook (*Arch. of Med.*, December, 1883,) notes this phenomenon in women of a neurotic tendency. The sensation of suffocation is genuine and intense. The patient sits up in bed, with anxious face, laboring for breath. But the face and mucous membranes show no signs of cyanosis, and the heaving of the chest, with free expansion and contraction, shows that there is no obstruction to respiration. Percussion and auscultation give no signs. The distress has its origin in disturbance of some higher center, the medulla being stimulated from above. The central disturbance is referred, in consciousness, to the periphery.

EDITORIAL

Annual Greeting—The Editor and Collaborators greet the readers of the ALIENIST AND NEUROLOGIST with hearty wishes for a happy New Year, with thanks for faithful support by earnest contributors and prompt-paying subscribers. We have neither lamentation nor adulation to record, nor promises, except that we shall endeavor to continue faithful in our work; and as for that, let the dead past bury its dead, and if aught in these pages has contributed to the advancement or glory of medicine, let it live only because it may be esteemed fit to survive among the fittest. The work of the ALIENIST is only fairly begun. Much more remains to be accomplished in its chosen field than has yet been done for the advancement of psychiatry and neurology, and though the Medical press and others in the profession have encouraged us by their applause, "let not him that putteth his armor on, boast as he that putteth his armor off." The true psychiatrist can be neither an optimist or pessimist. His observations of mind reveal how feelings may sway the judgment, and he yields neither to melancholia nor *grandiose* illusions in estimating the outcome of his enterprises. There is a place and a reason for the continued existence of the ALIENIST AND NEUROLOGIST, as the past four years of its probationary existence has verified, and it will continue its endeavors to fill its place acceptably and without giving just cause for honest censure or reproach.

How Many Senses Have We?—Sir Wm. Thompson's recent announcement of his belief in a "possible magnetic sense," suggests again the inquiry which, doubtless, has often before arisen in the minds of many, how many senses have we?

The senses of sight, touch, taste, sound and smell, are conceded. To these have been added the senses of heat and force, and now the magnetic sense. But if sight, taste, sound and smell, are anything but special touch perceptions due to special neural peripheral adjustment in the organism, then a muscular sense, a space sense, a

pain sense, a pleasure sense, a self sense or a sense of individuality and self identity, have at least equal claims to recognition, and we think better.

By reason of the self sense man knows he *is*, without the philosophic sophistry—*cogito, ergo sum*, which would be as logical if reversed—I am, therefore, I think. Through the self sense comes the early practical recognition of *meum* long before the logical faculties are sufficiently developed to enable the mind to distinguish and compare with the *teum*. The self sense may be lost, like the senses of seeing or hearing, while all the intellectual faculties remain intact, performing apparently normal functions; as in some states of cerebral automatism and other psychical states, possibly those of hypnotism and trance. Some conditions of insanity appear as if only the self sense was lost. The self sense is an organic axiom, as necessary to physiological mental existence as the axiom in logic is to sound reasoning, and more necessary to existence than any of the ordinarily recognized five senses. A sane man can neither be reasoned into nor out of the consciousness he possesses of his personality. He feels it and knows it, as he feels and knows that he sees, when his sight is unimpaired. He realizes the fact just as the logical sense accepts an axiom as true, which underlies all other truth, and which can not be proven because it is beyond proof—a deeper truth than reason can reach, except to build her superstructure upon it as unreasonable truth, or truth which can not be reasoned out—unreasonable, but not unknowable. Sir William Thompson is perhaps right. There is doubtless a magnetic sense and an electric sense, and a psychic sense, as well as a force sense and a heat sense, and a self sense, and a space sense. Sir William probably has more senses than he has yet dreamed of in his philosophy, notwithstanding he is the distinguished professor of mathematics in the University of Glasgow. We probably all of us have more senses, if not more sense, than we have been generally accredited with possessing, but the magnetic sense will hardly come in as the seventh. The space sense has before been described. The magnetic sense may come after it, and after it we name the self sense. What next, Sir William?

Evidently we must overhaul and rearrange the senses, or we shall have too many of them. Taste, sight, hearing, smelling, pain, tactile, pleasure, heat and space

sense might all be regarded as modifications of the sense of touch; then we would have the touch sense, the self sense, the power sense (or force and self power), the logical sense, the psychic sense, the muscular sense and the electro-magnetic sense. If we are going to increase the number of our senses, let us be logical and liberal! What say you, Sir William?

The Death of Dr. Thomas S. Kirkbride, the venerable and distinguished alienist, and physician-in-chief of the Pennsylvania Hospital for the Insane, occurred at Philadelphia, in his native state of Pennsylvania, on Sunday, the sixteenth of December ultimo. He died at the ripe age of seventy-four years. At the time of his death he was the physician-in-chief of the Pennsylvania Hospital for the Insane, over which he had presided, with singular fidelity and efficiency, for the past forty-three years. The good work of that noble institution will remain a monumental record of his philanthropic and professional worth, that will keep his memory fresh for years to come. It was his sole mission to save lost minds, and right nobly did he fill that mission, as the thousands who, having entered the Pennsylvania Hospital for the Insane with reason dethroned, and left it with reason restored, have attested, and still bear witness all over this broad land and even in foreign countries. Dr. Kirkbride took his medical degree at the medical department of the University of Pennsylvania, in 1832, and amply sustained, in the just fame he has achieved as a true and noble physician and philanthropist, the honor bestowed by his *alma mater*. He was an ex-president and one of the original founders of the Association of Superintendents of American Hospitals for the Insane, the oldest national medical organization in the United States.

He was associated in the formation of this body, with Bell, Brigham, Stribbling, Awl, Woodward, Ray and others, all now numbered among the distinguished dead, and with Earle and Butler, among its distinguished living founders. There were but thirteen original founders of this society, all of them honored in their day, and many, like the one now departed, have become immortal.

The rules and regulations for the government of employees of the Pennsylvania hospital for the insane, prepared by Dr. Kirkbride, have been put in practical operation in most similar hospitals in this country; and the influence of Dr. Kirkbride's two books, the earlier and

smaller one on the "Organization of Hospitals for the Insane," the later and larger one on "Hospitals for the Insane," like his well-written and sagacious annual reports, will be more or less felt through all coming time. Dr. Kirkbride did not write much, but he wrote opportunely and always well, and he wrought in the same manner and always for the welfare of the insane. The influence of his example over the younger alienists was always an inspiration to nobler work, and the new superintendents of the country made pilgrimages to Philadelphia. It was the true superintendents' Mecca, who, with moslem-like faith, went annually to this institution, and found new hope for the unfortunate insane, through the humanitarian suggestions, skillful devices and judicious prescriptions of the now dead alienist. Dr. Kirkbride is dead, but in the hearts of his confrères and in the esteem of humanity he still lives, through his good and enduring work.

We gratefully acknowledge our indebtedness to the departed for many instructive courtesies and valuable suggestions freely given us in our time of need, in the past, when the burden of a large hospital was upon us, and we were young and inadequately experienced for so grave a responsibility.

Sane Logic and Insane Premises.—In illustration of a fact noted by Locke, that the insane often reason right from wrong premises, and a fact confirmed by abundant observation, we extract from the public press a recent noted illustration :

THE DELUSIONS OF A SON OF HON. WM. M. MEREDITH.

Annexed to the inquisition which finds insane William Meredith, son of the distinguished jurist, William M. Meredith, who was Secretary of the Treasury under President Taylor, is his own written and sworn argument in defense. It analyzes the testimony of the witnesses to his insanity, and granting the delusions to which he is subject, accounts for them on scientific ground. The hallucinations of Mr. Meredith, as the doctors have found them to be, dated back to 1877, and began in England, where he had been for the two years previous. Mr. Meredith's insanity consists in his claim of hearing constantly the voices of invisible enemies—chief among them are two men unknown to his friends, Hellman and Whitney by name. These persons, he says, work upon him by electric devices; and in some letters to his friend, William P. Tatham, he states his position most clearly. The first letter is dated from Clifton Heights, January 2, 1878, in which he says :

"The reason why other people can not hear them is that the dogs have established a special connection with me by means of some secret invention in electricity. The connection is certain. They pump something into my

lungs so that I can hardly breathe, and sometimes make me shake as if I had the palsy."

On the 20th of the following October he proposed a remedy, as follows:

"I write to inquire whether you would have any objection to consult with Prof. Edison in regard to the horrible persecution I am undergoing, and the means of avoiding it. A scientific secret, which I believed to be a combination of electricity and ventriloquism, is held by a rascally crew of thieves and murderers, and enables them to violate my person and my mind incessantly."

The six years since Mr. Meredith's return from Europe have been spent at Clifton Heights, the houses of his friends in Philadelphia, and a hotel at Suffolk Park. Since April last he has been at Dr. Kirkbride's. A letter from his last place of residence sets out an ingenious argument for his sanity. It is that in all known cases of delusions of the kind, the hearing of the voices has grown intermittent, under treatment, and finally ceased. With him they are incessant and increasing, from which he argues his sanity. His sworn argument exhibits a graceful turn of composition, rare subtlety of argument, and decided powers of analysis and satire. The first flowing period concludes:

"Persecuted by enemies, kidnapped by friends, and with all the doctors against me, I appeal to you, as the minister of God, for justice."

He then admits the presence of his so-called delusions, and supporting his electrical ideas, asks:

"In view of the wonderful discoveries constantly being made in the hidden powers of nature, especially the telephone, and considering also the increasing knowledge and activity of the criminal classes, can you say upon your oaths that I am laboring under a delusion?"

Mr. Meredith is 46 years of age, a bachelor, and a member of the bar. The strongest witnesses, except experts, to his insanity, said of him on oath: "His mind is superior even to his father's on any other point." There is little or no bitterness between him and his friends in the controversy, into which the question of money matters does not enter, except formally.—*Phil. Times*

Glycosuria and Melancholia.—Notwithstanding the long recognized association of hepatic and gastric disorders with melancholic forms of mental derangement, dependent often upon co-existent atonic nerve conditions, it is only of late that a somewhat intimate relationship between the latter and glycosuria has been noted. In some of these cases the glycogenic function is disturbed, co-existent, at others alternately with mental aberration, and more notably in connection with the depressed forms of mania, sufficiently often, it may be justly remarked, to justify an examination of the urine in all cases, especially of atonic melancholia. Two years ago the editor saw a gentleman of middle age, who after an unusual business strain became affected with diabetes mellitus. His physi-

cian was skilled and experienced, and found this condition existing. After several months of treatment, though the diabetes improved, his melancholy persisted and became aggravated. A course of treatment embracing cannabis indica, codia, arsenic, strychnia, and the hypophosphites, with some electricity and change of air and surroundings, caused both the melancholia and the glycosuria to disappear, the latter however had been most excessive when the melancholy was less.

Snell and Cotard, as early as 1878, and Santos more recently (*Annales Médico Psychologiques*, 1880), and still later Madigan (*Journal Nerv. and Ment. Diseases*, April, 1883), have noted that insanity and diabetes alternate. In the September 15th number of the *Philadelphia Med. and Surg. Reporter*, Dr. Turner reports a case in which the disappearance of glycosuria was followed by fatal typhomania.

There are probably more of these cases than have been hitherto suspected, and the clinical lesson of the light thus far thrown upon the subject is to search for the definite relationship between glycosuria and states of marked mental depression and mania.

Without entering at this time into discussion as to the existence of a diabetic center in the medulla, the clinical phenomena and the satisfactory results of treatment tend to confirm the idea of an intimate relationship between nervous depression and glycosuria. The influence of agencies that conserve, recuperate and tranquilize the nervous energies tend to prove this, such as the bromides, chloral, opium, cannabis-indica and galvanism, the latter especially when applied to the occipital regions, by a descending cerebral current from the cortex down through the medulla, thence to the dorsal spine and through the liver.

Sensationalism, in regard to Insane Hospitals

on the part of medical journals which ought to know, and are presumed to know whereof they speak, whenever they discuss asylum methods and management, are reprehensible. They unjustly damage the reputation of our hospitals for the insane, imperil the welfare of their inmates and cause misery and distrust among the friends of the patients and in the public mind generally. Nothing better need be expected of a daily newspaper whose prosperity depends upon the daily sensation it serves to its readers, but a scientific medical journal is supposed to speak editorially with the rigid candor of fact.

A late editorial in one of our most estimable medical exchanges, well-designed but misleading and unfounded in fact, calls forth the following rebuke on the subject of the imprisonment of sane people in our asylums for the insane, the bugbear of the modern sensation-monger. We venture the assertion without fear of successful *contradiction*, that no absolutely sane person is ever consigned to an American Asylum for the insane. The sensational terms *immured*, *incarcerated*, etc., we ignore altogether, as having no significance as applied to a residence in a modern hospital for the insane.

People who are insanely drunk, or transiently insane from narcotics or epileptic accesses or hyperæmic conditions of short duration, or the anæmic states following tardy convalescence from certain fevers are sometimes, and justly, sent to asylums, and certainly and very properly retained there some time after their insanity has passed away. But it is doubtful if any really sane person is, in these days, ever committed to our public asylums and kept there for sinister purposes. There are persons of extremely unbalanced nervous organisms, known to every practical alienist, who, under the salutary restraint and surroundings of asylum life, appear sane enough to visitors, and who, during a trial in court, where their right to liberty is in question, may even then act like sane people under the stimulus of judicious restraint, but who, when once again free from the restraint they need and are back among the scenes and causes of former morbid excitation, show their mental infirmities plainly enough.

It is to be regretted that the salutary influence of the modern asylum over the insane mind, in giving the latter the appearance of sanity under restraint, should have become a means of prejudicing people against these useful institutions.

The medical profession should protest against hospitals for the insane being designated as prisons, and their medical officers as turnkeys and keepers.

Asylum Mismanagement.—Whenever a negligent attendant in an insane asylum leaves a patient in the bath to be scalded, or in any manner abuses a patient, the cry of asylum mismanagement at once goes forth from the medical and secular press. Now, while there ought never to be either abuses or neglect in asylums for the insane, or crime in communities, they do occur under the best of management. The careless, the inordinate and the criminal may be found under the best

of governments, and in the best of institutions. Abuses and neglect ought to be exceptionally rare in asylums, and statutes should be expressly framed to protect the helpless insane from neglectful or brutal attendants, and most rigid discipline and careful oversight should be exacted of asylum superintendents; but neither omniscience over the hearts, omnipotence over the passions and mental movements, or omnipresence to prevent the exceptionally impossible, should be expected of them. Let a law be framed in every State, for the abuse of the insane in and out of asylums, and for such negligence on the part of those who assume to take immediate personal care of them, as may result in preventing avoidable harm to them; and let States pay attendants on the insane not grudgingly and parsimoniously, but liberally, discountenancing alms, have methods of providing for these helpless creatures, wherever such prevail. While holding superintendents to a reasonable accountability for executive oversight, and paying them liberally, the State should have special penal enactments for the punishment of those employees who neglect or abuse the insane, conspicuously posted in all suitable places in asylums. The law on the subject of criminal carelessness as it probably now is in Ohio, would enable the superintendent of the Dayton Asylum to prosecute and imprison the attendant who lately left a patient alone in the bath tub to scald himself with hot water, and it ought to be done, to the fullest extent of the law. To simply discharge such an attendant, is too light a penalty.

The New York Medical Journal, Dec. 8th, in connection with a complimentary reference to the success and merit of this JOURNAL, for which we return our thanks and reciprocal expressions of good opinion and good will, remarks: that Dr. Hughes had unusual difficulties to contend with in establishing his JOURNAL, mainly in the form of ungenerous criticism at the outset, and refers to "an ili-natured remark made by a writer in one of the journals, to the effect that the appearance of the second number was doubtful."

The ALIENIST AND NEUROLOGIST has not been at any time conscious of what its editor regarded as unusual difficulties. On the contrary, we have felt from the very beginning that we have been unusually well sustained. The journal that predicted the premature demise of the ALIENIST has itself died, *de mortuis nil nisi bonum*. The

"little unpleasantness" that prompted the fatal prognosis has passed away. The editor of the dead *journal*, we are happy to say, still lives. One of the gentlemen who criticised the name we had chosen for the christening of our bantling is interested in a *journal* of a similar name.

Psychiatry and neurology have now six journals in this country, each doing good work in its way, and we wish them all success. There are none too many for the field.

The *New York Medical Journal* speaks a good word for four of them, in which we heartily join, and expresses the opinion, which can not be gainsaid, that: "Neurology and psychiatry must undoubtedly be classed among the special departments of medicine in which the best work has been done in this country of late years." In this all candid, observant minds, will concur. The neural pathology is destined to reign over a vast domain of territory in medicine not yet acknowledged by the profession.

The *New York Medical Journal* only shows its liberal appreciation of the direction of medical progress, in its reference to, and comments on this subject.

The Kansas City Times, the brightest of stars in the firmament of Western journalism beyond St. Louis, and brilliant rival of our own great dailies, though seldom open to just criticism in its estimate of men and matters of the day, is somewhat at fault in regard to the scope of the ALIENIST AND NEUROLOGIST.

The aim of our JOURNAL is to inculcate sound views respecting the nature and relations of mind in its scientific, clinical (medical) and forensic (legal) aspects. The lawyer, the theologian, the philanthropist, the practicing physician, the scientific student of man in his nervous organism and relations to his fellows and surroundings, and the man seeking to be generally well-informed, will all find "psychiatry" a subject of interest to them. The terms do not mean simply healing. The alienist is not simply devoted to the cure of brain and nerve diseases, but to the study of the mind, brain and nerves in *health and disease*, with special reference to their relations to society, to law, and their improvements and treatment. Psychiatry and neurology express a great deal. The terms are more comprehensive than "mental and nerve disease," and alienist and neurologist signify more than mere physician to treat brain and nerve disease, though mind-healing is the chief meaning of the term psychiatry.

We hope the *Times* will like our name better after it becomes more familiar with its sound, and its full meaning, and we thank it for its friendly notice. Following is the quotation to which the above answer refers:

Why would it not be better to choose a name for a magazine that would be more easily understood by the great mass of readers. Diseases of the mind and nerves, surely, can be expressed in simpler words, and then "Psychiatry" to express healing; but this is a matter of taste, whether one unintelligible to ordinary readers should be used or two simple ones which all can understand. This is a quarterly journal devoted to scientific, clinical and forensic psychiatry and neurology, or in other words, to the cure of brain and nerve diseases.

Misconceptions of the Term Moral Insanity.

—One of the expert witnesses is reported in the official report of the Guiteau trial, as having said: "Moral insanity is wickedness," "there is no such word as moral insanity in science," etc., and yet he conceded that insanity might be a perversion of the emotions and instincts, without perversion of the intellect, without delusion (pages 1031 and 1032). He seemed under the impression that simple devilment without cerebral disease, was regarded as moral insanity by alienists, whereas, moral insanity, as defined by Prichard, referred to derangement of the moral faculties as contradistinguished from the intellectual, without perceptible derangement of the reason—a distinction made by the mental philosophers of Prichard's time, and still recognized in metaphysics.

It is not strange that our gynecological friends should sometimes have psychical misconceptions. This is clearly an extra-uterine mental foetation, speaking gynecologically, one of the "higher revelations," of the speculum, perhaps, but not of the clinical study of psychiatry.

The Medico-Legal Society.—The 197th Regular Meeting of this Society was held at Mott Memorial Hall, No. 64 Madison Avenue, on Wednesday, January 9th, 1884, at 8 o'clock P. M. The business of the evening consisted chiefly of the Inaugural Address by President-elect Clark Bell, discussion of paper of Dr. J. G. Johnson, on "Concussion of the Spine in Railway Injuries," and the Annual Banquet, which took place at the Hotel Brunswick.

Monument to Ray and Kirkbride.—We hope the citizens of Philadelphia and the medical profession of

America will not permit the year 1884 to pass without erecting a monument to commemorate the names and attest the country's appreciation of these noble benefactors of mankind in the department of psychiatry.

"Our Continent."—We are pleased to see that Dr. Brinton, the well-known editor of our esteemed contemporary, the *Philadelphia Medical and Surgical Reporter*, has become engaged in a new literary enterprise, a weekly literary journal recently started in Philadelphia, and entitled *Our Continent*.

"The Minor Treatment of Insane Patients."—The article in the last October number, so entitled, was written by Dr. Henry M. Hurd, of Pontiac, Michigan, the name of the author having been inadvertently omitted from the manuscript by the author.

Veratria for Tremors.—Dr. Bazile Feris' remedy for tremors of various diseases, especially those of alcoholism, consists of one milligram (one sixty-fourth gr.) of Veratria every hour till four doses are taken daily for ten days or more.

Dr. M. J. Madigan's paper on the Insanity of Guiteau, in reply to the views of General Elwell, is unavoidably crowded out, but will appear in the next issue.

Prof. Leidesdorf, of Vienna, the eminent psychologist, has received the Cross of Knighthood of the Order of Francis Joseph.

Dr. John E. Darby,—Prof. Materia Medica and Therapeutics, Cleveland Medical College, Cleveland, O., says: "Having given BROMIDIA a *fair trial*, I take pleasure in adding my testimony as to its being a *safe, reliable and efficient hypnotic*."

Cain of old slew his brother Abel, and disclaimed being his brother's keeper. The later *Kane* has slain his able brother endorsers (ethically speaking), and keeps them before the public in "Living Death." For this the New York County Medical Society expelled this *Kane*. The new code could not stand the "Living Death." He therefore left the society *quietly and penitently, and shamelessly probably, and with absolute certainty*, to join the other quacks, who have impossible sure cures for opium habitues at their own homes.

Shall the Index Medicus be Discontinued?—
Five years' publication of the *Index Medicus* has proved conclusively :

1. That the mere cost of production (per annum) is not less than \$5,000.
2. That the maximum return from subscriptions, at \$6 per annum, has not exceeded \$3,600.
3. That the increase of subscriptions during the past two years has been merely nominal.
4. That the limited circulation permits no material return from advertisements.

Since there are scarcely 600 subscribers to whom the *Index Medicus* is, or seems to be, a necessity, the question to be determined is whether there remains a sufficient number of subscribers who are willing to continue their subscription at the requisite increase of price.

The editorial preparations requiring an immediate decision, subscribers are earnestly requested to respond without delay to the questions submitted below.

F. Leypoldt, publisher, 31 and 32 Park Row, New York, asks of the profession the following questions: I. If the future subscription price of the *Index Medicus* is fixed at \$10 per annum, are you willing to renew your subscription for 1884 at that rate? II. Should not 500 subscribers renew at \$10, will you be one of 417 subscribers who are willing to renew at \$12?

Please answer these questions and send to the publisher by return mail.

Dr. J. K. Bauduy, Prof. of Nervous and Mental Diseases, Missouri Medical College, says :

After a thorough and continued trial of BROMIDIA, at St. Vincent's Asylum, I can cheerfully certify to its great therapeutic value and purity. Its effects are much more rapid and efficient than the ordinary chloral mixtures. The Sisters in charge of the wards, after using the Bromidia and comparing its effects with the ordinary chloral mixtures used so long as a hypnotic, claim great superiority for the former. Its success has been proved where the other, in similar doses, has failed. The purity of the chloral and the extracts of cannabis indica and hyoscyamus which it contains, together with the small dose of the remedy which is required, make it almost invaluable to medical practitioners, who are guaranteed a pure and efficacious remedy in the use of Bromidia. They are not left at the mercy of pharmacists, who sometimes dispense inferior if not adulterated preparations of chloral. We could not for some time be induced to try the remedy, entertaining some prejudice against all such preparations. But experience in its use requires us, as a matter of justice, most emphatically to indorse the preparation, after an extended and impartial trial. In fact, we expect in future to use Bromidia exclusively.

The Post-Graduate Medical School, of New York, will occupy, February 1st, a new and larger building, with a hospital attachment for clinical instruction, which is embraced in the curriculum.

The Newest Treatment for Neuralgia is a 10 per cent. solution of hyperosmic acid, administered by subcutaneous injection.

"The Quarterly Compendium of Medical Sciences," edited by D. G. Brinton, M. D., and Joseph F. Edwards, M. D. (\$2.50 per annum), is a valuable exhibit of medical progress.

"The Alienist and Neurologist," edited by C. H. Hughes, M. D., of St. Louis, is intended for general practitioners rather than the specialists, and most admirably does it serve the wants of those.—*Medical World.*

Corrections.—On page 86, for "via urea" read "*via auris*;" on page 88, for "poisoned," read "*poisoned*;" on page 90, for "Mr.," read "*M.*;" on page 91, for "conferers," read "*confreres.*'

CORRESPONDENCE.

TO THE EDITOR:

I have read the able reply of Dr. James H. McBride to my article in your April number, with much instruction and sincere pleasure. It is a forcible presentation of his views as to the insanity of Guiteau, and a fine specimen of pointed and legitimate discussion.

Yours truly,

Cleveland, Oct. 3, 1883.

J. J. ELWELL.

HOSPITAL NOTES.

COOK COUNTY INSANE ASYLUM, CHICAGO.—Dr. S. V. Clevenger, its special pathologist, analyzes in the last November number of the *Chicago Medical Journal and Examiner* the statistics of his asylum for the past twenty years. The records were kept in olden times in a very imperfect manner, but upon Dr. J. C. Spray's accession to the superintendency in 1878, decidedly improved, as well as has everything else about the place. The total admission figures up to about 3,500, many of whom lived in the asylum ten years and over. As far as could be ascertained, of 2,470 recorded: Recovered, 330. Improved, 401. Unimproved, 101. Sent to State Hospitals, 429. Died, 620. Not stated on the old books as to disposition, 70. Remained in hospital August 15, 1883, 519.

The final mean tabulation, considering the fact that the better class of patients were sent to State Hospitals, stands thus: Improved, 48.6 per cent. Unimproved, 5.6 per cent. Died, 33.8 per cent. The remainder omitted as uncertain.

APPOINTMENT OF DR. LETT.—Dr. Stephen Lett, late Assistant Medical Superintendent of the Asylum for Insane, Toronto, has received the appointment of Medical Superintendent of the "Homewood Retreat," Guelph, Ont. The distinguished Dr. Joseph Workman, former Superintendent of the Toronto Asylum, is the consulting physician.

APPOINTMENT OF DR. CHENAULT.—Dr. Robert C. Chenault, a former Superintendent of the Eastern Lunatic Asylum at Lexington, has been reappointed to the superintendency of that institution.

STATE EMIGRANT ASYLUM, WARD'S ISLAND, NEW YORK.—Dr. Alexander Trautman, late Assistant Superintendent of Wisconsin, has been appointed Medical Superintendent of the State Emigrant Asylum at Ward's Island, N. Y.

RESIGNATION OF DR. JOSSELYN.—Dr. Eli E. Josselyn, late Assistant Physician at the New York State Lunatic Asylum, Utica, has resigned, to engage in private practice.

IN MEMORIAM.

DR. J. MARION SIMS.—But a short time ago, while hastily visiting New York, we received a kind message from Dr. Sims, asking us to meet with his friends that evening, to honor Sir Wm. MacCormack. The heart that is now still was then all aglow with fraternal warmth and beat hopefully for further usefulness in the great profession its owner so nobly adorned.

He was looking forward to an early departure for Europe, where he had a large *clientele* as well as at home, and where during the past two years he had spent most of his time. The skies of France and Italy were congenial to him, and his skill was as much in demand in Paris, Rome and Brussels, as in New York. The French, Belgian, Spanish and Portuguese governments had bestowed upon him, high honors, in recognition of his skill, which he bore with modest grace and dignity; and the profession and people alike, there as well as here, attested in many ways their appreciation of his benefactions to mankind. He had operated in most of the great capitals of Europe, and in London, so that his hand, when abroad, did not forget the cunning and skill acquired at home. His visits abroad were not vacations. His brain was never idle there.

The New York Hospital for Women, begun in 1853, and securely founded in 1858, through his suggestion and industrious efforts, remains a grand and enduring monument of his zeal, while the speculum which bears his name, with his recorded operative procedures in pereneal surgery peculiar to women, will commemorate his genius to all time.

He was in great measure the founder of American Gynecology, and he taught it to the savants of Europe.

In 1866 he published, in London, his "Clinical Notes on Uterine Surgery," which was published the year following in New York. The other most characteristic of his contributions were on "Silver Sutures," "Intra Uterine Fibroids," "Ovariectomy," "Microscope in Sterility," and

a characteristic paper defending Dr. Long's discovery of anæsthesia.

His writings were not voluminous, but they were always fertile in discovery and suggestiveness, impressing the profession with his genius. His address before the many learned bodies that had honored him, were always forcible in logic, instructive and elegant.

He was an ex-president of the American Medical Association, of the American Gynecological Association, and an honorary and active member of many other medical bodies; among them the New York Academy of Medicine, the County Medical, the Pathological, and the Neurological Societies.

Dr. Sims was young-looking for one of his age, he having been born in Lancaster County, South Carolina, on the 25th of January, 1813. He died of heart failure, on the 13th of last November, the autopsy revealing atheromatous depositions in the coronaries and carotid, and fibromyocarditis of the inter-ventricular septum, with ventricular dilatation, and left hypertrophy. There were parietal and pulmonary plural adhesions, the result of a pneumonia contracted about two years ago, and sequelæ of chronic renal, and hæpatic congestions.

He was an American nobleman, chivalrous, cordial and magnetic in contact with his fellows. His private and professional character was without stain, and he was the surgical benefactor of woman. Earnest, impulsive, and often personally incisive in controversy, he sometimes offended, but his courage to undo a wrong was equal to his vigor and eloquence of speech, and this added to the general appreciation of his true manhood.

He has gone from us forever, but his fame and good name abide with us forever, to the glory of medicine and for the perpetual welfare of woman in her direst calamity, whose benefactor he, above any other in our profession, was.

REVIEWS, BOOK NOTICES, &c.

EXPERT TESTIMONY.—Dr. Wight's paper to the New York Medico-Legal Society, and the report of the Committee thereon :

The Committee premise that they have thought it well to incorporate their own views and suggestions with those of Dr. Wight, in order, if possible, the better to define the duties of a medical expert, to show more clearly what knowledge is necessary to a competent expert, and provide a remedy for certain evils of our medical expert testimony.

According to Dr. Wight, an expert is "one who has special knowledge to impart under oath, for the enlightenment of Court and jury." To this the Committee add that this knowledge must be and is in many cases not within the power of men of ordinary talent, as often there may arise questions which only extraordinary ability can answer—*e. g.*, cases of nervous affection in medical science.

When, therefore, a physician is called to testify as an expert, he is, or should be, called solely on account of his special knowledge, by which the Court or jury will be enlightened and guided to a proper conclusion on questions of medical jurisprudence.

This is the only object of the medical expert, and he should not appear in Court to support a particular medical theory advanced by one or the other of the parties before the Court.

The Committee claim that the present method of obtaining medical expert testimony is defective. Hence the many verdicts contrary to common sense and scientific accuracy.

Such is the opinion of Dr. Wight, as follows: "The greatest trouble is with the medical expert. The chief cause is that in this country we have no legitimate medical profession. Learned, able, conscientious physicians we have, but they are a melancholy minority in the great froth-ocean of practitioners. In the United States there are nearly a hundred colleges, a majority of which are only chartered doctor factories. To them flock every year green young men, many of whom could not write a sentence of correct English if the salvation of their souls depended on the effort, who obtain certificates from easy-going practitioners, listen to miscellaneous lectures for twice fourteen weeks, and are graduated as doctors. The schools compete with one another by the ease with which they induct them into a learned profession. And this is not the worst of it; in most States an enterprising fellow, who fails as a minister, lecturer on phrenology, schoolmaster, or tin-peddler, is allowed to put out his shingle as a doctor, and he is pretty sure to get fools to employ him, for he has cheek, brass, push, pretension and the audacity of ignorance. From such a heterogenous crowd parties in litigation find experts to testify to anything they desire."

The results of medical expert testimony in many recent cases have thrown no special light upon medical jurisprudence, because of the incompetency of physicians who appeared therein as medical experts. The evil is not with the science itself, but with its would-be high priests.

Quack experts are the bane of trials, and their testimony poisons justice. It has been well said that one who thinks he knows, but don't know is a genuine dunce against whom the very gods contend in vain. His presence everywhere is a calamity; his presence on the witness stand as an expert, is a judicial misdemeanor, a menace to justice, and a crime.

The knowledge necessary for a competent medical expert is not in the power of every physician. The great extent and liberality of medical knowledge that must be found in every competent medical expert, is the companion of only superior ability added to long experience. The mere possession of a diploma and a license to practice the healing art do not presuppose knowledge or ability.

For the protection of personal rights, all men are declared equal before the law, but this does not fix the measure of knowledge, nor can it ever make a genius of a dunce.

If a man is a doctor he has the privilege of appearing as a medical expert, no matter how feeble his intellect or small his experience. This is wrong. No one should be allowed to take the witness stand without giving satisfactory proof of thorough and special experience in the department of medical science on which he seeks to testify. Time does not allow, nor is it within the province of your Committee to discuss in all its branches the nature of the knowledge the medical expert should have.

Passing from the general to the particular, the Committee then proceeds to consider the scope of knowledge necessary in cases of mental aberration, and quote the language of Dr. Wight, that: "The most difficult field for medical experts is that of mental disease. There is no subject on which the Courts need more enlightenment; none on which trustworthy enlightenment is more difficult to be found. No small rule of medical science or of assumed law should be used to measure the wide realm of mental aberration; the difficulties to be encountered in such cases are immense. The human mind is not easily fathomed, either in its normal or abnormal state. The greatest intellects of the world, Plato and Aristotle, Leibnitz and Des Cartes, Kant and Hegel, Locke and Sir Wm. Hamilton, have labored in vain to make a satisfactory philosophy of mind. The achievements of mankind in science and art, in commerce and statesmanship, in literature and industrial works, are beyond ordinary comprehension. If then we cannot measure the products of the human brain in its health in action how shall we apply a petty test of legal fiction to the shoreless chaos of its mighty evolutions in disease."

What an extent of knowledge; what an experience of mankind; what a detective skill this subject requires! He who would pass upon the sanity or insanity of a deceased testator, the responsibility of a

criminal with his delusions and hallucinations, to what extent reason prevails in a person under alcoholic influence; he, who would do this must have a liberal and unprejudiced mind, deep and thorough knowledge of the many and wondrous avenues of the passions, a keen and intimate knowledge of human nature; his must be the sagacity to distinguish theft from kleptomania; he must know what influences, if any, eccentricities or insanity have upon a person's will; he must have that rare and delicate power—discrimination—that quality which marks and severs great from ordinary intellects. He should be able to tell us, why John Randolph, mentally diseased as he was, never became a maniac, why Lord Byron, a victim of life-long hallucinations and superstitions, preserved his great and wonderful genius. He should know the dividing line 'twixt genius and insanity; he should be able to run the boundary between functional derangement and organic disease; and above all he should have the courage to confess the limit of his attainments.

Such knowledge is not in the power of every physician. "In this entangled field no man should be an expert simply because he is a doctor," as Dr. Wight, says: and the learned author shows the depth of his reflection in adding, that even representatives of asylums, and especially those of long experience, labor under one difficulty, and need a word of caution. They are so accustomed to mental diseases, that they lose a fine sense of mental health, and thus may lack a full appreciation and presence in mind of the normal condition to which in the exercise of sound judgment a new and complicated case of aberration must be referred for comparison. An astute lawyer may embarrass or even confound them by asking for a definition of sanity.

Such is the knowledge, which a medical expert in cases of mental disease, should possess, and on reflection it will be found that in all the other departments of medical science, the same thorough and searching knowledge is necessary. No wonder then that with such requisites, and with our want of means to separate the dross from the gold, the competent from the incompetent medical expert, that so much ignorance of medical science, as often undetected as not, appears upon the witness stand, and no wonder that the average jurymen, to whom we cheerfully accord an inclination for justice, confused by technicalities and conflicting statements, given with all the dogmatism and assertiveness peculiar to empirics and sciolists, no wonder that in his bewilderment, the jurymen casts his vote for so many strange and unreasonable verdicts, and it seems as if a maudlin piety, rather than an even-handed justice, had decided the case.

"The habit," says Dr. Wight, "of allowing parties in litigation to select their experts beforehand, for their ascertained favorable opinions, and to bring them into Court as partisan witnesses, is a desecration of the temple of justice."

This is very true; for, while a party has this privilege he will use it, and if he cannot find physicians of ability, experience, erudition and authority, to support this theory, he will produce men of inferior capacity, of no medical experience and still less medical knowledge,

with narrow-minded views, and who reason from the particular to the general. These men, glib of speech, confident in assertion, and "cunning of fence," testify oracularly and with all the gravity of a solon; they merely escape the penalty of perjury, because in lieu of a falsified fact, there is only an expressed opinion. Add to this the temptations and degree of an honorarium, and you have the expert as he now appears.

What do such men know? What can they know of the wondrous, complex and incomprehensible movements of the human mind, of the many and strange afflictions to which flesh is heir? Yet, do they not, almost on the spur of the moment, solve problems which have taxed the greatest intellects of the world, and which, after years and a lifetime of study, they have given up in despair? Do they not, with all the pomp of a well-settled conviction, declare this man a victim of delusion, that one hopelessly insane, another merely eccentric, another insane but responsible, and so on throughout the many fields of medical science? For them there is no *terra incognita* in all the realms of psychology. The testimony of such is as sensible and useful as the work Lord Macaulay planned, when but a few years past his infancy. He then sought to write on four pages of foolscap, a history of the world from its creation.

While litigants have a right to furnish their own expert testimony, medical experts will be ever subject to the harsh criticism and contumely of the public, and in many cases not without reason, since their illy-disguised partisanship has invited it.

[This right cannot be denied them, but the Court can debar incompetent physicians from testifying as competent experts.—Ed.]

Those medical experts who really have that superior and special knowledge with which to enlighten the Court or jury, and the reputable members of the medical profession, owe it to themselves and society that the quack expert now infesting our Courts be driven therefrom, and that it be no longer a common belief that medical expert testimony is a commodity to be sold to the highest bidder.

The immense good to be derived from proper and competent medical expert testimony, and very often its great necessity, should not be defeated by carelessness and indifference.

The Committee does not agree with Dr. Wight, that: "When a judge admits a quack expert to testify in his Court, he makes himself responsible for the public scandal." [This JOURNAL does.]

The responsibility does rest with the judge, as he has the means of excluding an incompetent medical expert, by inquiries as to his experience, if objection is raised by counsel to witness's expert capacity; and there is further remedy, as the Committee suggest, in the Legislature.

The Committee further urges that while the medical expert is called by either of the parties before the Court, even in the case of men of superior ability and eminent fitness, there will be a partial, prejudiced testimony, of no real value or authority. The medical expert called under the present system, is there to prove the theory maintained

by the party calling him; and to support it, his whole testimony will be directed, not only on account of the relation created by the retainer between him and the party calling him, but also on account of personal dignity and self-respect.

[This is an unjust and untenable slander on the true medical expert, who gives his opinion and secures his fee before he testifies, and who often gives an opinion which cannot be used, because it is adverse to the interests of the party seeking it.]

Let us suppose, as often happens, a distorted statement of facts presented to the medical expert, on which he is asked to predicate his opinion; afterwards a new and true statement of facts is given; they call for a different opinion; he knows not which his true. Is it likely he will change his opinion which had previously gone forth to the public? No. The specter of stultification is forever haunting him; his reputation for consistency and wisdom is at stake. Will he not turn and twist all his answers to support the opinion he had previously given forth?

[This is an unwarrantably low estimate of the honesty of true experts. The true expert knows he has nothing to do with the issue of a cause.]

The Committee would have the medical expert independent of both the Court and the parties before it; he should occupy the same relation to the Court or jury, in matters of medical jurisprudence, that the judge holds in matters of law. [So he does.]

"The position of a medical witness testifying as an expert is much more like that of a lawyer than that of an ordinary witness testifying to facts. The purpose of his service is not to prove facts in the case, but to aid the Court or jury in arriving at a proper conclusion from facts otherwise proved."—Buckman's case, Supreme Court of Indiana.

This is the proper position for a medical expert, and the true expert will take no other, whether appointed by the Court or selected by parties to a suit. But we do not concur in the report of the Committee endorsing Dr. Wight, that: "in no case should the interested parties to a suit be allowed to employ experts; and in turn, experts should be prohibited, under severe penalties, from receiving any fees from litigants."

[Such reflections on science are unwarranted by the conduct of the really reputable and learned in the ranks of medicine, and come with bad grace from a physician. As well treat all women as though they were of easy virtue, because a certain proportion of them are prostitutes.—ED.]

Dr. Wight then continues: "It would be well for medical societies organized on a sound basis to designate those who are especially learned and skilled in particular departments of medicine and surgery, as proper experts in those departments, and from time to time furnish a list of such to Courts in their locality. Laws that may be needed to carry out a plan of this kind ought to be speedily enacted."

[This recommendation would not so likely secure the men of best repute, as the popular society wire-worker—the familiar, complaisant and suave caterer to the medical crowd.—*Ed.*]

The Committee recommend to be forwarded to the Legislature, a law to the effect that a body of medical experts be chosen by the Judge of the Court of Appeals in full convention; that these experts be selected from a list of surgeons and physicians to be recommended by the medical profession in the manner that seems best to the Committee; that each physician or surgeon so recommended must have at least ten years' practice as such, exclusive of hospital service, and that he must have spent at least five years in the active practice and discharge of duties pertaining to the specialty in which he is presented as having expert knowledge; that to these medical experts so chosen be referred all questions of medical jurisprudence, arising in our Courts; that counsel have a right to submit, in writing, to these experts, any questions pertaining to the matter before them; that these experts report thereon to the Court, and give, in writing, both their answers to, and the questions submitted; that a compensation by salary or fee be affixed by the law for their services; that in either case the compensation should be liberal and such as would amply repay any physician or surgeon for any loss of practice he might sustain thereby, or for time spent in such service; that as far as is practicable, the above body of experts embrace and relate to every branch of medical jurisprudence.

The Committee have not the presumption to think that any scheme of theirs will secure an entire uniformity of opinion among medical experts. While human nature is fallible, and the human mind limited, so long will there be a diversity and contrariety of opinion, not only among medical experts, but among all classes of experts and all manner of men. However, your Committee believe that the above-suggested plan will remove many of the evils of our present medical expert testimony, and prevent the wholly unnecessary and inexcusable diversity of opinion and contradiction which exists therein. It will exclude and drive far from the witness stand the incompetent and impudent quack, and hedge our Courts and trials with a barrier that will resist and ever defeat the attempts of ignorance and effrontery.

In conclusion, the Committee say that the whole subject of expert testimony deserves the utmost attention and the fullest and freest exchange of views, and they crave pardon of the Society for the length of their report.

JOHN E. MCINTYRE, Chairman.
JOHN SHRADY, M. D.

TYPES OF INSANITY. An illustrated guide in the study of the physical diagnosis of Insanity. By Allan McLane Hamilton, M. D.

This is an attempt to illustrate Insanity by photograph, descriptive text, and the handwriting of the insane. Such attempts, however imperfectly or unsatisfactorily done, are commendable, and this manner of studying should be encouraged, until a greater degree of perfection in

descriptiveness of the physiognomy and other physical characteristics of the insane shall have been attained, than has been reached in the present brochure and atlas.

The difficulties in the photographic features of the author's work, as Dr. Hamilton himself realizes, are great. The work before us is the author's first attempt in this line, and therefore challenges charitable consideration. To catch the expression of insanity in all its varying shades of typical expression, were a task far beyond the photographer's art. It is doubtful if the artist's brush were not better for the purpose, to transfer to canvas the insane expression, the work of the artist being unobserved. One of the most difficult things in the work of human photography is to get the sane subject who is to be taken, to look natural. Many proofs have to be taken often, and great pains, by skillful instruction, are requisite to catch the varying expression of the "human face divine" (or diabolic). This same difficulty has been encountered by Dr. Hamilton's artist in catching the natural features of insanity. He has succeeded only partially, a few of the faces being reasonably typical, but none of them decidedly so, except plates one and eight, being respectively illustrations of chattering idiocy, and driveling dementia, typical extremes of mental vacuity. The crayon shading has probably marred rather than improved the facial lineaments secured through the camera alone.

Plate third resembles more the face of some of the feeble minded we have seen in schools for this class, than of acute melancholia atonita in general.

The majority of chronic melancholias we have seen have presented a different expression from the face in plate *four*, but they were not seen by us through a camera.

Plate *five* will do for one of the many facial expressions of acute dementia, but it is by no means the most common, and in it the disheveled hair, like the same sign conjoined with the driveling saliva in plate seven, indicate more than the facial outlines.

The old man in plate seven needs only a shillalah, and to be shown in other surroundings, to pass for the picture of a sane lunatic about to engage in a row at "Donnybrook Fair;" nevertheless, as an expression of somewhat purposeless insane passion, it might pass.

Dementia, plate *eight*, might pass for meditating melancholia, or meditation not melancholic. The first glance at this photograph recalled to mind a picture we once saw of Napoleon at Elba. He was in a bad fix at that time mentally, somewhat "bulldozed," if we may be allowed the expression, but not at all demented.

Plate *twelve* may do for a representation of great expectations and profound hopefulness, but it is not especially typical of insanity, probably as typical however as any photographer can catch of the varying facial expression of general paralysis, but this plate is intended to represent a stage in this disease of dementia and stupidity; such faces, however, may not infrequently be seen outside of lunatic asylums.

Conceding the extreme difficulty of catching the correct features of mental aberration in but nine representative photographs, and thanking the author even for this imperfect attempt at accomplishing the almost impos-

sible, we are obliged to pronounce the plates before us as delusive. A detective would hardly succeed in picking out from the crowd of persons who people a city, the lunatic from the sane ones, by these photographs.

The printed text of Dr. Hamilton's book is much more accurate than his *types*, and the specimens of handwriting given are also of more value. The sphygmographic tracings are of interest, but by no means conclusive; as the author states, "absolute indications cannot be relied on, as the result of sphygmographic examination."

The text bears the mark of the student, rather than of the savant in psychiatry, and we are glad to see the subject studied in so diligent a manner. The book will be of service to the profession in inspiring further interest in a subject too long neglected by the great majority of medical men. And while some of the author's precepts must be taken *cum grano salis* (those, for instance referring to the pupil and pulse in melancholia, and to the subject of salivation in insanity, and the pupil of melancholia), the book as a whole will prove instructive and valuable to the general practitioner, and as such we commend these clinical studies of Dr. Hamilton, hoping that in the next edition the author will extend and amplify his descriptions, improve and increase the number of faces, taking rather groups of varieties of mental aberration rather than so-called types, which can never be well expressed in the reproduction of a single face, of each kind of mental disease. The real features most of all lacking in these plates, and the most impossible to secure, is the face of the lunatic photographed when sane, and placed in juxtaposition for comparison, the true test of insanity, except in its exceptional forms of teratological descent, being the comparison of the individual with his former self; and even in marked cases of hereditary insanity this test is valid, except in extreme states of congenital idiocy, for the later and last states of these is far worse by comparison than their first, their very early history rarely revealing marked deviation from the usual standard of normal mental activity.

We question the propriety, in the fifth chapter, of putting an abstract of the laws relating to the commitment of the insane, though Mann and Ray have done the same thing, in the shape of an appendix. Such laws are scarcely entitled to be called types of insanity, though some of them border on this subject, notably those of Illinois. A body of lunatics could hardly have desired provisions more insanely unjust and unwise, than those in the latter State, which require a jury trial for a question of mental disease, before laymen, to decide whether an individual whose life or future sanity is imperiled by the delay, and may be, postponement of such a trial, should receive the treatment his malady requires.

ELECTRICITY IN MEDICINE AND SURGERY. By Geo. C. Pitzer, Prof. of the Theory and Practice of Medicine in the American Medical College (Eclectic), of St. Louis.

This is a small work of 136 pages, largely made up of extracts from Bartholow, Rockwell, Morton, Geo. Henry Fox and others of the regular practice in this country, but containing nothing from the European masters in electrology, and no reference to them.

The book has many illustrations of batteries and electrical apparatus in common use, but is really very incomplete in this respect.

A large part of the book is a duplicate of different familiar instrument makers' advertisements and cuts.

The author is evidently a novice in electro-therapy whatever his pretensions may be. He "appropriates practically to therapeutic purposes" the absurd notions of a certain Dr. A. W. Tipton, of which this is a sample: "If I find a spinal irritation, say in one or more of the cervical or dorsal vertebræ, and at the same time a stomach affected with chronic dyspepsia, accompanied with constipated bowels, I will work over the inflamed or irritated spine with my positive pole, because I know from the irritation that there is an excess of the electro-vital fluid in the part, making it improperly positive, and with my negative electrode I will, at the same time treat over the stomach, bowels and liver, because I know from the inaction of these organs, that there is a lack of vital force, a deficiency of the electro-vital fluid there, and that consequently they are too negative.

"If desirable to produce sedation, or quiet nervous excitement in a part, or relieve nervous irritability in weak and feeble persons," he "would apply the positive pole of the Faradic machine to the diseased, excited, or irritable part."

The author knows nothing of the tranquilizing power of constant galvanism, apparently, or of the principles which should govern its application, and the selection of currents in the real removal of morbid conditions, except in electrolysis. That knowledge of the nervous system so essential to the proper use of electricity as a therapeutic agent, determining the choice and direction of currents and the kind of electricity to be used, is ignored by the author.

The real demonstrated and demonstrable therapeutic power of the galvanic current to contract or dilate vessels through vaso-motor influence seems not to be known to the author. On the whole the book is misleading and dangerous to the novice in electro-neurology, who alone will buy it, tending to make the ignorant bold without knowledge, in blindly using the most powerful agency in nature. The author has gone beyond his depth in attempting to write a book on the subject.

A detail of cases he reports; and an inquiry into the rationale of his treatment would have been as far as the author is entitled to go with the limited knowledge of electro-therapy at his command. To become an author under such circumstances is to become a blind leader of the blind with the usual result.

But to be an author now-a-days is not expected to be an authority. The book is quite eclectic in selecting from sources other than the author's school.

A **DICTIONARY OF MEDICINE.** Including, general Pathology, general Therapeutics, Hygiene, and the Diseases peculiar to Women and Children. By various writers. Edited by Richard Quain, M. D., F. R. S., Fellow of the Royal College of Physicians, and Physician to the Hospital for Diseases of the Chest, at Brompton, etc. In one large 8vo. volume of 1834 pages, with 138 illustrations. Half mor., price, \$8.00. Sold only by Subscription

This work is primarily a Dictionary of Medicine, in which the several diseases are fully discussed in alphabetical order. The description of

each includes an account of its etiology and anatomical characters; its symptoms, course, duration and termination; its diagnosis, prognosis, and lastly, its treatment.

General Pathology comprehends articles on the origin, character and nature of disease.

General Therapeutics includes articles on the several classes of remedies, their modes of action, and on the methods of their use. The articles devoted to the subject of Hygiene, treat of the causes and prevention of disease, of the agencies and laws affecting public health, of the means of preserving the health of the individual, of the construction and management of Hospitals, and of the nursing of the sick.

Lastly, the Diseases peculiar to Women and Children are discussed under their respective headings, both in aggregate and in detail.

D. Appleton & Co., New York, are the publishers. The neurological articles are of a high order of merit, by well known names in neurological science. The list of contributors embraces the names of: William Adams; William Aitken; T. Clifford Allbutt; H. Charlton Bastian; G. F. Blandford; W. H. Broadbent; Brown-Sequard; T. Lauder Brunton; Thomas Buzzard; W. B. Carpenter; the late J. Lockhart Clarke; J. Langdon Down; M. G. Echeverria; Robert Farquharson; David Ferrier; W. R. Gowers; Jonathan Hutchinson; Sir William Jenner; the late Edward Meryon; Robert Southey; T. Granger Stewart; J. Batty Tuke; besides a host of the most eminent names in general medicine and surgery, such as, Spencer Wells, Erasmus Wilson, Murchison, Latham, Stephen Mackenzie, Granger Stewart, Sir James Paget, Sir Wm. MacCormick, the Foxes, and more than we have space to mention.

The illustrations are all appropriate, and add largely to the easy understanding of the various texts, and the articles are all terse and clear.

Altogether the book is without a rival in the English language. It is a condensed encyclopædia, and, in our judgment far superior in practical utility to Ziemssenn's, and not surpassed by Chambers'. It is the best book of its kind ever published.

THE ARCHIVES OF PEDIATRICS is a new candidate for special professional favor. Published at Jersey City, N. J., and devoted to the diseases of infants and children, not to the healing of boys alone, as its name would imply.

Its prospectus states that: "original articles, clinical lectures, etc., have been promised during the year by the prominent writers and teachers on this specialty in this country and Europe." Referring to the rapidly increasing literature and facilities for studying the diseases of early childhood, "the object of the Archives of Pediatrics will be to impartially review and encourage scientific research."

"The *Archives* is the only medical journal in the English language," the editors think, "which is published exclusively in the interest of the profession, *i e.*, without advertisements." This is a singular reasoning, especially when so many of the advertisements which appear in medical journals are exclusively interesting to physicians. We hope the editorial head, in exclusively *pediatric* matters, will be found to be more logical.

DES MALADIES MENTALES ET NERVEUSE (Mental and Nervous Diseases.)
By Dr. E. Billod. Paris, G. Masson, 1882.

Dr. Billod is an old asylum superintendent, who has been, since 1843, prominently before the world of alienists. This is a collection of his works, arranged in chronological order only, and in consequence there are some curious contrasts. Side by side, with an article on Hallucinations, may appear something different. Dr. Billod denies that lucid intervals exist,—a denial whose justification would be difficult, and which has resulted in a vicious system of classification. For example: In discussing melancholia (typomania) he makes seventeen varieties, based entirely on single psychical symptoms. Later on it is found that Dr. Billod has rejected all classification. He makes the astonishing statement in one place that "disease is a new force introduced into the economy." It must be evident from this that Billod has been, or is, a disciple of the school of Heinroth. As an illustration of the phases through which the mind of an alienist may pass the book is of decided interest, but its scientific status is not of the first rank. The book has the not infrequent fault of French works—a defective index.

THE KANSAS CITY MEDICAL RECORD, No 1, Vol. I., came to us as we go to press. Drs. Fulton and Halley are the editors. This journal presents a promising, enterprising and ambitious appearance, like the flourishing and aspiring young city on our western border, in which it is published. In make-up the *Kansas City Medical Record* has very much the appearance of the *New York Medical Record*, but the title page is marred by the advertisement of "Malarial Shield Bitters," which are put on the market by a wholesale and retail liquor dealer, of Kansas City.

The *Record* is attractive and metropolitan-like, which pleases the Kansas City doctors. It is good-looking, like its editors, which will excite the envy of the brethren in the Future Great city of the Missouri valley.

A STUDY OF THE 10TH CENSUS.—The Increase of Insanity in the United States, its Causes and Sources. By Foster Pratt, M. D., Kalamazoo, Mich. A Paper read before "The American Public Health Association," at Detroit, Mich., November 15th, 1883. This paper states that the chief increase found among immigrants is in the foreign born,—1-8 of the population,—producing 1-3 the insane, 1-3 the paupers, and 1-3 the criminals of the United States; the several States are powerless to arrest the rapidly growing evil; Congress, alone, has the power to so regulate immigration as to keep out the defective and criminal classes, and protect each and every State; the native born children of foreigners outnumber the older native white element, in the Northern States and Territories, by 1,500,000; the hereditary tendencies to insanity, found in these native children of foreign parents, corrupting native blood, in the North; native whites, in the North, therefore, produce a larger proportion of insane than native whites in the South.

THE ANALECTIC, a monthly periscope summary of the progress of medical science. Edited by Walter S. Wells, M. D., formerly editor of *Quarterly Epitome of Practical Medicine and Surgery*, and *Epitome of Braithwaite's Retrospect*, etc., is announced for 1884. The purpose of this new journal is

as set forth upon its title page, to present a repertory of the most valuable selections of a practical character to be found in current medical literature. The new journal has our best wishes.

Possible Cerebral Origin of the Symptoms usually Classed under "Railway Spine." By G. L. Walton, M. D. This is an intelligent and plausible attempt to locate the morbid conditions of "railway spine" within the encephalon, and those who are not disposed to concur with the author *in toto* nevertheless accept his conclusions *in partibus*.

A Contribution to the Clinical Study of Typhlitis and Perityphlitis. By William Pepper, M. D., LL. D., Provost and Professor of Clinical Medicine in the University of Pennsylvania. Extracted from the Transactions of the Medical Society of the State of Pennsylvania for 1883.

Introductory Address, delivered before the Medical Class of Dartmouth College, August 1st, 1883, by Louis Elsberg, A. M., M. D., Professor of Laryngology.

Relation of Eye and Spinal Diseases. By A. Friedenwald, M. D., Professor of Diseases of the Eye and Ear, College of Physicians and Surgeons, Baltimore.

Report of Fred. H. Wines, Secretary to the Illinois State Board of Public Charities, respecting the Tenth Annual Session of the National Conference of Charities, at Louisville, Ky., Sept. 24—28, 1883.

Contribution to the Physiology of Parturition. Illustrated by the history of a case of labor during Paralysis, by A. C. Bernays, A. M., M. D., M. R. C. S., Engl., etc.

Past, Present, and Future. Introductory Lecture to the Fifty-First Session of McGill Medical Faculty. By Joseph Workman, M. D. (McGill, '35), of Toronto.

Medico-Legal Society of the City of New York—Constitution and By-Laws, Officers, Committees and Members, and List of Donors and Contributions to the Library, to December 31, 1882.

Two Cases of Brain-Tumor. R. B. Mitchell, M. B., C. M., Assistant Physician, Royal Edinburgh Asylum.

The Drunkard and his Responsibility. By Henry P. Stearns, M. D., Hartford. John Hopkins University Circulars, Vol. II., No. 24.

A Clinical Note on the Propagation of Insanity. By H. M. Bannister, M. D., Kankakee, Ill.

Nerve Stretching, for Traumatic Tetanus and Sciatica, with Remarks. By J. G. Carpenter, M. D., Stanford, Ky.

New York Medico-Legal Society.—Sixth Inaugural Address of Clark Bell, as president, pronounced January 9th, 1884. Shows this society to be in a very prosperous condition.

Our Insane Neighbor; His Rights and Ours. By W. W. Godding, M. D. Author of "Two Hard Cases."

Statistical Tables of Medico-Psychological Association. Adopted 1883. The Meteor, for December 25, 1883.

Locomotor Ataxia. By Philip Zenner, M. D., Cincinnati.



THE
ALIENIST & NEUROLOGIST.

Vol. V. | ST. LOUIS, APRIL, 1884. | No. 2.

ORIGINAL CONTRIBUTIONS.

Contribution to the Study of Cerebral
Localizations and Gliomata.*

(WITH A PLATE)

*APHASIA, AGRAPHIA, RIGHT HEMIPARESIS, GLIOMA OF THE
CEREBRAL CORTEX IN THE MOTOR ZONE.*

By A. TAMBURINI, M. D., Italy,

Director of the Psychiatric Institute of Reggio,

—AND—

V. MARCHI, M. D., Italy,

Pathologist of the same Institute.

THE case which we now undertake to illustrate seems to us of some interest, both from the point of view of cerebral localizations and that of new formations in the texture of the brain. Both these subjects are as yet so far from having reached their perfect development, that any contribution whatever of clinical and histopathological observations cannot fail to be of some use towards their more exact knowledge.

CASE.—N. C., a woman of thirty-eight years, married, entered the asylum of Reggio on 7th June, 1882. There were no hereditary antecedents of mental or nervous diseases in her family. Her father, however, as it would

* Translated by JOSEPH WORKMAN, M. D., Toronto, from *Rivista Sperimentale di Freniatria e di Medicina Legale*, Anno IX.—Fascicolo II, III., 1883.

appear, died of some scrofulous affection, her mother of pulmonary tuberculosis, and a brother and sister of tuberculosis. The patient has always been robust. She has had one child, and her pregnancy and confinement were favorable. She is handsome, and it appears that she has led a rather loose life, being much addicted to venereal pleasures. It was suspected that she had been affected with syphilis, but no traces of it are observed on her person. For some months previous to her present malady she complained of general weariness, wandering head pains, and a state of disquietude, which prevented her from attending, as before, with good-will, to her domestic affairs. About three months prior to her entrance into the asylum, one morning, shortly after rising from bed, she suddenly fell to the floor with loss of consciousness and convulsed movements, which affected especially the upper limbs, and above all, the right arm and the face, which was drawn towards the left. In about half an hour the convulsive movements ceased, and she passed into a state of coma. The accesses were repeated many times through the day. On the following morning, feeling better, she arose, but she was siezed with new accesses, which continued very numerous for the four succeeding days, so much so that from ten to twelve were counted in a single night. The attacks then became less frequent, but she was obliged to keep in bed, especially because of severe headache, and a variety of symptoms which cannot now be accurately related, because of the defective information supplied by her relatives, and by the medical report. In the latter, however, the diseased state of the patient was diagnosed as *cerebral meningitis*, which was treated with leeching, cold ablutions to the head, revulsives, etc. One fact appears certain,—difficulty in speaking was observed. This was exhibited in the fact that she was obliged to stop in her discourse because of her inability to pronounce certain words, which she said she could not express. She remained in bed and under treatment for about a month. Then, though the difficulty of speech

still remained, she felt able to rise, but at this time mental disturbances supervened, which rendered her entrance into the asylum necessary. Her character had changed: she was restless, talkative and desirous of constant movement, running here and there without definite object. She had lost affection for her family, and had become irritable to such a degree that she broke into passions from the slightest cause, and she frequently spoke incoherently. Finally, an unreasonable attempt to escape from her house and her city, decided the family on placing her in the asylum.

Present State.—On her entrance (June 7th) she was found to be a woman of robust physical constitution, of regular osseous development, well nourished, and of fair muscular development. Her skin was of pale yellow color. The cranium well formed, of brachiocephalic type (cephalic index 84), circumference 542 mm. (20.7 in.) The psychical examination shows especially disorder in speech and writing. In the middle of a sentence she suddenly stops, being unable to pronounce certain words, most usually substantives, but sometimes also adjectives. She becomes unquiet and distressed. If various words are spoken to her in order to find the one she has wished to use, she replies negatively until the one she intended to utter is given. She then repeats it promptly and hurriedly. If only the first word, or the first syllable of those which she wishes to utter, is given to her, she often succeeds in pronouncing them, and sometimes she succeeds even when a word is given with the same termination as that of the one she requires, especially if it chances to be a proper name—as that of her husband or son. She assures us that she has a clear idea of what she wishes to say, but when she is on the point of expressing it she finds it impossible, do what she will, unless she is aided by the words from other persons.

At certain times after this disorder had become aggravated, she was unable to express herself except in monosyllables, though well understanding what was said

to her, and monosyllables only being used, or if she succeeded in speaking she mispronounced the words.

There is an analogous disorder in her writing. When she is requested to write her own name she thinks a long time before commencing. She then draws one or two letters, and stops, and either proceeds no further or writes letters different from those she should write. She assures us that she recollects very well the form and the number of the letters requisite for the writing of her own name, but when she is on the point of acting she is prevented from doing what she wishes. The like is also observed when words are given her to copy: after the first letters she halts, and she frequently writes one letter in place of another. When she is made to write one by one several letters given to her, she almost always succeeds, though with some difficulty, and after taking up much time.

As to the rest, no traces of delirium or of hallucinations are observed in her mind; she is merely seen to be in state of disquietude, in consequence of which she would wander about without definite purpose; it seems that she has no exact idea of the place she chances to be in, or of her relations with the external world; her affections, however, are still preserved, and she gives attention to what is said to her.

Motility is diminished in all the right side of the body, especially in the right arm. In the first days of her residence in the asylum walking was accomplished pretty well, with exception of a little hampering in the right leg. In the upper limbs, however, the muscular force is diminished on the right side (25 kilog. on the right, and 30 on the left), and the ability to make certain of the more complex movements is defective; the paresis, however, yet permits the patient to execute with the right hand, though with effort, the motions necessary for writing. It is also noticed in the face that the right side is somewhat drooping, whilst the left labial angle is drawn outwards; the tongue deviates slightly to the right. The

pupils are symmetrical, but slow in response to the action of light and to distances.

The tactile and thermic sensibility is equal on both sides; the dolorific, as well mechanical as electrical, is diminished on the right. The electro-muscular contractility is diminished on the right (contraction of closure on the right 106, on the left 110). The visual sensibility is normal on both sides; the acoustic is diminished on the right.

The patient complains of intense pain in the head, especially on the left side. Methodical percussion on the head aggravates the pain, localizing it in the middle part of the left parietal region.

The sounds of the heart are normal, but the first is rather prolonged at the apex; the pulse is small and frequent; the respiration normal; the temperature sometimes a little above normal (37 and 37.7—98.6 and 99.8 F.). The digestive functions are regular; and so is the discharge of urine and fæces. The sleep is regular.

Progress of the Disease.—On the third day (June 10th) after admission, she was taken with vomiting and prostration and intense aggravation of the head pain.

She remained in bed one day, and then these disturbances passed away.

June 15th. The vomiting returned severely, with aggravation of the head pain, of which she complained very much; general prostration, intellectual torpor and tendency to slumber were noted. The difficulty of speech was much increased; she answered only in monosyllables, and very slowly, to questions put to her, and then fell into torpor. The pulse was small and hardly perceptible.

16th. Feeling herself better she tried to rise, but her strength failed, and she fell into a state of syncope, which lasted about a quarter of an hour. She then revived, complaining of a feeling of general *malaise* and severe left headache, and fell into a state of somnolence. She had no vomiting. The embarrassment of speech was

augmented. She was no longer able to repeat neatly the words given to her.

17th. The vomiting returned with continual head pain and somnolence, etc.

22nd. For two days past the vomiting had been absent; but it now returned with great severity, throwing the patient into a state of grave prostration, which went on augmenting still more. In a few hours the aggravation increased; the temperature rose to 38.3 (101 F.); the pulsations, small and hardly perceptible, reached 110; the state of stupor was complete; there was involuntary discharge of urine and fæces. Resolution and general insensibility soon followed, and then stertorous breathing, etc., etc., and death.

The phenomena described in this case, which had attracted our attention, as best adapted to aid us in establishing the diagnosis of the seat of the cerebral affection now met with, were the hemiparesis and the accompanying aphasia and agraphia. The cotemporality of these three facts led us promptly to admit a *cortical lesion of the left hemisphere*, as it is generally in lesions of the cerebral cortex, and more precisely in those of the so-called motor zone, that alteration in speech and writing is found associated with hemiplegia. The latter two facts permitted us also to institute a more precise limitation of the lesion in the cortical motor area.

The aphasia appeared to us to appertain to one of the varieties of *amnesic aphasia*, that in which, according to Kussmaul, association of words with the idea is impeded. The patient was in fact no longer able to express her conceptions with the related words, so far at least, as regarded substantives, and sometimes adjectives also; but she could articulate them as soon as she heard them pronounced in whole or in part by other persons. The case was not, therefore, one of *ataxic aphasia* (Kussmaul), nor of *motor* (Charcot), nor *verbal paralysis* (Tamburini), for the ability to articulate words was yet complete; it was not the typical form of *verbal amnesia*, that

is, in which speech is completely canceled from the memory; the words corresponding to the idea were conserved in the treasury of memory, but they could not be awakened in consciousness by the mere origination of the idea; it was necessary for the awakening of the immediate recall of them, and hence for effecting the related verbal expression of them, that the memory should be aided by hearing the word sought for pronounced by other persons. At certain times afterwards, of great aggravation, this assistance was no longer sufficient; the word pronounced before her could not be repeated by her; only monosyllables were then uttered by her; the amnesic aphasia became also *ataxic*, that is, there was also *verbal paralysis*.

Now, this form of aphasia, which is the most frequently met with, is at present, by universal consent, held to be dependent on lesion of the third frontal convolution, especially of the left side, and precisely in the foot of this convolution and the adjacent part of the ascending frontal convolution, which is more especially the motor centre for the muscles that serve in phonetic expression (the face, lips, tongue, etc.,) and these were, in fact, included in the lesion, as there was also *facial right hemiparesis*.

The *agraphia*, or better to say, in this case, the *disgraphia*, because the ability to write was not totally impeded, appeared then as belonging to that variety called by Kussmaul *ataxic agraphia*, in which the patient, though still able to write some letters side by side, does not succeed, or only with great trouble, in forming with them an entire written word, or, at the most, only his own name, and even this often in a deformed way; but he is not unconscious of this incapacity, as is the fact in amnesic agraphia; on the contrary, he perceives it, and he is pained by his incapacity to put into writing his own thoughts. Exactly this was verified in our case. Now, though nothing is yet known with certainty regarding the region of the cortex, which should be the centre for the

motions in writing, yet this much may be asserted: 1st. That the center of co-ordination of written words, though intimately connected with that of spoken words, since both forms of expression are frequently affected together, should have a distinct seat for itself (Marcè, Kussmaul), because it is not rare to meet with the lesion isolate. 2nd. That the cases observed by Exner render it very probable that, as the co-ordinating centre of speech (the foot of the third frontal) is found in immediate contiguity with that for the muscles (facial, lingual, etc.) which act in the expression of words (the inferior portion of the ascending frontal); so, also, the co-ordinating center of writing should be found in immediate contiguity with that for the movements of the hand, which is the executive organ of writing, and hence, as this center is situate in the middle part of the ascending frontal convolution, the centre for writing may be found in the foot of the middle (second) frontal convolution, which is immediately continuous with the ascending frontal. The fact of the paresis of the arm, which indicated a lesion exactly in the middle part of the ascending frontal, was consistent with this localization in our case.

The *right hemiparesis*, which was least in the leg, and greater in the arm and face, whilst it did not permit us to exclude the idea that both the central convolutions might be affected, yet, being found associated with the agraphia, it rather gave preponderance to the belief that the *frontal ascending*, only, was affected, chiefly in its middle and inferior portion, together with undoubted participation by the inferior, or third, frontal, and probably by the middle (second) frontal.

The absence of any sign of verbal deafness and blindness, for the patient understood quite well all that was spoken to her (though the sensibility of the left ear was a little lessened), and she was able to read printed and written words, warranted us in excluding any participation whatever in the morbid process by the *temporal* convolutions, lesion of which is wont to accompany the so-called

sensorial aphasia (Wernicke), or the *verbal deafness* (Kussmaul), also, participation by the *inferior parietal* or by the angular gyrus, which has been found affected in a few cases of *verbal blindness* described with exactitude by *Magnan, Dejerine, Chauffard, Reilly and Chantemesse*.

The diagnosis of seat then localized the lesion in the cortical substance of the left hemisphere, and precisely the motor zone in correspondence with the *ascending frontal convolution* (especially in its middle and inferior portion), and with the third frontal, and probably the foot of the middle second frontal.

This diagnosis of seat was confirmed by the fact of the head pain localized in the left side, and which was more exactly limited by means of the methodical percussion, to the left middle parietal region.

Finally, in confirmation of the cortical seat of the lesion, there were: 1st. The cotemporeity of the *intellectual disturbances* with the lesion of motion, speech, etc. 2nd. The manner in which the affection originated, that is, in the form of *convulsive access* (epileptiform), which was more conspicuous in the right arm and face (epilepsia Jacksoniana), and was followed by paresis of the convulsed parts, as is most frequently verified in paralyzes of cortical origin.

Coming next to the *nature of the lesion*, and taking into account the manner of its origin with phenomena of irritative character (epileptiform convulsions, cephalæa, signs of meningitis, etc.), which were followed by phenomena of a destructive character (paresis of motion, of speech, etc.), which became always more aggravated, we were led to admit that the morbid process had been initiated by an inflammatory state of the cortex, probably accompanied by extravasations, and followed by a process of degeneration and softening of the parts primitively affected.

The autopsy came in confirmation of the diagnosis of seat, and the macroscopic examination also confirmed the diagnosis as regarded the morbid process.

AUTOPSY.

The Cranium.—The skull is of normal weight and thickness; slight left fronto-parietal twist; vascular sulci deep.

Cerebrum.—Dura mater of normal thickness; adherent to arachnoid in middle part of the internal margins of the hemispheres. Arachnoid and pia mater atrophied; in the latter, which is reduced to a very thin web, only very small minute vessels are seen, unless in the posterior part, where the veins appear dilated and turgid. The pia mater is readily detached from the cortex without abrading it. There is then seen a notable flattening of the convolutions of both hemispheres, especially the left, except in correspondence with the central convolutions, which, instead, appear very large, spread out, and pressed together, with almost total disappearance of the sulci, which are made evident only with much trouble. In the middle part of the left hemisphere, an extensive area of softening is seen, which is even fluctuating; this area is largest in correspondence with the foot of the middle second frontal convolution. The entire area of softening, which is differentiated from the other parts of the cortex by its whitish-red color, includes, (as may be seen by the annexed figure): a small portion, in its middle and external parts, of the superior (first) frontal; the foot of the middle (second) frontal, and a portion of its middle and anterior part: the third frontal, or inferior convolution, a small portion of the upper part and a portion somewhat more extensive of the middle part of the ascending frontal, where the superior (first) and middle (second) frontal originate, and all the inferior part of it. The chief point of softening, corresponding to the foot of the middle frontal, and to the middle part of the ascending frontal, appears to be formed of a very soft, fluctuating, semi-transparent texture, of gelatinous aspect and consistence; through the first stratum of this, another, deeper, is transparent, of a dark red color, and it feels under the touch more fluctuating.

On cutting into the superficial stratum there is discovered under this region, in the body of the convolution, a small cavity with reddish-yellow walls, formed of a membrane richly vascular and suffused with transformed blood of a rusty red color, and hence possessing the characters of old apoplectic cysts. On cutting deeper into the convolution under the small cavity, the white substance of the convolution is reached: it appears somewhat sclerosed and presents in its center another small cavity, about the size of a pea, having the same characters and color as the preceding one. Cutting still deeper and penetrating into the white substance of the *centrum ovale*, it is seen that this part is softened, and of reddish-white color. This zone of softening of the medullary substance extends forward as far as the point of the frontal lobe, and backward as far as the bottom of the ascending frontal, consequently the softening is limited to the medullary substance belonging to the frontal lobe.

On examining the third frontal convolution, it is seen that the gray substance in it is reduced to a very thin stratum, hardly distinguishable, very soft, and of gelatinous aspect, and that the white substance under it is also fluctuant and of gelatinous consistence, being continuous then with the softening of the medullary part of the whole frontal lobe. The convolutions also of the insula (of Reil) appear softened.

There is no apparent alteration in the para-rolandic, or in the internal convolutions of the hemispheres, nor in those of the other lobes.

The lateral ventricles are dilated, full of fluid, and poorly vascularized.

The optic thalamus, and in great part the corpus striatum, are notably softened, and this softening extends to the lenticular nucleus. The Sylvian artery on the left is reduced to a very slender trunk, which is easily torn.

In the cerebellum and the rest of the encephalon there is nothing worthy of note.

Examination of the spinal cord could not be made, as

we were unable, for special reasons, to complete the autopsy.

The autopsy therefore, as we have said, served to confirm exactly the diagnosis made of the seat, and to explain the several facts of lesioned functionality so neatly limited in this case. In fact the lesion of the ascending frontal convolution, which was least in its upper part (the centre for the movements of the limbs—arms and legs), greater in the middle part (the centre for the movements of the hand), and in the inferior part (the centre for the movements of the face) gave the reason for the hemiparesis of the whole of the right side, more conspicuous in the arm and face. The extensive lesion of the third frontal convolution (the centre for the motor memory of language) explained the amnesic and ataxic aphasia; finally, the lesion in the foot of the middle (second) frontal, just in front of the centre for the movements of the hand, might explain the agraphia, and serve at the same time to confirm the idea that in this point the centre for the movements in writing has its seat.

We had, therefore, fallen upon one of those cases which, in a very typical manner, illustrate how much experimental and clinical physiology have demonstrated with regard to cerebral localizations.

Finally, the extensive fine softening, of gelatinoid consistence, the apoplectic cysts, apparently of old date; the limited sclerosis surrounding these, confirmed our pathogenic conception of a primitive irritative process in the cortex, accompanied also by extravasations with succeeding softening of the affected part.

If, however, this was all we were permitted to derive as to the nature of the morbid process, from the macroscopic examination, the histological examination of the diseased parts had in reserve for us other facts, which it was not before possible to perceive, but which were yet of very great interest.

Microscopic Examination.—The histologic examination of pieces was made by means of lacerations and sections,

using the various methods of coloring (carmine, hæmatoxylin, etc.) best adapted to distinguish well the structure and form of the several elements. In examining most diligently any of the points of the diseased cortical region, by means of delicate lacerations, it was seen that the texture of them was composed almost exclusively of large cells, of variable size, from 17 to 28 micro m. m. of irregularly rounded form, sometimes oval, sometimes triangular, and sometimes fusiform, with finely granulated contents, and presenting in their interior, as well toward the center of the cellular body as towards its periphery, oval or rounded nuclei, very variable in size and number, from 1 to 12. These nuclei were finely granulous, but more transparent than cellular protoplasm. From the contour, and especially from the angles of the body of these cells, some prolongations went out, varying in number from 1 to 8, and even more. These appeared rigid, transparent, homogeneous, and above all, notably long; those rather large at the point of origin went on becoming always more slender as they went further from the body of the cell. In their course these prolongations, unramified, or only occasionally ramifying dichotomously in the vicinity of their origin, were very irregular: some of them bent at an acute angle at some point in their length; others, on the contrary, had a tortuous course, zigzag or spiral, but most frequently they formed, by their numerous foldings, a sort of irregular interlacement around, and also at some distance from, the cell from which they had their origin. Proceeding with the examination towards the deeper part of the diseased region, that is, towards the medullary substance, the same elements were again found in great abundance, but with some difference. The cells, irregularly rounded or oval, had a less diameter than those previously described, and the prolongations, for the greater part, did not present the thickness and length of those before mentioned; on the contrary, they were shorter, more slender and flexible, but more numerous—so much so that many of them, from their form, the characters and disposition

of their short, very slender and crowded prolongations, resembled the normal cells of the neuroglia. Finally, proceeding still more deeply into the part under examination, so as to enter into the medullary substance of the frontal lobe, cells were again met with, of various diameter, some globose, broad and granulous, containing a single nucleus, others smaller and purely granulous, having in general few prolongations, or being quite unprovided with these (which might very probably depend on the traction made in lacerating, in order to isolate these elements); such cells were found intermixed with the nervous fibres, and meshed into a rich fibrillar netting. (*Vide* plate, Fig. I., *b*.)

On examining the pieces in fine sections, previously hardened in the bichromate, and after various colorings, as before mentioned, the above-described elements were seen in great number in the more superficial parts of the cortex, where they were closely packed and as it were enmeshed in the interlacement formed by their own prolongations; their number gradually decreased as they proceeded towards the deeper strata in the medullary substance. The examination of the sections further showed, in the superficial and middle strata of the cortex, the presence of nervous cells, few in number and rather distant from one another, furnished with their prolongations and having throughout the characters of perfect normality. (*Vide* plate, Fig. I., *a*.)

The blood vessels of the regions included in the lesion, presented notable alterations; they appeared numerous, tortuous, much ramified and very little resisting; the perivascular sheaths of the larger capillaries and of the arteries of small and medium calibre appeared much dilated, and they contained a notable quantity of small, rounded, granulous cells (lymphoid cells).

It is lastly to be noted that the special elements above described, forming almost in totality the superior strata of the affected convolutions, were found in greater quantity, and were more voluminous and robust around

the vessels; the cells most characteristic among the above named, surrounded the perivascular sheaths in great quantity, and formed with their prolongations an interlacement that surrounded the sheath itself.

From this histological finding it is seen that all that part of the left frontal lobe which appeared in the form of a softened gelatinous texture, was in greatest part formed, more towards the surface, less towards the deep part, of special cellular elements, which do not exactly correspond to the type of any of the cellular elements that are physiologically met with in the cerebral texture; but which, nevertheless, in their rounded form, their granular contents with several nuclei, their long, slender and numerous prolongations, remind us of the cells of the neuroglia; and this similarity becomes still more evident the farther we proceed from the superficial into the deep parts, with the pieces under examination; for in the deeper strata these elements diminish in number and volume, and instead of them we find those cells which in their volume, form and character of the prolongations, much resemble the normal cellular elements of the cerebral connective. It also appears that these elements were very numerous and more voluminous in the vicinity of the vessels, behaving in this in the same manner as Golgi has demonstrated with respect to the normal elements of the neuroglia; and lastly, in the superior strata of the affected region, rare nervous cells were met with, but they were of quite normal aspect.

The characters, therefore, presented by these special cellular elements, their becoming, gradually as we descended from the more superficial to the deeper strata, always more like the normal connective cells, their mode of behaving as to the vessels, and the important fact that they were more numerous in the more superficial stratum of the cerebral cortex, where normally the connective elements are found most numerous, and finally the fact that the nervous cells appeared scarce (perhaps because of their separation from one another by the

abnormal development of the neoform elements), but normal, lead us to hold that the above named elements represent a *neo-production of connective nature*, developed from the stroma (neuroglia) interposed among the nervous elements, which stroma has thereby undergone an enormous development both in its quantity and the robustness of its cellular elements. We have therefore a *gliomatous* neo-production,—a *cerebral glioma*.

It is well known that *Virchow* has designated by the term gliomata those neoformations that are developed from the interstitial stroma of the central nervous organs, that is, the *neuroglia*, which he has described as a soft, amorphous and finely granulous substance, in which are found disseminated in great numbers, cellular elements of rounded form, with finely granulous contents and large granular nuclei, wherefore gliomata would be constituted of rounded, lenticular, fusiform or stellate elements, scattered in a granular substance, which is amorphous in the fresh state, but reticulate in hardened pieces. Since, however, the studies of *Deiters*, *Jastrowitz*, *Boll*, and especially *Golgi* on the connective of the central nervous organs, have modified the ideas of the constitution of this texture, our conception of the intimate constitution of gliomata ought to be somewhat modified.

It has in fact resulted from the studies of *Golgi*, especially, that the connective stroma interposed among the nervous cells and fibres, as well in the cerebrum and cerebellum as in the medulla spinalis, is constituted: in the gray substance of cells of irregularly rounded form, provided with a thick hedge of very fine prolongations, partly granulous, partly homogeneous and splendid, and frequently ramified; in the white substance, of cells with flat and wide body, which is continued into a great number of fine, long prolongations that but rarely ramify; and finally to these prolongations pertains the principal, if not the exclusive part, in the formation of the interstitial stroma.

Resting on the principle that the structure of neoformations always takes imprint from the structure of the tissue in which they originate, it follows as a consequence that gliomata should be essentially characterized as cellular elements analogous to those which form the basis of the normal connective of the central nervous organs.

In fact, the study of the two cases of glioma of the brain, observed by Golgi in 1871, and afterwards excellently illustrated by him, have fully confirmed this idea, and have authorized the decision that *by true gliomata* we ought to understand *those neoformations which are mainly constituted of radiate cells, that is, with multiple prolongations analogous to those which form the connective stroma of the central nervous organs.*

Later studies by *Bizzozero, Simon* and *Fenoglio* have fully confirmed this principle.

Bizzozero, confirming the observations of Golgi, draws from them laws, important to pathology, on the relations between the structure of tumors and the nature of the tissues in which they originate.

Simon has illustrated two cases of cerebral glioma, one of the right cerebral hemisphere, completely constituted of connective cells with multiple prolongations (Dieters), or arachniform (Jastrowitz): the other of the ependyma of the left lateral ventricle, containing a great number of connective feathery cells, and analogous to those found by Boll in the optic thalami, the white substance of the medulla spinalis, etc.

Fenoglio has illustrated two cases of cerebral tumor belonging to the collection in the laboratory of Prof. Bizzozero, one of which is a particular form of true glioma, constituted of different varieties of the typical form of the cells of the neuroglia; the other, being, on the contrary, a typical case of *sarcoma*, afforded the author occasion for confirming the ideas of Golgi, not only as to the intimate constitution of gliomata, but also as to the difference in structure between glioma and sarcoma, on which subject we shall treat hereafter.

From this manner of viewing the constitution of gliomata, *Klebs* widely differs; in sixty-four cases of tumors in the central nervous apparatus, observed in the Anatomico-Pathological Institute, of Prague, he met with thirteen of glioma, which he considered as a hyperplasia of the whole cerebral texture, that is, as well of the elements of the neuroglia as of those properly called nervous, in which he seems to have found the characters of proliferation; he, therefore, prefers to designate these neoplasms by the name neurogliomata.

Kümmel and *Hartdegen* have since approached near to these views. The former found in a gliomatous hypertrophy of the pons and the medulla oblongata, in addition to an augmentation of the volume and the number of the connective elements, also an augmentation of the nervous elements; and the latter seems to have found, in the lateral ventricles of a new-born child, multiple neurogliomata, which he denominates *gangliocellular gliomata*.

Meyer and *Beyer* have also confirmed the views of *Klebs*, in an important study of two cases of parenchymatous inflammation of the medulla spinalis and the frontal lobe, in which the histological analysis showed such a neoformation of the different constituent elements of the nervous tissue as to constrain him to regard it as a form of transition from parenchymatous inflammation to glioma.

The idea recently sustained by *Witowski* is in unison with these views. He holds that the neuroglia represents a tissue, not of a connective, but rather of a nervous nature,—a very complex question and subordinate to another still much discussed, as to the embryonal origin of the diverse elements constituting the nervous tissue.

The case which we now publish goes to confirm, on the contrary, the principles established by *Golgi* with regard to the constitution of gliomata, and it presents such important analogies to the first of the two

cases described by him, that we think it here opportune to reproduce its chief heads.

This case of Golgi was that of an epileptic idiot, the history and objective examination of which are wanting. At the autopsy, the convolutions limiting the fissure of Rolando (the ascending frontal and parietal) were found isolately elevated and swollen, as compared with those around them, and as if they had undergone a colossal enlargement. Under the touch they presented an extraordinary softness and a quasi fluctuation. This apparent enormous enlargement of the convolutions was produced by a soft, semi-transparent gelatinous tissue, of a hydrangia red color. At points it covered the two internal thirds of the grey substance, between which and the tissue itself no precise boundary could be established; at other points it occupied the whole of the grey substance, gradually passing from the gelatinous tissue to the white substance. This tissue appeared, on histological examination, to be formed of cells with irregularly rounded body, of the size of 15 to 25 micro m. m., having one or more rounded nuclei, and furnished with innumerable filiform, very long prolongations, which were partly rigid, partly flexuous, and for the most part not ramified, or only dichotomously so; they were larger at their point of origin, and more slender in the rest of their length. There were also discovered rounded, nucleate cells, which, from the small number of prolongations, or even the absolute want of them, brought to mind the characters of the embryonal cells of the cerebral connective. Finally, cells perfectly identical with the gangliar or nervous cells were seen.

Though the case described by Golgi, as may be seen from the details, resembles ours very conspicuously, under macroscopic examination, yet between the two there are differences worthy of note, with respect to the characters of the fundamental histological elements of the neof ormation. These are in fact, in the cases of

Golgi, as may be still better shown by comparison of the figures published by him and by ourselves, much more like the elements of the normal cerebral connective. On the contrary, in our case they differ from those of Golgi in the greater irregularity of form in the cellular body, the greater number of the nuclei, the less number of prolongations, and above all in the greater length and robustness of the prolongations. Whilst, however, it is beyond doubt, that of the different elements which normally constitute the cerebral tissues, those to which the elements of the neo-production in our cases are most similar, are exactly the connective, it is further to be observed that the gradual passage from these cellular forms to those evidently connective, as discovered in proceeding from the more superficial to the deeper parts of the neo-production, their abundance in the more superficial strata of the cortex, their behaviour with respect to the vessels, their disposition in relation to the other elements constituting the cerebral tissue, as shown in fine sections, which, as may be perceived by comparing the respective figures, present great analogies in the two cases,—all these are facts that prove the connective nature of the elements in question.

On searching among the different cases of glioma that have been described, we have not been able to find any description of the elements presenting a notable analogy with those related by ourselves as constituent of the neo-production in our case.

In the cases alone of Fenoglio before mentioned, we have found something analogous mentioned. In the glioma examined by him, he found, in addition to the cells characteristic of the neuroglia, some others of oval, or of irregularly polyhedral form, with finely granulous protoplasm, and presenting a pretty large nucleus, which was ordinarily provided with various nucleoli, from the periphery of which there were given out two, four, six or more pale prolongations, consisting of a substance more homogeneous than that of the body of the cell, and

generally furnishing only some rare ramifications, which often appear ribbon-shaped. These cells, however, differ from the elements described by us, in their volume, which is much greater; in fact, they had a diameter varying from 45 to 120 micro m. m.

Fenoglio appears rather doubtful as to the nature of these cells, but he concludes on holding them to be hypertrophied cells of the neuroglia, and he regards this fact as very interesting, because it shows how the cells of the neuroglia may be pathologically altered.

Now, the cells described by us, which have much similarity to those observed by Fenoglio, though differing from them in their smaller volume, whilst they are yet more voluminous than the normal cells of the neuroglia, would appear to represent a primary stage of that pathological alternation (hyperplasia) of the connective cerebral cells, of which the elements observed by this author would represent a yet more advanced stage.

In the cases of Meyer and Beyer also, among the various histological elements described by them, some are found which present some similarity to those met with by us, and which the authors themselves recognize as of connective origin. But as we have before said, that the similarity between the cases described by Golgi and our case, consists in the macroscopic finding, we think we should call special attention to this fact.

In both cases, in an almost identical region of the brain, there was observed, in the macroscopic examination, a soft, fluctuating, gelatinous tissue, which rendered the affected convolutions so voluminous as to be called quasi elephantiasal. This character of enormous enlargement of the regions in which the glioma, instead of appearing in the form of a localized tumor, presented in a diffuse form, has been noted by the majority of other observers: Klebs, indeed, uses the very expression elephantiasal, to indicate this diffuse enlargement of the cerebral substance, which characterizes the gliomatous parts, and Kümmel more recently, in describing the

glioma already mentioned, of the pons and the medulla oblongata, observes that the strata of the affected parts is comparable to elephantiasis, and he prefers to denominate it *gliomatous hypertrophy*. Gerhardt also, in his recent work on "Glioma," insists on the expansive, diffuse nature of the gliomatous tumefaction, which he denominates *tumor of superposition*. This character seems to us of great importance in the appreciation of the macroscopic findings in autopsies. The soft, gelatinous, and more or less fluctuating appearances of certain parts of the cerebral cortex, especially when of a red or hydrangia-red color, as was the fact in our case and in that of Golgi, and still more when accompanied, as in our case, by the presence of old hemorrhagic foci, might promptly lead to the idea of a softening of the cerebral tissue, due to that necrobiosis of the elements, which often accompanies apoplectic foci, an alteration to which, as being rather common, much importance might not be attached; whilst, on the contrary, we should fall into grave error did we fail to recognize the not very common affection of gliomatous neo-production in the brain. Now, the fact of the tumefaction of the convolutions, which is proper, as it would appear from the majority of the cases observed, to the gliomatous neoformation, and which is not verified in necrobiotic softenings, may be a character of great value in preventing our being led into error. We therefore think it opportune to call attention to this fact, in order that whenever in autopsies, especially in the cerebral cortex, a notable tumefaction of the convolutions is found associated with a gelatinoid softening of the tissue, the histological examination of the parts may not be forgotten, as there is a great probability that the case may be one of cerebral glioma.

Another fact which we think merits attention, is that of the two hemorrhagic foci found by us in the neo-production. This fact has already been noted by other observers, as frequently to be met with in cerebral

gliomata, and in the case of Fenoglio also there was observed in the deeper, dark red part of the tumor, a hemorrhagic focus, with other hemorrhagic points scattered here and there, as they have also been found described in the cases described by Meyer and Beyer.

This depends on the great vascularity that gliomata generally present, in consequence of which they have a great tendency to congestions and a rapid increase of volume, with grave disturbance of the cerebral circulation, so that they are very liable to hemorrhages, so much so indeed that it is not always easy to distinguish macroscopically, especially when they have the characters of the apparent softening above mentioned, hemorrhagic gliomata from simple cerebral hemorrhages. This remarkable vascularity was noted in our case also, in which the microscopic examination showed the vessels in correspondence with the neoplasm to be numerous, tortuous, much ramified, and having the perivascular sheaths greatly dilated and full of lymphoid elements. In the case illustrated by Golgi also, it was noted that, besides the remarkable hyperæmia of the meninges lying on, and adherent to, the gliomatous cortical area, as well of the different strata of the neoformation as of the surrounding cortex, there was an abundance of blood vessels with thickened walls, and turgid with blood. This great vascularity in our case explains the presence of the two hemorrhagic foci, which nothing would authorize us to regard as primitive and antecedent to the neoformation, whilst, on the contrary, everything leads us to hold them as secondary occurrences proper to the neoplasm.

We do not believe it necessary to delay long on the *differential diagnosis* between the neo-production studied by us, and other possible cerebral neoplasms. The neoplasm which is most frequently confounded with glioma is cerebral *sarcoma*. But this confusion must be much more likely to occur could we avail of no other characters as our basis of distinction, than those described by Virchow for the neuroglia and gliomata; he goes so far as to

declare "that the distinction of gliomata from sarcomata presents such difficulties that the establishment of the group in which to place the cerebral neoformation is, in most cases, altogether arbitrary." And in truth, the characters given by him for gliomata, as tumors constituted of rounded cells, immersed in a finely granular substance, and not presenting any essential difference from those of sarcomata, must, as a necessary consequence, have led to the impossibility of an exact distinction. But since the studies, before mentioned, of Golgi, on the intimate structure of the cerebral connective, and on the constitution of gliomata, it remains established that whilst the histological characteristic of glioma has, as we have several times said, been given by the cellular type proper to the interstitial connective of the brain, that for sarcoma is, on the contrary represented by elements which have their type in the embryonal connective, that is, by rounded or fusiform cells, situate in a more or less abundant, granulous, or fibrillar, intercellular substance. From this it has followed as a consequence, that many neo-productions have, in the past, been attributed to gliomata, instead of sarcomata. The two cases of Fenoglio, already mentioned, have served to confirm the correctness of a distinction, which has been established by Golgi between glioma and sarcoma. And this distinction, when brought to bear on the characters herein set forth, of fundamental elements of the neo-production in our case, authorizes us to completely exclude the idea that it could be one of sarcoma.

The like may also be said respecting the so-called *neuro-glioma* of Klebs, of which we have already made mention. The neo-production in our case was constituted essentially of those special elements which we have demonstrated as proceeding from proliferation of the neuroglia. The nervous elements did not present any sign of participation in the neo-productive process; they were indeed scarce, probably because of the considerable development of the neoplastic elements, but they

presented themselves in their perfectly normal characters. There was not, therefore, anything that pointed towards that hyperplastic process of *all* the constituent elements of the cerebral tissue, which, according to Klebs, should be the characteristic of neuroglioma; and indeed whilst our case comes, as we have before intimated, in full confirmation of the views of Golgi, it is, on the other hand, antagonistic to the ideas published by Klebs on the constitution of gliomata, at least as a general law.

It remains now to consider whether the interesting histological finding met with in our case, is, or is not, confirmatory of the pathogenic conception which we have before enounced, with regard to the morbid process which must have taken place in the case. It is certainly modified in so far as the characters of a secondary degenerative process in the parts affected are wanting, the whole being on the contrary, but a neo-productive process. Nevertheless, the pathogenic conception formulated by us remains, on the whole, confirmed, and indeed with the minute alterations discovered, we are enabled to explain fully to ourselves, the course of the disease and its phenomena. In fact, the gliomatous proliferation met with in the convolutions of the motor-area, suffice to demonstrate to us the existence of a *formative* process, which is as much as to say, an *irritative* one, which we admitted in our case as the first pathogenic fact.

This conception respecting the pathogenic process, besides being admitted for neo-productions in general, is especially admitted for gliomata, of which Virchow has written thus: "The name glioma is appropriate when the neof ormation, being also of inflammatory origin, acquires the durable character and form of a tumor;" and, as we have noted, Meyer and Beyer have endeavored to show the derivation of the gliomatous neof ormations met with by them, from parenchymatous inflammation of the nervous tissue.

This irritative nature of the process was clearly proved

by the numerous, tortuous, greatly ramified vessels, with dilated perivascular sheaths, full of lymphoid elements, and above all by the fact that the neoform elements were more numerous and robust exactly in correspondence with the blood vessels. Now this irritative process, proved by the characters and nature of the neo-production met with, explains to us the phenomena of irritative character (epileptiform convulsions, cephalæa, etc.) with which the affection commenced.

The succeeding compression of the cortical nervous elements of the affected region, produced by the abnormal development of the interstitial connective elements, explains to us the phenomena of the impeded functionality of the convolutions, that is, of motility, and the phonetic and agraphic expression of ideas, of which the affected convolutions are evidently the centers. This impediment should not, and could not, attain to a complete abolition of the functions, for, as we have before seen, the specific functional elements, that is, the ganglion cells of the cortex, though scarce and distant from each other, because of the abundance of the interposed neo-produced elements, did not present any alteration in their structure.

WAS GUTEAU INSANE ?

A REPLY TO DR. ELWELL'S REJOINDER.

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DR. Elwell, in his analysis of Dr. Spitzka's paper, starts out by claiming that he is not committed to the doctrine that the "really" insane (that is, those who do not know right from wrong, in the legal sense,) should be punished, but that he does stand committed,

On the other hand, to the punishment of that large class of *alleged* insane, thrown to the surface as the emergency requires, for whom the defense of irresponsibility is so constantly interposed in courts of justice—composed of the weak-minded, the evil-minded, those more or less disordered in mind but still know right from wrong, the "odd" and the "singular" people; and, lately have been added to these, the eccentric; and still later (*Lancet*), "those of bad memory," have been made to swell the list. This is the class whose position as to responsibility is here under discussion; and these are the persons who are spoken of in this article as *the insane*, and not those who come under the rule of the English judges.

It is scarcely astonishing that such views should be regarded by the greatest forensic alienist of the age, Krafft-Ebing (elegantly denominated by Dr. Elwell "a German doctor who speaks Dutch"), as showing "transplendent ignorance," of psychiatry; but even this "transplendent ignorance" scarcely prepares us for the statement that:

The rule of responsibility, as found in the criminal code of Germany, is substantially the same as the knowledge of right and wrong in England and America, the German rule being that "there is no criminal act when the actor, at the time of the offense, is in a state of unconsciousness or morbid disturbance of the mind, through which the free determination of his will is excluded."

Do all lawyers of the English-speaking countries agree

with Dr. Elwell? To give a just idea of the legal doctrines on this subject, it is best to pass in review the circumstances under which this right and wrong test was officially promulgated. Sergeant Ballantyne,* a British lawyer, known wherever English is spoken, says that :

This test was promulgated after the acquittal of Macnaghten, for the murder of Mr. Drummond. The judge presiding at that trial, Chief Justice Tindal, of the Court of Common Pleas, was made for the position. Sound law and substantial justice were sure, as far as human power could prevail, to be administered under his presidency. It required a judge of this caliber to control the violent indignation against the accused. Sir W. Follet prosecuted, and the late Lord Chief Justice, then Mr. Cockburn, defended. The facts were easily proven, and the only question at issue was whether the prisoner, at the time of the crime, was of sound mind. The onus of showing the contrary practically devolved upon the prisoner's counsel. Macnaghten had been treated as a lunatic, and appears to have imagined that Sir R. Peel was bent upon his destruction, which he intended to prevent by the assassination. There was no ground whatever for even the belief that Sir R. Peel knew him. In a case somewhat similar, Erskine made a most masterly argumentative speech upon the different phases of insanity. Cockburn, in his defense of Macnaghten, had the advantage of this great advocate's treatment of the subject. This did not detract from one of the most masterly arguments ever heard at the English bar. The facts just stated were fully proven. Before the evidence was concluded the Chief Justice appealed to Sir W. Follet, who admitted that he must submit to a verdict acquitting the prisoner upon the ground of insanity, which was accordingly pronounced. A storm of indignation followed. "Mad or not, the prisoner ought to have been hanged." Such was no uncommon expression, and a general denunciation of mad doctors and lawyers was frequently heard. This outcry resulted in a very singular and unprecedented proceeding on the part of the House of Lords, which fortunately has never been repeated. It called upon judges to express their opinions upon the law applicable to insanity in criminal cases. It seems to me surprising that they did not point out that such a proceeding was extrajudicial, and that their opinions could only properly be given upon certain facts arising before them in their judicial capacity, and that what was asked of them was to make a law in anticipation of facts that might hereafter arise. The same proceeding also might be adopted in relation to any subject, civil or criminal. However, the judges went and sat in solemn conclave, but as might be expected, being called upon to found abstract opinions with no facts to go upon, they have not greatly assisted the administration of justice. The important point propounded by the judges seems as follows: "The only ground on which an alleged lunatic is entitled to an acquittal is *that he did not know the difference between right and wrong* in the act he committed."

* Memoirs.

If they had proceeded to say upon what grounds the question was to be determined, some benefit might have arisen from their opinions. (Judge Maule refused to sully the ermine by bowing to mob spirit, as voiced in the House of Lords, and did not agree with the other judges, taking his stand on the law as promulgated before these dicta.) The judges say that:

“Although a person may in a particular matter act under an insane delusion, and act in consequence thereof, he is equally liable with a person of sane mind.” This seems to mean that unless the delusion destroyed knowledge of right and wrong, to be discovered and proved independently of the admitted delusion, he must be considered sane. If these dicta are to be received as law, then a totally different principle governs civil and criminal cases, and a person incapable of making a will or executing a deed, may, nevertheless, be liable to be executed for the commission of what, in a sane man would be a crime. It is not difficult to presume that the insane often know they are doing wrong; and, indeed, the cunning that in many cases attends their acts indicates that they do; but assuming one of the qualities of the sane human mind to be self-restraint, and supposing this barrier has been removed by insanity, ought the sufferer to be held criminally liable for his acts, although evidence existed that he was conscious of the difference between right and wrong? It would be dangerous doctrine to declare because the sense of right and wrong had disappeared, a criminal should be deemed irresponsible, yet, on the other hand, an utter lunatic may possess a sense of right and wrong in many actions of his life.

He then cites the case of the lunatic who concealed his delusion from Erskine, and says:

He was admittedly a lunatic, but certainly if he had been charged with a crime it might fairly have been contended that he knew the difference between right and wrong. A civil act is destroyed by proof that the person performing it was at the time subject to mental delusion upon one subject, although in every other perfectly reasonable. The only principle upon which this rule can be founded is that the mind is one and entire, and if diseased it is impossible, whatever may be the external signs, to say to what extent, and in what direction, the disease extends. If this be good reasoning, surely it is equally applicable to the mind of a person charged with a crime. I cannot think that where an insane delusion is clearly proved, although numerous facts may be brought forward to show that the lunatic distinguished, up to the time of the offense, the difference between right and wrong, he ought to be consigned to the gallows. The gout that has taken possession of a man's toe suddenly leaps to his heart. When a man believes himself to be the Saviour, how is it possible for human skill to tell what thought or opinion is likely to control any

act of his life? The law must yield to the dispensations of Providence, however much prejudice and passion may seek to sway its administration.

Lord Chief Justice Cockburn, up to the time of his death, held similar views. Judge Blackburn, as evidence of the fallacy of the right and wrong test, recently cited the following case :

A woman who had been more than once insane from excessive lactation, had again suckled a babe for more than two years. She had under her care a fifteen-year-old girl, of whom she was very fond. The family were miserably poor. One night, this woman deliberately cut the child's throat. She then went to her own child, to whom she was greatly attached, who looked up on hearing a noise, and said : "What are you doing?" She replied, "I have killed Olivia, and I am going to kill you." The child flung her arms around her mother's neck, and said : "No, I know you would not hurt your little Mopsy." The woman dropped her child, went out, and said to a neighbor "I have killed Olivia and was going to kill Mopsy, but when the little darling flung her arms around my neck I had not the heart to do it."

Lord Blackburn, commenting, says :

She knew right from wrong on the definitions in the *Macnaghten* case. She did know the quality of the act, but he felt it was impossible to say she should be punished, and therefore charged the jury that there were exceptional cases where the accused did know right from wrong, yet was irresponsible.

In this case the woman had pretended to recover from her depression to secure opportunity for the homicide.

In *State vs. Pike*, Chief Justice Perley, of New Hampshire, instructed the jury :

That they should return a verdict of not guilty, "if the killing was the offspring of mental disease in the defendant; that neither delusion, nor knowledge of right or wrong, nor design, nor cunning in planning and executing the killing, and in escaping or avoiding detection, nor ability to recognize acquaintance, or to labor or transact business, or manage affairs, is, as a matter of law, a test of mental disease; but that all symptoms and all tests of mental disease are purely matters of fact to be determined by the jury.

Judge Doe said :

A striking and conspicuous want of success has attended the efforts made to adjust the legal relations of mental disease. It was for a long

time supposed that men, however insane, if they knew an act to be wrong, could refrain from doing it. But whether that suspicion is correct or not is a pure question of fact; in other words, it is a medical supposition—or, a medical theory. Whether it originated in the medical or any other profession, or in the general notions of mankind, is immaterial. It is as medical in its nature as the opposite theory. The knowledge test, in all its forms, and the delusion test, are medical theories introduced in immature stages of science, in the dim light of earlier times, and subsequently, upon more extensive observations and more critical examinations, repudiated by the medical profession. But legal tribunals have claimed these tests as immutable principles of law, and have fancied they were abundantly vindicated by a sweeping denunciation of medical theories, warning that this aggressive defense was an irresistible assault on their own position. In this manner opinions purely medical and pathological in their character, relating entirely to questions of fact, and full of errors, as medical experts now testify, passed into books of law, and acquired the force of judicial decisions. Defective medical theories usurped the position of common law principles. Whether the old or the new medical theories are correct, is a question of fact for the jury. It is not the business of the court to know whether any of them are correct. The law does not change with every advance of science, nor does it maintain a fantastic consistency by adhering to medical mistakes which science has corrected. The legal principle, however much it may formerly have been obscured by pathological darkness and confusion, is that a product of mental disease is not a contract, a will, or a crime. It is often difficult to ascertain whether an individual has a mental disease, and whether an act was the product of that disease; but these difficulties arise from the nature of the facts to be investigated, and not from the law; they are practical difficulties to be solved by the jury, and not legal difficulties for the court.

If the tests of insanity are matters of law, the practice of allowing experts to testify what they are should be discontinued; if they are matters of fact, the judge should no longer testify without being sworn as a witness and showing himself qualified to testify as an expert. If it is necessary that the law should entertain a single medical opinion concerning a single disease, it is not necessary that that opinion should be a cast-off theory of physicians of a former generation.

In *State vs. Jones*, Judge Ladd, on the right and wrong test of responsibility, claimed that

An interference with the province of the jury and the enunciation of a proposition which, in its essence is not law, could not, in any view safely be given to the jury as a rule for their guidance, because, for ought we can know, it may be false in fact.

Judge Hughes, of Ohio, Judge Hornblower, of North Carolina, and Chief Justice Agnew, of Pennsylvania, hold

similar views. It will be seen that this test is flung to the winds by the more enlightened judiciary. According to the test promulgated by Judge Elwell, the unfortunate woman already mentioned, would have been hung, as, since being more or less disordered in her mind and knowing right from wrong, she was only "alleged" to be insane. Fortunately for the interests of science and of the insane, it was not given to Dr. Elwell to blow away the scientific conception of insanity by the use of the word "alleged." He might with equal propriety speak of the "alleged structure of the brain," of the "alleged" position of man in nature, and his opponent of the "alleged existence of the soul."

Second. I, like Dr. Spitzka, did believe that Dr. Elwell's foot note was intended as an advertisement for Dr. Elwell's book, and the most impartial judge would have this opinion strengthened on reading the dozen or more fulsome press notices scattered through that work under the guise of foot notes. His paper and Dr. Spitzka's do not come under the same category. Dr. Spitzka's was historical; devoted to a trial in which he himself had been a prominent actor, and for the purpose of demonstrating the falsity of certain misrepresentations made of his share in that trial: here the personal element could not be avoided. Dr. Elwell's paper was casuistic, and in such a paper the personal element was out of place.

Third. It is difficult to believe that a *medical* man could cite approvingly the statement of Dr. Ordranax concerning the disagreement of science and law, and approvingly endorse the statement that the layman and physician were on a par as regards their knowledge of mental pathology. That the rules of law should not be applicable to medicine is not astonishing, nor would a scientist regret this. Law is hide-bound by precedent; medicine scorns precedent as precedent; medicine welcomes all truth; law, such truth as can be fitted into formulæ. Legal minds, of the better class, have endorsed the statement of an eminent English judge, that law must fit itself to

science, not *vice versa*. Dr. Spitzka was wrong in saying that Dr. Elwell was a *mere* echo of Dr. Ordronaux. Their arguments are the same; both are nativistic in tone, in the mean sense which nativism in science implies; both oppose moral insanity from a fear of consequences, but here Dr. Elwell strikes out in a new path. Dr. Ordronaux feared the doctrine of moral insanity because of its tendencies to induce belief in the supernatural. Dr. Elwell fears it because of its tendencies to destroy belief in the supernatural. Which is difficult to ascertain, since alienists who are members of the Calvinistic denomination, of the Arminian denominations, of the Roman Catholic Church, and others who are agnostics—all believe that there is a psychosis of which moral manifestations are the most plain and obvious symptoms. As an argument in science, fear of consequences is an absurdity; and in the present instance, a double absurdity—Dr. Ordronaux's fears offset Dr. Elwell's fears. As has been very well said by Dr. H. M. Bannister,* of the Eastern Illinois Hospital for the Insane:

There is an unworthy tendency, from which even scientific men are not entirely free, to apply to all questions where the general welfare seems in any way liable to become affected, the rule of expediency, and to avoid expressing apparently dangerous truths, and even to suppress them as far as possible.

This is equally in point as to the theology introduced into medicine by the editor of the *Lancet*, who is not regarded as an alienist anywhere. Dr. Elwell accuses Dr. Spitzka of innovation in introducing the doctrine of moral insanity, and of believing that insanity results from congenital conditions. I need not tell the readers of the *ALIENIST AND NEUROLOGIST* that in all the works of the fathers of psychiatry these ideas are to be found. Although innovation is frequently a sign of progress, it is Dr. Spitzka who, like Drs. Hughes and Godding, has cleared away errors which have obscured the teachings of Rush, Prichard, Esquirol, Morel, Ray and Griesinger.

* *Journal of Nervous and Mental Disease*, 1877, p. 645.

Dr. Elwell cites approvingly the statements of the editor of the *Medical Record* that Guiteau's cross-examination was proof of his sanity, and as proof that his conduct during the whole trial showed evidence of able generalship. Dr. Shrady is not known to the profession as an alienist, nor was he present at the trial. Guiteau's conduct impressed very differently one who is admitted to be an alienist, who was present at that trial, and another alienist who was not. Dr. McBride,* superintendent of the Wauwatosa Asylum, shows that Guiteau's conduct at the trial was no evidence of sanity, and clinches his argument by citing the following case:

Mrs. Crocker, a well-educated lady, who had studied law, a resident of Milwaukee for many years, but latterly a resident of Washington, D. C., because of certain differences between herself and her step-mother, came from Washington to Milwaukee, appointed an interview with that lady at a lawyer's office, and without any immediate provocation, shot at her. At the outset of her trial, she pleaded insanity, claiming that the shooting was in obedience to a command received at night from her dead father's spirit. She insisted that at the time of the shooting she was insane, exhibited much interest in the trial, and suggested to the attorneys questions to be put to experts. Upon the witness stand, she claimed that she was insane at the time of the shooting, and underwent a long cross-examination without contradicting herself. She was acquitted on the ground of transitory mania, and set at liberty, but was soon after arrested for another offense, and upon trial, being declared insane, was committed to the Wauwatosa Asylum, where she now is. She was undoubtedly insane at the time of the crime, the insanity having existed for years previous. She now states that the plea of insanity at the time of the first trial was false, that she did not entertain the delusion mentioned, and only entered that plea to escape punishment. There is no doubt that her statement is true, and that her pretended delusion that she was influenced to commit the deed through the command of her father's spirit, was feigned. Such a delusion would be inconsistent with her other mental symptoms; it is totally unlike those she is known to entertain, and a belief in the communication with spirits is one which she is now, and always has been, prompt to ridicule. She is shrewd and intelligent, but entertains many wild and extravagant ambitions like those of Guiteau, but intellectually she was his superior.

The "able generalship" of Guiteau impressed Dr. Hughes† as decidedly insane conduct, as witness the following citation from his paper on Guiteau:

* *Alienist and Neurologist*, October, 1883.

† *Alienist and Neurologist*, October, 1882.

Seeking to be cleared of the insane crime through the plea of insanity, not because he is insane ; he vigorously denies insanity, but because, legally, his inspiration will be so regarded by the jury, and so ruled to be by the court, through providential guidance, even though he plead the cause of his insanity himself. A lawyer boldly facing judge and jury, and, not by mimicry of madness as a sane man would, but by vehement and ingenious speech as coherent as he is capable of making, seeking to establish his insanity by proof and precedent! Yet, though knowing by experience the necessity for proof, and what constitutes evidence in law, omitting all evidence of every form of insanity known to the law, of which he is by profession an exponent, and endeavoring to establish his case upon his own testimony alone, in his own behalf, unable to discern what, in his best mental estate was quite familiar to him through experience at the bar, that such testimony was of no value. The delusional thralldom of this morbid mind is here most apparent. Was there ever a more insane act and action than Guiteau and his insane plea of "spiritology and Abrahamic insanity, not craniology," in the late serio-comic performance at the Capitol? How the insane incongruity of the man and his act, and his morbid disharmony with his surroundings could escape expert detection, and fail to make its impress on the Government medical witnesses, as it did not fail to do upon others, seems most strange.

A case like that of Dr. McBride is reported by Dr. Burr:*

The patient, like Guiteau, committed a sudden, but premeditated homicidal attempt, which had an ostensible motive. He took precautions for safety after the crime. He laid claim to inspiration, and had at one time attempted to establish his own insanity in order to secure a pension. He was intensely egotistic, had an exaggerated sense of his own importance, wrote profusely, and had followed unsuccessfully the profession of lecturing. He was visionary, expansive, and showed a lack of good business judgment. He became erratic and perverted at an early age. The higher mental faculties were much below the normal standard for the individual; and, like Guiteau, he reasoned logically, though from false and inadequate premises. In consequence of this homicidal attempt, he was sent to the Pontiac (Michigan) Hospital for the Insane, where, becoming restive under detention, he contemplated effecting his release by taking the life of the superintendent of the asylum. He procured and concealed in his stocking a sharp-pointed steel husking-pin, and laid a plan for the murder. Unless he was previously discharged, this was to take place on or after the first day of April, at which time his conscience, to use his own expression, "would be clear."

The dermatological question raised by Dr. Elwell has no bearing on the case, although Dr. McLane Hamilton†

* American Journal of the Medical Sciences, July, 1883.

† Official Record, p. 1174.

did say that "the skin of the chronic insane person has a dry appearance," and that Guiteau's skin was both well nourished and diseased*.

Mr. Scoville's conduct in offering Guiteau a partnership was one of those manœuvres which relatives of insane people use to induce them to engage in regular employment when the family are not all willing to send them to an hospital. Dr. Elwell, as a lawyer, knows very well why Mr. Scoville did not testify. It was contrary to legal ethics for a lawyer to testify in a case in which he is engaged as attorney. Reed was not an attorney in the case when he testified, and his subsequent entrance into it was not regarded by Judge Cox as a violation of the legal standard of ethics. Dr. Elwell deliberately accuses Dr. Rice of attempting fraud in trying to confine Guiteau as a lunatic in an hospital for the insane. He had previously denied that any one "thought of having him (Guiteau) shut up in a lunatic asylum." At this point I cannot help alluding to what seems to me to be a very peculiar procedure on the part of Dr. Elwell. In the April number of the *ALIENIST AND NEUROLOGIST* he says:

Dr. Spitzka, the defendant's chief and most important medical witness, says: "He found his skin was in a healthy condition; found his appearance perfect; his eyes perfectly healthy. No change of habit, of life or thought."

He now claims that this last clause was not put into Dr. Spitzka's evidence by him, but was a quotation from Dr. Hughes. If so, it was in a decidedly queer place, for up to the time of this last explanation I regarded it as intended for a quotation from Dr. Spitzka's testimony, and, under the circumstances, it could not be otherwise understood.

As to the question of heredity, Dr. Elwell states that Dr. Rice swore positively that Guiteau's father was not insane. Dr. Rice† saw Guiteau's father only when suffering from hepatic atrophy. He swore that Luther W.

* Official Record, p. 1173.

† Official Record, p. 356.

Guiteau manifested delusions, but that he saw no evidence of intellectual aberration other than could be accounted for by the hepatic disease. It is evident that Dr. Rice refused to express an opinion on an impure case. If so, he must be conscientious and careful, and all claims that he was guilty of fraud in his diagnosis of insanity in Guiteau's case are libelous.

Dr. A. McFarland,* one of the leading alienists of Illinois, who saw Guiteau's father in health, would have testified that the latter was insane, but was excluded from the witness stand by one of those rules of law to which science won't conform, to the disgust of Drs. Elwell and Ordranax. A paternal uncle of Guiteau died insane in the Bloomingdale Hospital for the Insane. According to Dr. Elwell this does not mean anything; according to Dr. Ray,† it is of considerable significance, for

The uncle or aunt rather than the parent may be the connecting link between grand-parent and grand-child.

In the history of this uncle (dated 1829) it is stated that he had a strong hereditary tendency to insanity. This record was offered in evidence, and excluded on the objection of the District Attorney, who had obtained a copy of it three months before the trial. Had this official not pretended to be desirous of doing full justice to the prisoner and to wish that if insane he should not be punished; had he contented himself with simply claiming to do his duty to the Government, this conduct, with his mutilation of the prisoner's letters‡ and his suppression of the stenographer's notes§ of his first interview with Guiteau, might be defended, as resulting from narrow views of professional duty. Under the circumstances they look suspiciously like a conspiracy to hang a man whom this official regarded as insane. Like the editor of the *ALIENIST AND NEUROLOGIST*, I have been informed that

* Official Record, p. 1717.

† Mental Pathology.

‡ Official Record, p. 1120, Vol. I.

§ Official Record, p. 731, Vol. I.

the hereditary taint of insanity came into the family from the paternal grandmother, who had periodical gloomy spells. She also brought consumption into the family. It was proven at the trial that two of the sisters of Guiteau's father were insane; that his brother Abraham was weak-minded and dissolute, and one of the other children died in infancy. It was decided in an Illinois court that this evidence proved that insanity was hereditary in the Guiteau family. Of the next generation five individuals are known to have been insane; the daughter of Abraham Guiteau; the daughter of one and the son of the other of the two aunts mentioned; the son of another uncle* now residing in New York, has periodical insanity. As to the mental status of another member of this generation the following verdict, rendered, in part, on evidence admitted, and in another part on evidence technically excluded at the Guiteau trial, speaks for itself:

We, the undersigned jurors, in the case of Frances M. Scoville, who is alleged to be insane, having heard the evidence in the case, are satisfied that the said Frances M. Scoville is insane, and is a fit person to be sent to a state hospital for the insane; that she is a resident of the county of Cook, in the State of Illinois; that her age is forty-six years; that her disease is of about six months' duration; that the disease is with her hereditary; that she does not manifest homicidal or suicidal tendencies, and that she is not a pauper.—B. P. Reynolds, M. D., Charles G. Muller, Jefferson Farmer, C. R. Capron, J. J. Jennings, M. S. Hovey.

John W. Guiteau, the elder brother, is decidedly anomalous in his mental make-up. Guiteau was born of a mother suffering from a nervous disease at the time of her pregnancy with him. Of the two children born after Guiteau of the same mother, one was deformed and the other died in infancy. The half-sister of Guiteau has exophthalmic goitre. If there be not a morbid heredity in this family where shall we find it?

Dr. Elwell lays stress on legal rules. The inquest in the case of Mrs. Scoville was conducted on legal principles. There was no element of prejudice against insane homicides

* American Journal of Neurology and Psychiatry, 1882, p. 276.

in the case, and a jury decided that insanity was hereditary in the Guiteau family.

I have already spoken of the validity of the *Medical Record's* psychiatric criticisms. I now come to something on the part of the journal cited by Dr. Elwell as an authority, which I leave my readers to characterize. The *Medical Record* (p. 65, October 22, 1881) says:

It is worthy of note that despite his eccentricities, the uniform story of his life is that nobody thought him insane.

This was written after the interview of Senator Logan and numerous others had appeared, but before the trial had begun. The *Record* had no evidence before it of an official character, and what evidence there was contradicted the *Record's* statement (which by the way no alienist would make).

On turning to the official record it is found that Dr. Rice¹ proposed to commit Guiteau to an insane hospital; that the Rev. H. N. Burton² thought him insane; that Mr. F. L. Union,³ a freethinker, who met him at Paine Memorial Hall, thought him insane; that the Rev. Norwood Damon,⁴ who saw him at the same time, thought him insane; Mr. Olds⁵ thought him insane; Hon. C. H. Reed⁶ regarded him as insane; his brother⁷ and sister⁸ thought him insane; Mr. Amerling⁹ looked upon him as a lunatic; Senator Logan¹⁰ gave his opinion that he was a lunatic; Mr. Moss,¹¹ who saw him in a crowd of office-seekers at the White House, looked upon him as a lunatic; Dr. Neil,¹² who met him at Columbus, Ohio, on his lecture tour, believed him to be insane; Fernando Jones,¹³ an old trustee of the Jacksonville Hospital for the Insane, Ills., had him released from confinement for a petty offense, on the ground of insanity; Chas. B. Farwell,¹⁴ a leading Chicago merchant, testified that Guiteau was insane; and the like testimony was given by Mr. Burroughs,¹⁵ Mr. Daniels¹⁶ and Mrs. Parker.¹⁷ Noyes¹⁸ (who by the way did

1—Official Record, p. 325; 2—Ib., p. 345; 3—Ib., p. 358; 4—Ib. p. 368; 5—Ib., p. 372; 6—Ib., p. 396; 7—Ib., p. 477; 8—Ib., p. 486; 9—Ib., p. 415; 10—Ib., p. 447; 11—Ib., p. 458; 12—Ib., p. 715; 13—Ib., p. 512; 14—Ib., p. 785; 15—Ib., p. 481; 16—Ib., p. 508; 17—Ib., p. 725; 18—Cited in Two Hard Cases, p. 100.

not, the *Medical Record*, December 3, 1881, to the contrary notwithstanding, testify in the case), in a letter to Guiteau's father in 1868, expresses the same opinion; and the same opinion is expressed by Guiteau's father,¹ with the addition that if he had money enough C. J. Guiteau should be put in a good state hospital for the insane. The editors of two Chicago papers,^{2,3} basing their opinion on their previous knowledge of Guiteau, stated that they regarded him as a lunatic.

The fact that laymen regard a man as sane is no evidence; *vice versa*, it raises a suspicion, to be confirmed or not, on hearing their reasons. This evidence without the reasons is cited in the present case only to illustrate the value of the chief alienistic authority cited by Dr. Elwell. The Cabinet, including Mr. Blaine, sent a telegram⁴ to the United States Ministers in Europe, stating that the assassin was a lunatic; this was signed by Mr. Blaine, who in an interview published in the *Herald*,⁵ stated that the assassin was a lunatic; he denied, on the stand, ever looking upon Guiteau as a lunatic; what such a self-contradiction would ordinarily be designated, I leave to the reader to judge.

Dr. Elwell has insisted very strongly that

Law and medicine never confronted each other in a court of justice or elsewhere with an issue so momentous, witnessed by the intelligent people of two continents as excited spectators; never did law make greater demands upon the resources of medicine; such requisitions were never more fully and promptly met, by so many and so able representative men of the profession; never was testimony given under weightier and more solemn circumstances; and finally, never has a great profession been so triumphantly vindicated from the clamor, general distrust and odium into which medical expert testimony had fallen—when insanity was interposed as a defense for crime—and completely lifted out of that quagmire of sentimentality, fatalism, "moral monstrosity" and wickedness, called moral or emotional insanity, into which it had fallen.

At the very outset of this question thus raised it

1. *Official Record*, p. 1733.

2. *Chicago Daily News*, July 4, 1883.

3. *Evening Journal*, July 3, 1883.

4. This telegram was published in the leading American and European papers, and when cited by Dr. Spitzka on the stand (*Official Record*, p. 1001) was not shown to be erroneous by the prosecution.

5. *Herald*, July 4, 1881.

might be shown to even Dr. Elwell's satisfaction, that the majority of alienists in the United States and elsewhere, regard the verdict in the Guiteau case as not warranted by the evidence. With two exceptions, both in Great Britain, every European alienist who has discussed the case regards Guiteau as a lunatic. The expert testimony given is, however, a more legitimate subject of criticism and analysis, since knowledge that an alienist regards a criminal as sane is only of interest when it is known why such an opinion has been expressed. Dr. Spitzka* has already cited some of the evidence. Concerning the evidence so cited an English medical journal, which *has* alienists among its editors, says:

If this report is an accurate one, the answers of these witnesses, upon whose evidence the man was hanged, are simply amazing; and one can only wonder where and how the prosecuting counsel contrived to find a group of persons pretending to a knowledge of insanity who could make such statements as the following: "I do not know what an irresistible impulse is. That is something I do not understand. I cannot conceive of an irresistible impulse." "People who are known as eccentric . . . or illy-balanced (*sic*) are not as liable to outbreaks of insanity as those who are more steady and staid in habits and character." "The existence of insane cousins, uncles and aunts, would have no bearing whatever on the question as to whether there was any hereditary tendency in a family." "There is, I think, no difference between an illusion, a delusion, and an hallucination." "I never knew a case of hereditary insanity where the disease itself was transmitted. Disease is never transmitted." It is difficult to believe that this report is correct, but if it be correct, and if the criminal was convicted on this evidence, it would be as erroneous to speak of his being executed as to speak of his victim in the same terms. We repeat, that if he was convicted on such evidence as this, his death was not an execution, but a murder.

Further quotations from this evidence will enable the reader to judge whether Dr. Elwell's eulogy of the testimony for the prosecution is justified. The first authority cited by Dr. Elwell is Dr. Fordyce Barker, who seems to be an omniscient expert since he has testified as an expert on toxicology. That he was an alienist was not suspected until the Guiteau trial; he is known only as an excellent authority on obstetrics. He refused

* *Medical Times and Gazette*, September 8, 1883.

to examine Guiteau;* admitted on the stand that he was coached by the prosecution as to his answers to the questions on the direct examination.† He sent, according to Dr. J. P. Gray,‡ to the Utica Asylum, a woman whom Dr. Gray found on her arrival to be perfectly sane. These circumstances are necessary to a full comprehension of Dr. F. Barker's evidence, he being an eminent scientist according to Dr. Elwell.

Dr. Barker was asked:

Q.—What is insanity? A.—It is a disease characterized by perversion of the mental faculties, or of the emotions and instincts. Q.—Will you explain how a person can be insane without delusion? A.—A person may have the exercise of all the mental faculties, but by disease have his emotions so perverted from the normal or healthy action of these emotions and instincts as to destroy the power of his will to regulate his own conduct.§

Just how such evidence as this can be cited as "lifting the medical profession from the quagmire of moral or emotional insanity" may be apparent to Dr. Elwell; it certainly is not to me. If there is stronger testimony to be found anywhere to the existence of moral insanity it has escaped my notice.

After his response to the last question Mr. Barker was asked:

Q.—Is that moral insanity? A.—It is something very different. Q.—What is moral insanity? A.—Moral insanity is wickedness. It is a term which, in medical science, is not found as describing a form of insanity. It is a term loosely used to excuse or palliate crime, which on any other theory would be inexcusable.

After this decided *lucus a non lucendo* Dr. Barker's "scientific" evidence might be left to the deliberate judgment of my reader, but that just here Dr. Bonfigli's statistics on moral insanity, cited so confidently by Dr. Elwell, require analysis. Among the authorities cited as read by Dr. Barker on the witness stand was Bucknill

* Official Record, p. 1023

† Official Record, p. 1025.

‡ Official Record, p. 1641, Vol. II.

§ Official Record, p. 1019.

and Tuke's work on "Psychological Medicine." In that work there are twenty references to moral insanity, which these two alienists regard as a specific form of insanity. They cite,* as the most lucid description of moral insanity they have met with, that given by Crichton-Browne: †

Moral insanity is of frequent occurrence in early life. The intellectual faculties unaffected by it remain entire and unimpaired. The patient is perfectly capable of perceiving, knowing and judging. He cherishes no delusion. He cannot, in the ordinary and legal sense, be pronounced insane, yet he is, to all intents and purposes, of unsound mind, and as much requiring guidance, restraint and treatment, as the most furious maniac. He suffers from entire perversion of the moral principle, from the want of every good and honest sentiment. He is actuated by impulse, or by the most selfish, depraved and cruel motives; he presents, in short, a perfect picture of a desperado and ruffian. The existence of moral insanity, like the existence of everything else, has been called into question, and there are not lacking those who will recklessly commit the moral monomaniac to the scaffold or penitentiary.

There now are these authorities; two or three cited by Dr. Barker, who are usually considered alienists, who use the term moral insanity in the Prichardean sense, and out-Prichard Prichard. Maudsley‡ will make a fourth authority; Prichard§ a fifth; Lockhart Robertson|| a sixth; Amsden¶ a seventh; Wigan** an eighth; Woods†† a ninth; Manley‡‡ a tenth, and Crawford§§ an eleventh. These eleven English alienists use the term moral insanity in its Prichardean sense. It is obvious that if Dr. Barker did read Bucknill and Tuke he has a very treacherous memory. Bonfigli states that there is but *one* English alienist who accepts the Prichardean doctrine. So far there have been unearthed eleven, and the number might probably have been doubled by a little more

* Psychological Medicine, p. 244, ed. 1878.

† Journal of Mental Science, p. 314, 1860.

‡ Pathology of the Mind.

§ On the Various Forms of Insanity.

|| Essay on the Moral Management of Insanity.

¶ Cited by Bucknill and Tuke op. cit.

** Duality of the Mind.

†† Lancet, Oct. 26, 1882.

‡‡ Journal of Mental Science, Oct., 1882.

§§ Cited in Psychological Medicine.

extensive search. An additional instance of Bonfigli's accuracy is found in the fact that he has quoted Blandford, from the *Journal of Mental Science*, as one authority, and Blandford, from the text-book of the latter, as another. While Bonfigli's article has eluded Dr. Spitzka's research it certainly seems to be a production to be used with caution, since the authorities, whom Bonfigli has failed to discover, outnumber the ones he found nine-fold. Dr. Elwell states that to the doctrine of moral insanity, as enunciated by Dr. Hughes, there is no legal objection. Why then did Dr. Hughes consider that this type of moral insanity had been denied at the Guiteau trial by the thirteen eminent experts of Dr. Elwell? Why did he use such language as this?—

Whether, in order to establish the prisoner's insanity, experts shall assert the existence of a form of insanity so plain that only the incapable or dishonest experts would deny it, or whether they shall deny the existence of forms of mental aberration, not the most common, yet plainly demonstrable, is likewise important to the fair fame of Psychiatry.*

As Dr. Hughes has here stated, it is of interest to ascertain whether an expert be capable of perverting facts to suit his purpose. If the prosecuting experts, including the one just cited, did pervert facts, Dr. Spitzka's† alleged statement is fully justified.

In his direct testimony Dr. A. E. Macdonald‡ stated:

As long as his sister testified in his favor he made no interruption whatever.

On cross-examination he was asked:

Q.—Was not the fact, testified to by his sister, of his raising the ax against her the strongest point in his favor?

A.—I do not think now that any one fact, testified to by his sister, if true, was a stronger evidence of insanity than the others. That fact, among others, would be as strong, perhaps, as any.

Q.—Did he not contradict that insanity when it was stated?

A.—Yes, but he had contradicted it before.

This witness also stated that Guiteau did not interrupt

* *Alienist and Neurologist*, Jan, 1882.

† This statement was not made by him, and Judge Cox more than once rebuked the District Attorney for stating that Dr. Spitzka made it.

‡ *Official Record*, p. 1466.

Dr. Spitzka,* but suppressed the fact that he did not interrupt Dr. Barker either.

Dr. Macdonald† stated that:

If a man commanded a hill to be removed into the sea, and believed that, since the Bible said so it would do so, it was an evidence of insanity; but thought that the conduct of a person who commanded disease to depart from a sick person, if based on sincere belief, was not evidence of insanity.

The first statement had no bearing on the case. The second bore upon the sanity of Guiteau's father.

The following testimony‡ is compatible only with ignorance, or a lack of integrity. In the first case, the man is not an expert and has no right to claim to be:

Q.—Now is it not true that bodily diseases can pass by inheritance from father to son?

A.—No, sir.

Q.—Is it not true than any diseased or disordered condition of the blood may pass from parent to child?

A.—It is true of all diseases, as I have stated it to be of insanity, that the effect or predisposition may be transmitted. The disease is not in any case transmitted.

He further states that the "predisposition to phthisis, cancer, gout and syphilis. is transmitted, but not the disease itself."

It appears that this witness was ordered§ by

His official superiors, the New York City Commissioners of Charities and Correction, to place his services at the disposition of the Government.

To do full justice to Dr. Macdonald, this evidence should be compared with his testimony in the Grappotte case. In the Grappotte case|| Dr. Macdonald testified that

He had never known a lunatic to change his purpose when he had formed one, unless prevented by some one else. Men really insane

* This was not true, as the most dramatic interruptions were made by Guiteau when Dr. Spitzka testified; thus, he denounced the moral depravity and moral monstrosity; and that he did not interrupt this witness more, was due to the fact that in his opinion Corkhill (an especial aversion) had received a severe blow. He interrupted Dr. Barker's testimony less than that of any other witness.

† Official Record, p. 1453.

‡ Official Record, p. 1459.

§ Official Record, p. 1425.

|| American Journal of Neurology and Psychiatry, Vol. I., p. 173.

do not recognize their insanity, and hence do not conceal it. The chief and leading characteristic of melancholia is delusion, and not depression; depression is only a bodily indication. Further on he says that depression is an affection of the mind, considered as distinct from the brain. He had never known or heard of insane persons transacting business, even of a routine character.

In the trial of Conroy, in which a *bogus* defense of insanity was raised, this witness, while the general tenor of his testimony was properly against that plea, yet as usual, it partook of the nature of special pleading. Being asked by counsel for the prisoner, whether such-and-such eminent authorities did not declare in favor of transitory insanity, he admitted the fact, and added that all these authorities were dead and buried long since, their teachings supplanted, and that science had made great strides since their demise. Science has undeniably made vast strides since the days of Pinel and Georget, but the sense in which Dr. Macdonald seems to understand progress, is in the direction of the abolition of the doctrine of hereditary transmission of several recognized forms of insanity besides transitory mania, and of the necessity of studying the development of the human mind at all.

The ideas as to progress of the leaders of psychiatry are somewhat antagonistic to those of Dr. Macdonald. Nor is it easy to learn where Dr. Macdonald discovered that Krafft-Ebing, Mendel, Maudsley, Lombroso, Pick, Brush, Tamassia, Reich, Essenbeck, Schwartz, Silvio and Kiernan were dead. They seem, to judge by the literature of the present day, to be very lively corpses. But supposing, for the sake of argument, that they were dead, unfortunately for Dr. Macdonald, the only *real* authority whom he could cite against them, Casper, *is* dead, dead indeed, very long ago, and the gentlemen who have undertaken to edit the successive editions of his works have abandoned his views on this point. It is clearly evident from the testimony of this expert just cited, that his views are fitted to suit the side he is engaged by.

The expert for the prosecution, whose testimony deserves special mention for its frankness, is Dr. A. McL.

Hamilton, who, on the direct examination, stated that there was no hereditary type of insanity,* but admitted a little later that such a type of insanity called "primäre Verrücktheit," did exist, and "was very rarely manifested by a deliberate crime of any kind—a deliberate attack." It is "usually one which was symptomatized by a violent explosion of temper and some violent performances of a deed."† He also states that there were congenital types‡ of insanity. He agreed with Dr. Spitzka that the influence of mesmerism in producing insanity was very doubtful.§ He stated that:

In every detail the definitions given by the German and Austrian alienists, Sander, Schüle, Krafft-Ebing, Meynert and Kirn, of "primäre Verrücktheit;" by Pasternazki and Andruski, of Russia, of the same psychosis; by Björnström and other Scandinavians, of "primär förrethet;" those given by Dagonet and the French masters, of "*monomanie systématique*;" those by Buccola, Morselli, Silvio and Tonnini and the Italian alienists of "*passia sistematizza primitiva*," differ most decidedly from the conception expressed by Dr. Hamilton on the witness stand. That the Atlantic has not proven an insuperable barrier to the transmission of correct views, is shown by the papers of Burr, Fenn, Spitzka and Kiernan. The first describes a typical case of primary monomania (primäre Verrücktheit) and the third, in the first systematic article published on the subject in the United States, described the assaults made by primary monomaniacs in words prophetic of Guiteau's crime, while the other two have cited cases strongly supporting the doctrine; a doctrine held by most of the American alienists.

Moral insanity was a term used by Maudsley and others for "the exculpation of acts committed as the result of ungovernable anger and lust,"|| and stated that

If insane people know the nature of their acts and the consequences of them, and if they cannot control themselves, they should be punished the same as sane people.¶

He admitted also that Guiteau was eccentric** and that eccentricity differed from insanity in being a condition which existed from birth. He admitted also that

* Official Record, p. 1175.

† Official Record, p. 1175.

‡ Official Record, p. 1193.

§ Official Record, p. 1212.

|| Official Record, p. 1202.

¶ Official Record, p. 1202.

** Official Record, p. 1176.

Guiteau's head was asymmetrical*. His diagram of Guiteau's head directly contradicted that furnished by Dr. Kempster. In justice to Dr. Hamilton, it should be stated that, on further investigation, he appears to have changed his views on "moral insanity," for he speaks of moral insanity occurring in children, in his recently published work on "Types of Insanity." He also stated that Guiteau, in jail, was perfectly quiet, perfectly self-possessed. He offered the experts every chance to examine him. Dr. Hamilton said he believed Guiteau to be playing a part in court, because his manner was different. This was a common statement of half of the experts for the prosecution, while the other half swore Guiteau was sane, but not feigning. It must be obvious to anyone that an insane man would act just as Guiteau did; quiet under seclusion; excited in a crowd. Every expert for the prosecution admitted that there was no attempt at feigning, in the jail, before them. Dr. Hamilton† would not consider it insanity

If a man lost his will and reasoning power and was unable to distinguish right from wrong, from the use of alcohol, drunkenness being excluded from consideration. Further on he admits that chronic alcoholism is insanity.‡

Dr. Kempster§ gave the following reasons for considering Guiteau to be feigning :

"When people came upon the stand with whom he was formerly acquainted, he greeted them pleasantly as good fellows, unless they had something to say reflecting on what he considered his honor as a gentleman; then he immediately attacked them. So long as the testimony was given with reference to the proprieties of life, he was perfectly quiet, but when any improprieties in his life or conduct were brought forward by witnesses, he objected, sometimes in a very abusive and insulting manner, and the one particular feature" to be "observed in the court-room is his demeanor when he speaks of his inspiration, his so-called delusion." He then "immediately assumes a condition of excitability, which does not appear at any other time; pounds the table with his fist; elevates his tone of voice, and appears to be somewhat excited; as soon as he gets through making his remarks on the subject, he immediately subsides, picks up a newspaper or pen, and resumes the work he was engaged at

* Official Record, p. 1173.

† Official Record, p. 1186.

‡ Official Record, p. 1187.

§ Official Record, p. 1555.

before his outbreak. *That is entirely inconsistent with any form of delusion in an insane person with which I am familiar. An insane man who becomes excited remains excited for some time, and does not subside as soon as the exciting cause of the manifestation has been removed.*" "While appearing to read the newspapers and books with which he had been supplied, he did not in fact read them; his eyes were wandering up and down the page, and he was paying keen attention to what was going on, sometimes looking around or over his book, but whenever any remark was made from the stand which did not suit him, he instantly, dropped the paper and began his denunciatory expressions which have characterized his behavior from the beginning, and which, in my opinion, is inconsistent with the acts of an insane man."

He also stated that insane persons did not often have an acute memory.* He mentions collateral heredity† in his asylum reports, only because it was required by Wisconsin law. He‡ also states that disease is never inherited, and says|| that

Delusions under which violent acts are committed by the insane are of slow growth. For a time the individual may be able to recognize the delusions, but as disease of the brain progresses he reaches a period where he no longer recognizes the delusion, and the ideas then present themselves to the mind of the individual with the force of a terrible reality, and under that reality he carries out the object he has in view. The insane delusion of a divine command from God comes to an insane person like a flash, and the act performed is almost as instantaneous as the command.

In your experience with insane, have you ever met with an insane man who paraded in public, insanity, under which he claimed to have committed his crime, as an apology for its commission?‡

No, sir.

He testified also that Guiteau displayed the same excitement about his "delusion" in the jail as in the court. He was asked:

Q.—Is it not true that insane people often deliberate and plan and practice prior to committing acts of violence?

A.—Not in my opinion, sir, especially those who have a divine command to perform.¶

* Official Record, p. 1566.

† Official Record, p. 1570.

‡ Official Record, p. 1534.

|| Official Record, p. 1537.

§ Official Record, p. 1539.

¶ Official Record, p. 1564.

He was then asked :*

Q.—Suppose it to be true in the case of Freeman that his attention was called to the subject of slaying his child by the matter of Abraham and Isaac, and there getting the idea of slaying his own child, and thought about it and endeavored to shake it off—thought about it for from twenty-four to twenty-six hours, most of the time talking to his wife about it, and eight hours before the deed was committed had fully made up his mind to slay his child; that he went and got a knife, sharpened it, and went deliberately, at the end of eight hours, and actually slew his child, —Would these facts furnish any evidence to your mind that the man was acting under an insane delusion?

A.—They would be indications, to my mind, that he was acting under an insane delusion.

Dr. Kempster was one of the delegates to Section Ten, which passed the following resolution, at the International Medical Congress of 1876:

It is not only not impossible for the insane to simulate insanity for any purpose, in any but its gravest forms of profound general mental involvement, but they actually do simulate acts and forms of insanity; for which there exists no pathological warrant that we can discover in the real disease affecting them.

Guiteau's conduct, as described by Dr. Kempster, is *not* inconsistent with insanity. In insane men who become excited from an external cause, the excitement *does* sometimes subside when the cause is removed. They *do* sometimes resent aspersions on their honor. They *do* sometimes, while apparently reading, pay close attention to what is going on. The statements about insane delusions of inspiration, on p. 1537, and the statement made about the Freeman case, contradict each other point blank. My readers can draw their own conclusions as to the validity of such testimony.

Another witness, the superintendent of a large private asylum in the West, would have (so he stated to more than one person) testified to Guiteau's insanity were it not against his interest.† This witness liberated, by his testimony, a clearly insane man, from the Elgin (Illinois) Hospital, and made the latter an attendant in

* Official Record, p. 1579.

† Mr. Scoville offered to prove this.

his own hospital, where, being a sufferer from sexual perversion, he indulged in mutual masturbation with one of the patients. This witness* testified that intense egotism is not very often associated with insanity, contradicting not only every European authority, whom he elsewhere contemns as being foreigners, but most Americans, and among them a prominent deceased alienist, Dr. Tyler,† who says:

We all know that with the insane, self becomes the central point of interest—the important consideration and authority. * * * * We all know how soon it is that his relations to every person and thing, are more or less changed by the different estimation in which he has unconsciously grown to hold himself. Upon any subject within the circle of his disease, fact and external circumstances show little or no influence with him. His convictions come from his own personal laboratory. They are original; sometimes they are strictly intellectual results; often they grow from morbid emotion. But they are coined by him and not received from another. And they are ultimate authority to him. No sane man is ever half so sure of any most palpable truth as an insane person is of the infallibility of his own convictions. "I know it is so," and upon this he rests without a shadow of doubt. "I know it is so," and this is more to him than all the facts and logic of the universe. Because his own opinions are not received or are even scouted, never leads him to distrust or examine them or even for a moment disturbs the ineffable complacency of his belief.

Dr. Stearns‡ was another expert, who, like A. McL. Hamilton, possessed great frankness. He stated that

Patients undoubtedly insane, who commit acts which would be a crime in a sane person, have afterward attempted to conceal what they had done, and denied that they had done it.

Dr. Stearns also contradicted Dr. Gray as to Guiteau's language respecting inspiration. He did make the statement which contradicts the assertion he first made, that:

He did not know of his own knowledge that where persons clearly insane, kill another, they sometimes plan, plot, deliberate, practice and get ready for it.

In his article on Guiteau|| he stated that:

The love of notoriety has little, if any, influence with the insane.

* Official Record, p. 2537.

† American Journal of Insanity, 1865.

‡ Official Record, p. 1367.

|| Archives of Medicine, June, 1882.

Persons whose brains are so much diseased are not in any condition to be influenced by it.

Dr. Hughes* has well said, in this connection :

Exactly, his egotism was a delusion of itself. In confirmation we quote one of the most experienced of American alienists, Dr. Chipley.† Instances have been referred to where the motive seemed to be a desire to excite public interest and curiosity, and to obtain notoriety. I am disposed, however, to regard such cases as examples of real insanity. I do not think that any sane person would sacrifice his social position, and otherwise injure his prospects in life under the influence of such a motive, and that for a purpose yielding no advantage whatever. A deliberate sacrifice of substantial interests, for a position generally considered as damaging, if not odious, and one which can by no possibility minister to the welfare of the subject, is of itself an evidence of unsoundness of mind.

Dr. Gray's evidence as regards heredity, etc., was an exact echo of that of Drs. Kempster and Macdonald. His report to the District Attorney is a brief *résumé* of his testimony on the stand. In it he says, concerning Guiteau, that :

His preparing his book for a large circulation and sale is evidence of vanity, and the belief that he could get off from punishment for murder, by taking advantage of the political agitation in the Republican party; and the fact that it would be considered a political crime; and, also, his preparations in procuring the weapon, and every detail connected with it: all his conduct; the change of purpose from time to time, as to the time and place of killing: his provision for his personal safety; everything, indeed, in detail, down to the final act of killing, are the deliberate work of a criminal intent. There is no phase or characteristic of insanity associated with it at any point, and certainly no evidence of impulse or pressure or guidance of any will, human or divine, except his own. His working himself up to it, his waiting for a good chance; these are strong evidences of criminality, and utterly against any claim of being under an insane delusion of a pressure or influence from a Divine Power. If insane, as he claims, he would not recognize himself as under delusion. All his personal aspirations were blasted; his vanity was wounded; then the idea came to him of making away with the President, whose failure to recognize him had accomplished this. It came upon him first as an impression and was entertained. This is the *rationale* of the development of crime; lodge the impression and entertain it, and it will ripen into action. It startled him at first, but the more he thought over it—the more he accustomed his mind to the contemplation of the crime, the easier it became. He spent two weeks at this—no flash of a divine inspiration—but, a deliber-

* Alienist and Neurologist, October, 1882.

† American Journal of Insanity, April, 1868.

ate contemplation. After failing to get any reply, or even any notice of his letters to the President, he settled his mind thoroughly in the intention ("My mind was thoroughly settled in the intention.") The claim of inspiration—the influence of the political situation—all that came afterwards, and was an excuse formed in his mind for the act. How to excuse himself to himself, and how to justify himself to the world: his vanity did not allow him to think of revenge and oblivion; what he wanted was revenge and notoriety. To my mind this is the whole of the crime.

Dr. Gray, on cross-examination,* stated that a lunatic, who had been under his observation,† had adopted plans for concealment of a crime which he had committed.

The following case, reported by Bluthardt,‡ confirms Dr. Gray's case, and may with propriety be cited at this point:

June, 1882, Dr. B. examined P., a hebephreniac, then imprisoned for disorderly conduct, who was quiet and seemingly harmless, and sent him back to the Bridewell, to await trial for insanity. He was placed in the same cell with C., who, when put in the cell, was drunk and ugly. The crowded condition of the Bridewell required two men to sleep in a bed two feet wide and eight feet long. C.'s condition gave him a notion that he was entitled to most of the bed. The result was a quarrel, in which P. was too weak to take an active part (C. was a burly fellow, six feet high); so he nourished his resentment until C. was asleep, and then sated his spite with C.'s blood. C., to replace a leg cut off in a railway accident, wore a wooden stump, shod with iron, and attached to a sort of splint which ran up to the thigh and made a convenient handle, the iron ferrule at the bottom giving the weapon frightful efficacy. P. rose stealthily, and with the wooden leg's iron end struck C. on the head, which produced unconsciousness, and then made the murder a barbarous mutilation. L., a deputy turnkey, whose duty it is to marshal men to breakfast in the morning, at six o'clock came to the cell occupied by P. and C. He encountered P. in the doorway, who said there was no occasion for inspecting the cell, as everything was all right. At this insubordination L. dragged P. into the corridor, and entering the cell, found C. lying on the bed as if asleep. Closer inspection, however, showed that he was dead. The skull was battered open, the brain protruded from a large gap, and the eye was completely obliterated. The stump had recently been cleaned off with a rag. In a bucket were hidden blood-soiled bed-clothes. P. replied to all questions as to his motive for the murder, at first with mere vacuous looks, but subsequently denied that he had killed any one, or even seen a dead man. He said that the blood which disfigured his hands and face came from his nose, which had bled during the night. He was a tall, slim twenty-year old boy, whose face had a demented expression, except for an occasional gleam of cunning, which showed he was not

* Official Record, p. 1253.

† Report of the Utica Asylum for 1870.

‡ American Journal of Neurology and Psychiatry, August, 1883.

so demented as he looked. Insane he was, certainly, but the story of the bleeding nose and the unwillingness to talk were evidence that the boy had at least a partial conception, of the enormity of his crime and the expediency of feigning insanity. That he was insane and feigning insanity was clearly evident to even newspaper reporters and to the jury which subsequently tried and found him insane.

Dr. Spitzka, on the witness stand, avowed the authorship of a communication in which he stated that:

Isaac Ray would have turned around in his grave if he could have heard some of the evidence given by the latter-day experts.

Without claiming as much as this, there would, no doubt, have been heard from that alienist, of whom American psychiatry is justly proud, some very vigorous English, on hearing Dr. Gray's testimony just quoted, for, in his discussion of the case of Trimbur,* Dr. Ray says:

Men who have been much conversant with the insane in hospitals— not meaning those whose knowledge consists in having seen many thousand patients—need not be told that sometimes, for one purpose or another, they make a show of being more insane than they really are. Many of the insane do certain things as well as ever they did. They *plan, contrive, anticipate*, in furtherance of a special purpose.

Dr. Dewey,† in a recent article, says:

Other lunatics plan and execute their crime deliberately, methodically and skillfully, alleging some fantastic reason for its justification. Insane persons are met with who feign insanity in some other form in the hope of escaping the consequences of their crime.

As "preparing his book for a large sale prior to the crime was evidence of vanity," and therefore a motive for the crime, the government brought witnesses to prove this preparation. Dr. Godding‡ says about this procedure:

The President of the United States to be sacrificed to give an impetus to this inspired work! Why this is in a dream of the night! No, in the broad daylight of the nineteenth century. Did the prosecution forget for the moment that this was a sane man when they proved this motive?

Dr. Gray agreed with, or rather, originated, this idea

* American Journal of Insanity, October, 1874.

† American Journal of Insanity, July, 1882.

‡ Two Hard Cases.

of the prosecution. Whether his idea or Dr. Godding's is most consistent with the truths of psychiatry I leave my readers to judge. That Guiteau expected the stalwarts—Grant, Conkling, Arthur, etc., to assist him there can be no doubt. Was this inconsistent with a delusion of inspiration? No. God, even to a lunatic of Guiteau's capacity, uses means, and this was one of them. Would a sane man believe that men who had barely shown him the ordinary courtesies of politicians would support him against the rage of a people frenzied by a wanton assassination, and run risks of at least political death for a mere acquaintance? It is true Guiteau looked upon them as great friends of his; but what sane man would expect as much from friends as Guiteau did from men barely polite to him, for *political reasons*, transmuted, in the alembic of his mind, into friends? To accept the sanity of such a belief on the part of Guiteau requires the supposition of an enormous egotism and great stupidity, such as can hardly co-exist with sanity. "His preparations in procuring the weapon,"—what were these? He borrows money and buys a pistol "with a white handle, to look better in the museum of the State Department."* Is this inconsistent with insanity? "His changes of purpose," all detailed fully and freely by himself: these, regarded as the actions of a sane man, are inexplicable, as the vagaries of a lunatic are easily understood. He won't remove the President at one time because the night is hot, and at another because Mr. Blaine is with him; and at another because it might kill Mrs. Garfield who is with the President, and whom he has no authority to remove. Except the last, all the other changes of purpose are inconsistent with sanity. The last is perfectly consistent with insanity. The statements of Dr. Gray that "Guiteau's working himself up to it and waiting for a good chance, being strong evidences of

* Judge Porter's closing address brings out so strongly the insanity of this procedure as to deserve quotation (Official Record, p. 2323): "Does he suppose that the Deity really wanted to have his name glorified by having a pistol with a *white ivory handle* rather than a pistol with a *brown handle*, deposited in the State Department, to commemorate a political assassination?"

insanity," are, by his own admission, already cited, demonstrably erroneous, even if the facts cited from Drs. McBride, Ray, Dewey, Bluthardt and Burr did not prove this. "If insane, as he claims, he would not recognize himself as under delusion." This has been shown by De Monteyel, Höstermann, McBride and others, to be an error, even ignoring the cases where, as even Dr. Gray has admitted, an insane man feigns insanity; but Guiteau's claim is very different from any of these, as the analysis by Dr. Hughes, already cited, shows; and Dr. Gray's interview with Guiteau,* on this point, is strong evidence in the same direction.

Q.—You say that your defense is insanity? A.—Yes, that is my whole defense: insanity, inspiration, and the work of the Deity.

I then asked him:

Q.—Upon what grounds, in your mind, did you put the killing of the President? A.—I considered the removal of the President a political necessity. Q.—How can you show it a political necessity? A.—If you will read the papers in May and June you will see the political situation. Q.—But I do not see that this created such a necessity? A.—If you will read the communications which I prepared for the public, and which the District Attorney has kept, you will see how I have explained it; and that I there claim that I am not responsible for murder. Q.—What do you say in regard to the question of insanity? A.—I do not claim to be insane as a medical man would judge—what is ordinarily called insanity—but legal insanity. Q.—How would you define the kind of insanity you assert as a defense? A.—It is insanity in a legal sense, an irresponsibility, because it was an act without malice, and was a political necessity. I do not think it would be murder without malice, as I have shown in the *New York Herald* of October 6, 1881. Q.—How did you come to think of insanity as a defense; when and where did it occur to you? A.—I knew from the time I conceived the act, if I could establish the fact, before a jury that I believed the killing was an inspired act, I could not be held responsible before the law. (He paused a moment and then added): You may add this, that the responsibility lies on the Deity, and not on me, and that, in law, is insanity. Q.—How can this appear in evidence as a fact? A.—I see that, but I think I can answer it. Suppose you take it down: That if the jury accepts this as my belief, and if the jury believes as I believe, that the removal of the President was an inspired act, and therefore not my own act, they are bound to acquit me on the ground of insanity. I have looked over the field carefully. Q.—You were two weeks cogitating and thinking this over? A.—I was two weeks before I made up my mind as to the political necessity, and determined to take the first chance at him. I came to this slowly.

* Report to the District Attorney.

Q.—You now put in political necessity. A.—I did not think one way or the other, just at first, as to the political necessity. This came out of the contemplation of the political situation. Q.—Still I do not see how you could arrive at this as a defense? A.—I knew if I could establish that the act was one of inspiration it would be a complete bar. After I read this over to him he said: Put in after inspiration “by Deity.” Q.—Did you think it out in words in that way? A.—I don’t know that I thought this especially in words, but I knew this was the law. This is fundamental law, and the idea runs through all. Q.—I ask you again, can you state just when this idea of the defense of insanity first came up in your mind? A.—I can’t state just when it came up in form, but it was latent, as a part of my general knowledge on the subject. I want you to put in the idea that it was the Deity, for this is my only defense.

I read to him the question that I had taken down the day before, as follows: I knew from the time I conceived the act if I could establish the fact before a jury that I believed the killing was an inspired act, I could not be held responsible before the law; that the responsibility was on the Deity and not on me, and that, in law, is insanity. I asked him if he had anything to say to that now more than he had yesterday? He said that he did not like the first part, and wished it was out. I told him I took it down word for word as he gave it to me, and that I had then read it over to him. He replied: “That is so, but now I wish it was struck out.” I said: “It was in answer to my question: ‘How did you come to think of insanity as a defense; when and where did it occur to you?’” He replied: “Yes, I remember it; but I would like to modify it by saying that I had no particular thought as to the effect of my act. The only point in my mind was to execute the Deity’s will.” I read this over to him, and he then said: “I would like to explain that part in regard to my first answer, because I don’t like to have it appear as though it had been calculated beforehand as a defense; as though I had prepared for the deed and then deliberately carried it out.” While saying this he got up and walked about the room. He then said: “The first part of that don’t look well.” I said: “It’s just as you gave it.” “Yes, but I don’t like it,” he returned. I then said: “I still fail to see how you can show that as a fact; and insanity is not a theory; it is a disease—a fact as much as relates to any disease.” To this he said: “I will put in my book in evidence of my belief, and that will come in as a fact in the case, as I there claim inspiration.” “Yes,” said I, “but you have already declared that your religious ideas, including the inspiration and the Second Advent doctrine, you got from your father; you admitted to this before and it was the teaching also of the Community. How is your book on this subject inspired more than any sermon or any other book on religious duty or faith?” A.—Because I wrote it under inspiration, and to save souls. Q.—But you said that you were started on it by the Rev. Mr. Kittredge, who made some remarks in a sermon on this subject, and you then determined to study it up, and went to a library and looked up authorities, and then wrote on the Second Advent. Now, where is the special inspiration in all this? A.—No one

before had ever fixed the date of the second coming at Anno Domini '70, the destruction of Jerusalem. Then I have claimed it as a spiritual coming, not a physical. Q.—I fail to see any inspiration in that. A.—Read my book, and especially the revised edition, which the District Attorney took, and you will see how I put it.

Is not Dr. Hughes' analysis and judgment on Guiteau's plea of insanity fully justified, as viewed from the statements of this interview? Is this the plea of an insane lawyer or the feigning of insanity by a criminal? Is the reasoning here displayed that of a man of great ability? or, is it not, as Dr. C. F. Folsom* has said, "very like the reasoning of a lunatic?" Does a delusion of divine inspiration always come as a flash? Every alienist must admit that a delusion of a divine inspiration might originate like any systematized delusion in what Dr. Orange† calls an insane process of reasoning. Dr. Godding‡ says as to this question:

But not taking sides—appearing only as *amicus curiæ*, it would have been his (Dr. Gray's) duty to point out to the jury wherein the inspiration developed in the chronic insane differed from those which Dr. Gray described, and which come as the controlling delusion in acute types; and also, to show wherein the actions and reasoning of such insane persons differed widely from the cases cited; and that in the chronic forms of insanity such deliberation and arrangements for safety are by no means unknown, and that a so-called "reasoning maniac" often plots and studies and arranges the minutiae of his plans.

Is the concluding clause of Dr. Gray's statement justifiable? Is it not decidedly peculiar conduct for a lawyer to scheme a murder for the purpose of attaining revenge and notoriety; to plan an escape on the grounds of "legal insanity—not medical;" and then *to denounce, on all occasions, all who say he is insane*; to be frank with the prosecuting attorney; to tell him all about his lurking and deliberation; all particulars of his life; to assist that officer to cross-examine his own witnesses; to "feign" in the court-room, and *to abstain from "feigning" before the experts?* Is this conduct, even assuming Dr. Gray's ideas

* American Law Review, February, 1882.

† Journal of Mental Science, October, 1883.

‡ Two Hard Cases.

about revenge and notoriety to be true, reconcilable with sanity?

It is a significant circumstance and one strongly indicative of the factors which led to the appreciation of expert testimony on the part of the "prosecution," that the honorarium voted to pay the four leading "experts for the prosecution" was distributed in such a way that the the largest share fell to the expert who most boldly contradicted what had been previously regarded as the dicta of science, and the smallest to the one who had been unfortunate enough to make a few admissions in consonance with the science of to-day, and to that extent sustained the insanity of Guiteau.

(To be Continued.)

Pathology in History—(The Family of Augustus).*

By J. SOURY, M. D., Italy.

PSYCHOLOGY, applied to history, has for its object the discovery of the laws of moral and intellectual phenomena; and these laws, as those of all the other sciences, seem to be indubitably reducible into others, of which these are but particular instances. To resolve a phenomenon into its elements, to decompose, in their turn, and reduce these elements into other simple principles, is what is called the explanation of a fact. The explanation, as is readily seen, is only approximative; the truthness of it remains always subordinate to the extension and delicacy of our means of investigation,—more is impossible.

It is therefore unnecessary to dissimulate that the explanations of science being incomparably more exact, and above all more arbitrary than those of common sense, they are, and must always be, incomplete. The factors of the problem which escape us are too numerous, and when we ascend from the sciences relatively simple,

* This article, by Dr. Soury, appeared in *Le Temps* and *L'Encephale*, in September, 1881. We have found it in the Italian of *Il Pisani*, as translated by Prof. Salemi-Pace, of Palermo. Whether it has suffered, or has been improved, by the change of vesture, we are at present unable to judge. If, however, the original exhibited as many phraseological peculiarities and rhetorical affectations, to say nothing of the numerous and utterly puzzling obscurations of logical and chronological order, as are now presented in its Sicilian garb, the distinguished Professor should have incurred no censure had he exercised a liberal discretion in transforming it into a less unnatural form, and thus have rendered its perusal by foreigners a less perplexing task. We shall, however, do our best to follow the author through his details of the miseries and atrocities of the descendants of the so-called *Great Augustus*, for which he seems to have been largely indebted to Jacoby, who, in his turn, no doubt, drew his facts very largely from Suetonius, a Roman historian of the time of Adrian, by whom he was banished from the Court, and was thus afforded a better opportunity for the composition of his celebrated work, "The Lives of the Twelve Caesars." It would most probably have been more fortunate for the memories of Adrian's antecessors, had he been more lenient towards their relentless and most minute biographer.—Translated by JOSEPH WORKMAN, M. D.

as, *e. g.* mathematics, to the sciences of life and of mind, the dark forest into which the meditator enters becomes instantly inextricable. These facts being admitted, as it is the first gift of the philosopher to be sincere, it is right to recognize the fact that historical psychology, among the very numerous causes of mental phenomena, succeeds in determining some of them with precision, and that the laws of the science of mind are not at all more arbitrary than those of meteorology or of physiology.

Historical psychology, for example, holds, that, as a general fact, the prolonged exercise of power, of absolute royal power, by weakening the moral force in man (that bridle which restrains our passions, tempers our desires and controls our instincts,) reduces the mind to a state of irritative enfeeblement, in which it is no longer master of itself, but yields to all the suggestions, and obeys all the impulses of the cynical and cruel beast which is at the bottom of human nature. In other words, the habit of power, by rendering more direct, and hence more easy and instantaneous, the transformation of ideas into acts, reinforces the reflex action at the expense of the activities of the moderating centres. This irritative feebleness is a true neurosis of these centres, a *Hemmungs-Neurose*, as the Germans call it; the spectacle which a mind so affected presents to the psychologist, is very similar to that of the exaltation of reflex action which is observed by the physiologist after decapitation of an animal.

First.—Let us, for the present, apply these psychological data to the family of Augustus, that is, to a family that under the influence of an external cause,—power,—fell, in the period of three generations, from a state of normal psychical health into the most frightful moral and intellectual degradation.

Octavius (Augustus) descended indeed, on the female side, from Julia, the minor sister of Julius Cæsar; but the statements made by some historians of the epilepsy and

the depravity of the dictator should be accepted with much caution.

Fatigues and excesses of every sort probably had produced the two fits of which Suetonius speaks: at all events, the disease, not having been congenital, could not be transmitted to the infant nephew of the sister of Cæsar. (?) Out of thirty-five known members of the family not one has been stated to have been affected with neurosis. It may therefore be admitted, that in the antecedents of Augustus no psychological anomalies existed; he himself, notwithstanding his forty-four years of rule, appears to have, up to a certain point, escaped the pathogenetic influence of absolute power.

We note however that, according to Paul Jacoby, Augustus suffered from a well-known nervous affection, that of writer's cramp; Suetonius also tells us of the means by which he remedied this trouble. Now, one of the causes of cramps and convulsions consists exactly in a state of debilitation of the moderating centres of the reflex actions. Here, therefore, we have in Augustus himself, an affection of the nervous centres, a characteristic disturbance in the manifestation of the superior activity of the encephalon. But it is unnecessary to exaggerate, and Jacoby is too severe on Octavius^{*} (Augustus). That he may have been vile, perfidious, cruel, libidinous, to as great a degree, or even greater, than Lepidus or Antony, imports not; the conqueror of Asia inaugurated in the world a new order of things, and only ages have comprehended the solidity of his political and social edifice.

In the book of Jacoby, the description of the diseases of Augustus is, on the other hand, excellent, as is also that of his complexion and temperament, but above all, of his likeness, which the erudite and acute psychologist has been able to turn to account so justly, that no archæologist or historian by profession could have excelled him. The perpetual moderation which Augustus imposed on himself in the midst of honors, the incessant conflicts

which he sustained against his instincts, the care he took in observing, moderating and conquering himself, preserved him from the dangerous giddiness of absolute power, and the Romans celebrated the goodness and clemency of Augustus.

Under favor of this discipline the *ego* of Augustus was invigorated, instead of weakened, since the interior bridle was strong. But as if he had exhausted the power of this *ego* by the force of restraining it, we find in his descendants a much weaker capacity of resisting those passions which beset the minds of the great. One is therefore led to believe that the descendants of Augustus inherited a mental constitution already debilitated, and struck with the latent state of degeneration.

It is sufficient to mention Julia, the daughter of Augustus and Scribonia, to arouse in all persons the recollection of the most cynical depravity that ever astonished the world. Haughty, proud, intolerant of all restraint, yet Julia, together with so solid and brilliant an education, had examples of chastity, and honorable examples, in the house of the Palatine, where she passed her infancy, between Livia and Octavia. And yet Julia, by her shameful excesses, scandalized even that age. She was one of those women of whom romancers are wont to boast the force of character and the strength of the passions. Jacoby, at this point observes with reason, that the Romans (better psychologists than such romancers usually are) justly gave the name of *impotentia* to this unchaining of the passions, this frenzy of vice which felt no restraint, and which, in reality betrayed the impotence of the will, an enfeeblement of personality, which was entirely a prey to the contrary and tumultuous movements of the instincts and the phantasy, an enfeeblement which alienists observe in the commencement of almost all the disorders of the sensibility and the intellect. The powerlessness to govern our instincts is not a proof of force, but the certain sign of exhaustion and congenital feebleness of character.

It would seem that Augustus was father to both Julius and Drusus Anticus. It is known that Livia, the wife of Tiberius and Claudius Nero, and already the mother of Tiberius, was pregnant with Drusus, when she had to procure a divorce in order to espouse Augustus. Not to speak of the manner in which Augustus always treated Drusus, a thousand other circumstances confirmed this suspicion. Never did two brothers less resemble each other than Tiberius and Drusus; the former was a true Claudian, the scion of a race superior to that of the Julii; but he was of a pride too inflexible to bend to the command of the public passions, and to condescend to the tastes of the vulgar. Tiberius was the grandest administrator and the most profound politician, not only of Roman, but of universal history. Perhaps this solitary thinker, this sad and taciturn genius, whom historical advocates, in the manner of Tacitus,* have calumniated, as if in rivalry, and whom the human family has cursed, as it curses all those who have despised it, did more than Augustus in the founding of the empire.

On the contrary, Drusus Anticus, the favorite of Augustus and of the Roman people, was gay, eloquent, amiable and benevolent. Like all the princes of the race, he was liberal; he took the part of the "dynastic opposition," thus conciliating to himself, at a cheap price, the favor and votes of the multitude. Drusus had not alone the character, the inclinations and the tastes of Augustus; all his likenesses and those of his descendants present, with those of Augustus, the same family resemblance. Jacoby has observed an additional peculiarity: Augustus had weak and slender legs; now, Drusus died in consequence of a fracture on the leg; his sons Germanicus and Claudius also had weak and slender legs; his nephew Caligula was often unable to walk or to stand upright; and Nero, his grand nephew, suffered in like manner. From the psychopathic point of view, Drusus

* We protest that in this, as in some of the other mistaken judgments, we do not at all agree with Mons. Soury (editor of *Il Pisani*).—W.

Anticus, not less than Julius, showed some symptoms of degeneration, though of a different sort. Only three of his numerous children survived, and we shall see what a miserable existence was theirs. But Drusus also had hallucinations, a fact of no small significance. History has preserved the record of a vision which he had in a forest of Germany, where a woman of greater than natural size appeared to him.

Let us pass to the second generation of the family of Augustus. We shall speak first of the children of Julia, and afterwards of those of Drusus Anticus.

By Vespasian Agrippa, Julia had the two Cæsars, Caius and Lucius, who both died young; next she had Agrippina, who was styled "the Grand," and became the wife of Germanicus, and then Julia and Marcus Agrippa Posthumus. The son which she had by Tiberius died in infancy. By Drusus Antiochus (who was the son of Mark Antony, the triumvir, and Octavia,) she had Germanicus, Claudius and Livilla.

Never were princes of the blood more tenderly cared for than the Cæsars, Caius and Lucius. Augustus loved them with that tenderness which excites the jealousy of mothers. He already discovered in these brilliant youths, his successors, the future masters of the Roman Empire. It was noble in him, who was so simple, if he really did it, that he ventured to condemn the vanity and haughtiness which they inherited from their mother, the proud Julia.

At the age of eighteen, Caius was sent to the East, to earn the title of *imperator*. Armenia, where some disorders had broken out, offered to the youthful pro-consul laurels easy to be gathered. Caius went forth, with his young wife, Livilla, the sister of Germanicus, and a whole court of nobles belonging to the high Roman aristocracy, as companions of his princely pleasures.

The influence of power, flattery and feasting, very soon broke down the enfeebled powers of this handsome and tender young man. Morbid heredity was manifested

in him in a very curious manner: devoid of the power of conquering himself, he was unable to resist the first blows of adverse fortune, and he fell under the first shock, never to rise. Having been wounded, but not badly, in an encounter, Caius abandoned himself to a complete prostration, laid aside his proconsular dignity, and retired into Syria; he preferred, as he said, to live in a corner of the world, to returning to Rome. Stupor and imbecility extinguished the last spark of moral sensibility: he died, not from poison, but undoubtedly from a traumatic tetanus, an accident which, in certain circumstances, may result from a very slight wound. Indifference and a moral insensibility carried to the highest point, have been noted by Jacoby, who does not hesitate to pronounce here the words—moral idiocy.

The young Lucius Cæsar, the brother of Caius, died at the age of seventeen; Julia, the granddaughter, of Augustus, who was called Julia the Second, to distinguish her from her mother, drove still farther than her brother the fury of luxury and infamy, which came to her in the blood of the Julii. Not content with wallowing in her turpitude, it seems that, like her mother, she also had conspired against Augustus; she was therefore exiled. Her brother, Agrippa Posthumus, was a sort of ferocious beast, a stupid beast, incapable of anything good, an idiot, subject to fits of maniacal fury, which ended in his destruction.

There remained Agrippina,—Agrippina the Grand—the Roman idea of a strong woman, a chaste and virtuous wife, the mother of the nine children of Germanicus. This picture of Agrippina, which is found in Tacitus, has its fellow in that of Germanicus, and this one is about as true as the other. That Agrippina, living always in the midst of camps, in the forests of Germany, was a chaste and faithful wife, is not a marvelous fact. But the widow of Germanicus sometimes lets it be seen that she had in her veins, at least some drops of the blood of the two Julias. What imports us to observe, is that the

impotence of which we have spoken, that inability of self-government, of restraining the disordered movements of her own sensations, never appeared so manifest as in this haughty, arrogant, ambitious and really unbridled virago, who lighted the fire of discord and hatred in the imperial family and the state, who urged her sons into absurd adventures, and dared to set herself at the head of the legions; in short, so destitute was she of reason and prudence in her savage impulses, that Tiberius put an end to her by banishing her to an island, where she was left to perish of hunger.

As to Germanicus, the son of Drusus Anticus, and grandson of Augustus and Livia, it would seem that he escaped the effects of morbid heredity. Admitting this, there would be no need for surprise, since it sometimes happens that heredity skips over one generation, or over some members of a generation. Thus, whilst heredity seems not to have fallen on Germanicus, yet in his relatives it fell upon his aunt, his brother Claudius, his sister Livilla, his cousins Caius, Lucius and Agrippa Posthumus; his cousins Agrippina and Julia, and their children and descendants. But who can say what might have happened had this son of Drusus lived longer, and the morbid germ that he certainly carried within his organization had been developed? What is known of his character is not very discordant with what was to be expected in the grandson of Augustus, the son of the hallucinate Drusus, the brother of the dissolute and criminal Livilla, the cousin of Agrippa Posthumus, the father of the epileptic Caligula, and of the incestuous Drusilla, Julia and Agrippina; finally, the grandfather of Nero!

O, but the liberalism of Germanicus! the republicanism of Germanicus! the goodness of Germanicus! the generosity of Germanicus! How many virtues have not the people accorded to their favorites! It would be tedious, according to Tacitus, whose hero nevertheless Germanicus is, to narrate the slaughters ordered by him, and the

decimations of the legions—all whilst weeping over them. Germanicus was, in fact, a man capable of shedding tears over the victims of the executions ordered by himself. He was a grand comedian, an artist of consummate ability; he excelled on the stage. Agrippina and her children almost always represented a part in these theatrical scenes, for which the forests of Germany served as decorations. Accordingly, on the occasion of a meeting of the legions, she is seen, surrounded by her women, flying from the camp, carrying her son in her arms. This boy, brought up among the legions, already wore the hose—the *caliga*—of the soldiers. In short, antiquity does not present a more complete type of the political intriguer, the liberal prince, and the popular pretender, than Germanicus was. And, as if he must have exhausted all the favors of fortune, he died in the flower of his years, before the exercise of power had dissipated the illusions of the worshipping crowd. From the blaze of his funeral pyre the hero seemed to fly up to the gods, and his death was an apotheosis.

Second.—The Emperor Claudius, the second son of Drusus Anticus, and brother of Germanicus, next to his kinsmen Caius, Caligula and Nero, was the most notable example of the rapid physical and moral degeneration that appeared in the family of Augustus. Here also, Suetonius abounds in all the details which the psychologist can desire. The great objection ordinarily made against this sort of studies is, as is well known, the insufficiency of recorded facts. If it is difficult to write the biography of a contemporary, what an excess of boldness must prompt to the undertaking of that of an ancient! We are not to suspect that the historians of antiquity, especially the biographers, were not excellent psychologists. There is not a clinical lecturer on mental diseases who puts into his illustrative model of a lunatic, and his notes and observations, so much care, exactitude and penetration, as did Suetonius in his "History of the Twelve Cæsars." It is difficult to imagine to what extremes

he was impelled by his taste for those minutiae and intimate particulars, which are always important to the psychologist.

The diagnosis in this case is not difficult or doubtful. Claudius was a species of idiot, affected with congenital imbecility; the scrofulous aspect of this microcephalus was remarkable. That pigmy head, retreating from the chin and forehead, and wabbling on that ugly body, the legs of which bent under it, and rendered his gait tottering; that thick round neck (as in several of the members of the family of Augustus), wrinkled by convulsive stretchings; that intolerable stuttering; those hands, agitated by continual tremors; that almost paralyzed right arm; the continual flow of saliva, which frothed on his lips, half opened by a stupid, wicked laugh; mucus hanging from his nose, which was inflamed by fleshy tumors at the internal angles of the eyes; everything, in short, announces in Claudius, a poor degenerate creature. Enfeebled in both body and mind, by various diseases, from his very infancy, he suffered, through all his life, intolerable pains in his stomach. And just what he was physically, that was he morally, if one may be permitted to continue this mode of speaking, since there is not in man two beings, but only one; the spirit is but the body under another aspect.

Like other imbeciles and idiots, Claudius was a most disgusting glutton; he was obscene too; he was passionately fond of every sort of shows and games; without any provocation he would burst into violent anger, real fits of mania; he was in the habit of cramming his stomach until his senses were lost, and then, swollen as an ox, with meats and wine, he fell into a state of stupor; he was then carried to bed, where he lay with open mouth, snorting; to relieve him his uvula was tickled with a quill. Next to his mania for judging, his strongest passion was that of gambling and shows. This, as Jacoby observes, is a very common sign of imbecility. Claudius was delighted with the sight of tortures, punishments and executions; not that he was cruel: he merely had, I repeat it, the passion for

striking shows, and just as are idiots and imbeciles, and as was his cousin Caius Cæsar, he was utterly devoid of moral sensibility. In the like manner Claudius was not avaricious,—he loved gaming solely for the emotions it excited in him.

His intelligence, in other respects, was far from being extinct; it broke out occasionally in sudden and unexpected flashes, which reminded of the origin of this strange Cæsar. He was not devoid of either culture or knowledge; some historical books were known, which, with his scribes, he had composed. Whatever part he may have had in editing of them, posterity is not consoled by having lost them. The *good* (!) Claudius was not quite so bad as the epileptic Caligula, or that monstrous beast, Nero, with whom the race of Augustus ended.

Without doubt he was more clever than the majority of those who, under Tiberius and Caligula, treated him as the lowest of imbeciles. Kept far away from court during the reign of Tiberius, he returned to Rome under Caligula. In the palace he was the buffoon of the prince and his favorites. Caligula even vented on him his wicked wrath, scoffing and cudgeling him.

Claudius delighted in judging,—in sitting on the tribunal. "Not content," writes Jacoby, "with his own tribunal, he interfered also with those of the consuls and of the prætors." In his passion for judging he laid hold of all the processes of the city, leaving nothing to the other judges to do; he refused to grant any vacancies to the tribunals, and he sat in judgment on the very days of the nuptials of his two daughters. His tribunal was in one of the prettiest parts of Rome. The advocates and litigants treated him as they would not have treated any other magistrate; the accused and those who were dissatisfied with his decisions, heaped invectives on him, and insulted him to his face; the advocates dragged him by his dress and forced him to remain in the tribunal when he wished to adjourn. Others seized

him by the leg whilst he was coming down the steps from the bench, so that the poor Claudius tumbled down the stairs.

At home the *good* Claudius was no less despicable than in the tribunal. What was called his principality, was in reality the reign of his women and freedmen. However capable he might be of good counsels, and whatever very just political views he often might have, the real direction of affairs usually escaped from his hands; and not he, but his women and libertines gave commands, awarded favors, and gave sentence of penalties and punishments. Here is an example, out of so many others, of the impudent and gross method in which he was cheated: A plot was formed for the destruction of Appius Silanus; Messalina and Narcissus took the parts between them. "One morning, before daylight," says Suetonius, "Narcissus, with an air of consternation, rushed into Claudius' bed-chamber, and related that he had just seen in a dream, Appius attempting his life. Messalina, feigning surprise, added that for several nights she had had the same dream. An instant after, Appius was announced, the watch having by express order, been fixed for that hour. Claudius, persuaded that he had come to put the dream into execution, ordered him to be seized and put to death. In the morning he related the whole matter to the senate, and thanked his freedman for having, even in his sleep, watched over his safety.

It is known that in the face of Rome and the world, whilst Claudius was at Ostia, Massalina espoused Caius Silius,—and that this union of the wife of Cæsar was publicly announced, was registered in the acts, and consecrated by the auspices and a solemn sacrifice. Further, Massalina persuaded the poor Claudius to confirm the contract, and Claudius complied. He was made to believe that it was a contrivance to secure him from some danger. In fact there is no appearance of his having known what he did, as he showed himself highly irritated when he learned at the same time of the excesses of Massalina and

her marriage to Silius. At any rate he was so little conscious of what took place around him that a short time after the execution of Massalina, he asked, when sitting down to table, "why the Empress had not come?"

Suetonius relates that Claudius sent invitations to dinner, and to play with him at dice, to persons he had caused to be put to death the evening before.

What is sometimes called moral personality, or consciousness, underwent, in Claudius, strange eclipses, and in certain moments became even extinct. As it happens in dreams, he fatally obeyed the suggestions, counsels and desires of those around him, and the last to speak had always the best of it. As the mere sport of numberless errors, the feeling of terror in Claudius immediately followed an order for an execution, and this by virtue of a phenomenon of cerebral automatism, which is observed in epilepsy, idiocy, dementia, and generally in all states of mental enfeeblement.

We are enraged when we think that this Cæsar, ruled through life by slaves and freedmen, was above all the instrument of the hatred of two furies, such as Massalina and Agrippina.

So, further, whether it was suggested to him, or arose spontaneously, every idea that became fixed in his mind, reigned tyrannically in this miserable intelligence, which was powerless to react. Like nearly all imbeciles that fall into dementia, he was incapable of correcting any false idea or delirious conception that ruled him, by means of other antagonistic ideas.

With Britannicus and Caligula we reach the third generation of the Augustan family. Britannicus, son of Claudius, was, like his cousin Caius Caligula, epileptic. Here is a likeness of this young prince, drawn by Jacoby, from a cameo and an authentic bust by Firenza. It will justify the ideas which may be formed from reading Racine :

"These two likenesses produce a singular impression. The puffed lineaments, a certain indefinable something in

those vacant eyes, as if without pupils, an air of stupor and sadness spread over the physiognomy, the broad large cranium,—all remind us of the aspect of chronic hydrocephalus; and the quality of the marble chosen for the bust, a livid white, which seems slightly translucent, still more confirms the impression. At all events it is undoubtable that these two likenesses, but especially the bust, carry the evident imprint of something morbid, pathological, and principally in the nervous and intellectual sphere, which perfectly accords with epilepsy and that profound psychopathic disturbance with which Britannicus was affected."

Caius Caligula, the son of Germanicus, brother of Claudius and Agrippina, son of the Grand Julia, "was not," says Suetonius, "sound either in body or mind." The picture of him, left to us by this historian, is horrific :

"Caligula, tall of stature, had a pallid complexion, an enormous body, limbs and neck extremely slender, eyes sunken, temples hollow, forehead broad and retreating, hairs thin, the crown bald, and the rest of his body very hairy. His countenance was naturally frightful and repulsive, and he tried to render it still more so, by practising before a mirror every possible means of terror and fright. Sleeplessness especially excited his nerves, as he could not lie more than three hours, in unquiet slumber, disturbed by terrifying visions. Once he dreamed that the sea talked to him. In this way, tired of watching in bed the greater part of the night, he would sit up, or walk about under vast porticoes, looking and wishing for day."

Epilepsy was congenital in Caligula; besides the fits of the *grand mal*, he was nearly always under the influence of epileptic vertigo. The importance of such a neurosis in the diagnosis of morbid heredity, is manifest. Caligula was an epileptic on a throne, an epileptic master of Rome and the world! *A priori*, one might almost write the history of such a reign. The well-known psychical disorders observed in the majority of these

patients, should be in this case merely exaggerated, and should assume monstrous proportions. But in Caius, as in many like him, we must be compelled to note dissimulation, a gloomy and deep character, sudden outbursts of anger, often without cause, extreme mobility, variability of tastes, humor and sentiment; the morbid fancies of a reinless imagination, useless cruelties, and above all, an avaricious wickedness, which very speedily changed into sanguinary ferocity. Add now to these symptoms the ordinary cortege of strange and frightful hallucinations.

The beginning of the reign of Caligula gave birth to many hopes. As a true son of Germanicus, this young prince in the first months made a show of liberalism that seduced the unsuspecting; but afterwards, secretly, in the basement of his palace, as before at Caprea, Caligula in his orgies committed indescribable excesses. "He was," as Racine said of Nero, "a born monster, only that as yet he dared not to declare himself."

Notwithstanding all the remedies he took "to purge his brain," the fits of his malady became worse and more frequent. One fine day he was seized with an attack of acute mania, such as is observed in the course of epilepsy, and to those who had not been able to penetrate the mysteries of such an organization, he appeared suddenly to become another person. "Hitherto," says Suetonius, "I have spoken of a prince: I shall now speak of a monster." In reality he was the same man, who had lost the power of dissembling any more; the last remaining bands of the broken-down machine were torn. The epileptic then appeared in all his brutalism, in the midst of instruments of torture and burning coals; "*videbam apud Caium tormenta*," wrote Seneca, "*videbam ignes*." Capital executions, exquisite and refined punishments became the favorite accompaniments of his banquets, and the very spicings of his orgies. Caligula did not otherwise want genius; his wickedness was ingenious, his malice infernal, his cruelty ironical, and often humorously piquant. It is known that he would make a consul of his horse Incitatus!

In his implacable and cold rabies against the human race, in that acrid voluptuousness which he tried in outraging all that men are wont to respect, he loved to dress himself (this Roman Cæsar) as an oriental monarch, a play-actor, a woman. He was seen in a painted tunic, or a vest of transparent silk, with the sandals of a woman on his feet and bracelets on his arms. "Very often," says Suetonius, "he appeared with a golden beard, holding a thunderbolt, a trident, or a caducus in his hand,—the insignia of the gods."

In his morbid necessity of vexing and mocking all persons, in the very middle of a public show he ordered the awnings that protected the spectators from the rays of the sun to be taken down. If by chance he, who was bald, met anyone on the streets with the head covered, he would order his neck to be shaven. In order to have the pleasure of predicting and producing a famine, he closed the public granaries of Rome. It was his custom when he condemned a son to death, to have the father also killed, through mercy, as he affirmed, that he might thus save him the grief of mourning for his son. Such were the doleful jokes of Caligula. Being once displeased with a verse in a comedy, he commanded to be burned, on the very stage, not the comedy, but the author of it. An old prætor, absent on leave, for his health, at Anticyra, requested from him permission to remain there longer. Caligula ordered his veins to be opened, asserting that blood-letting would cure him. Junius Priscus, being put to death, as the possessor of a large fortune, it was found that he was really poor. "This man has, cheated me," exclaimed Caligula, "and has died innocent."

He ordered the death of a certain person; the tribune charged with the execution was deceived, and he killed another citizen. "It matters not," said Caligula, "this one deserved just the same." Having ordered to be laid before him a list of the most heavily taxed Gauls, he condemned the richest of them to be put to death; one

Julius Sacerdos, was found on the list. Though not rich Caligula did not omit to have him slain with the others, "just because of his name," said the Cæsar.

In order to raise money, he sold at public auction, at enormous prices, his jewels, furniture, slaves and the freedmen of his house. An aged prætor, Aponius Saturninus, having fallen asleep at one of these sales, Caius told the auctioneer to attend to the movements of the sleeper's head, as he evidently had the intention of bidding up. The unfortunate old man found on awaking that he had bought thirteen gladiators for nine millions of sesterces.

Caligula was killed in his 29th year. The head of his only daughter, Drusilla, who had shown all the signs of precocious ferocity, was broken against the wall.

But what must we say of Agrippina, the sister, wife and mother of emperors? The savage pride, the cunning and the violence of this woman were the fitting legacy from her mother; but the great Agrippina was ignorant of incest. The activity of the neuropathic virus deposited in this family was not yet exhausted. Nero had to make even his own mother wonder; Nero had to make the wife of Claudius shake with fear. But the hereditary antecedents of this histrionic monster, with whom the race of Augustus terminated, were very complex. Nobody doubts that he had inherited from his mother the basis of his nature; though, he must have inherited from his father Aenobarbus Domitian, vices and anomalies of every sort, from which the Domitian family, not less than the Julia-Claudian, suffered. "From the union of a Domitian with a sister of Caligula, nothing but a monster could be born." If this answer of the father of Nero to those who congratulated him on the birth of this son, was really given, it should testify that even at that time there was a very clear knowledge of the effects of selection and heredity in man.

MIGRAINE.*

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MIGRAINE, or megrim, is ordinarily the periodical protest of cerebral overtax in the acutely exhausted, comparatively young, brain of a mildly neurotic, subject.

It belongs especially to the time of life—from early puberty to middle manhood—when emotional disturbances—fret and worry—most violently agitate and accompany the intellectual movements, and when the latter are most active and impulsive. It is a temporary disequilibrium between waste and repair in the higher cerebral centers, a comparative neuratrophia from mental overstrain which expresses itself in slightly neurotic subjects, like the outcry of an oppressed or famished nerve in neuralgia. It is not denied that it may be precipitated by other conjoint causes than cerebral overstrain, especially such as contribute to congest the head by exciting disequilibrium in the systemic circulation; but an hereditary tendency to weaken under a certain degree of overstrain on the part of the cerebral vaso-motor system, and the co-existence of that strain, which can not be resisted, constitute the essentials of an attack of migraine.

Migraine usually expresses itself unilaterally, because one hemisphere—and that on the left side, the driving hemisphere, as Ferrier terms it—gives out first, the hemisphere to which the heart's blood goes most directly.

Migraine is periodic, but not equi-distantly so, because a certain stage of exhaustion must be reached—longer in some individuals than in others, and longer in the same person at certain times and under certain circumstances than

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others—before the mental machinery resists further goading and the outraged brain asserts its right to rest.

The migrained cerebrum, in refusing thus to be driven to further work, prescribes its own proper therapeutics in the involuntary rest which the mind is forced to take from accustomed labor and emotional commotion, which is worse than labor. The timely recuperation which comes of this repose sooner or later re-establishes the normal equilibrium of recuperation and disintegration, and a re-accumulation of psychical force takes place; a sense of restored mental vigor is again felt by the patient, and eager impulses inspire him to expend it, and he goes along again normally, for a while, expending only the daily accumulations of cerebral force until the more or less nervous temperament of the megrim victim leads, sooner or later, to draught on the reserve nerve force of the cortex and to its final and rapid exhaustion, with a repetition of the previous experience as its sequel. With the lowering of the brain tone from overtax, the cerebro-spinal dominion over the sympathetic nervous system diminishes; vascular excitations and contractions within the cerebrum, followed by vaso-motor paralysis and dilatations of vessels, and the meningeal pain of distension and pressure, and increased, tumultuous and rapid psychical activity, somewhat like that in the early stage of intoxication, follow. Thoughts come thick and fast, till soon the cerebral exhaustion is complete. Sympathetic influences pass downward to the stomach; nausea and emesis frequently follow, and the bowels sometimes move freely. The co-existence of nausea followed by vomiting, and this by sleep and final relief, has given to megrim the synonym of sick-headache; the headache is not dependent upon the sick stomach, but the nausea is due to the sickness in the head. Megrim is a very sick headache, but in another sense. If the vomiting continue long enough, the hemi-crania will, of course, cease with the cessation of the vomiting; but, to make the vomiting effective, the stomach should be washed out with lukewarm water till it is empty of all solid contents, and then hot water, of at least 115°

F., should be given, in from four to six-ounce draughts, every hour or two, till about twelve to sixteen ounces are taken. This may be made more acceptable by flavoring with some agreeable tea-leaves or herbs, the commercial tea from China being often acceptable if not made over strong, and given without cream or sugar. If there should be a loathing for hot drinks along with the usual antipathy to food, then cooling draughts may be given, impregnated with five drops of creosote, or half a drachm of aromatic spirits of ammonia, or carbonic acid water, or peppermint water and a little bromide of potassium. The preferences of the stomach, as thus indicated, should be respected.

The hyperæsthetic special sensations all tend to secure that conservation of brain force so essential to the patient's speedy restoration, and their suggestions should be fully heeded in our management of this affection.

Nature, in these sensations, hints strongly at the rational restorative therapy, and such hints to the wise physician should be sufficient. Every movement increases the bodily discomfort; hence the patient asks to be let alone—to be undisturbed.

The hot, aching eyeballs and hot, painful head, suggest evaporating lotions, the best of which are the ethereal for the head, and laudanum-and-water, of proper temperature to evaporate readily, for the eyes, for ether is painful if it gets between the lids. The sensitive retinae and troubled vision demand the exclusion of light; the morbidly impressible centers of audition make sounds painful and, in aggravated cases, unbearable. The salivary secretion is sometimes increased—more often, altered and disagreeable. To heed nature's demands in these regards is to give the brain, as well as the sensitive centers and channels of audition and vision, the much-needed repose that leads to restoration of exhausted power which has tracked the parts it has forsaken with marks of irritability. The general listlessness and brain-weary feeling which the patient reveals as the painful feelings pass away (if the usual tendency to sleep then does not come on or is interfered

with) demand further brain rest, and our therapy and surroundings for the patient should promote rest until an apparently complete restoration follows each attack.

The intervals of freedom from nervous headache should be prolonged by a course of tranquilizing neurotherapy calculated to promote and maintain the nerve stability and by a moral prophylaxis. To this end the patient should be made well acquainted with the nature of his trouble and the essentials to avert its recurrence.

He should have a mild, uniritating course of constant cephalic galvanization in the interval, repeated daily, or every other day, until he has passed the time of several attacks exempt from them. A full dose of ammonium or potassium bromide, 30 to 40 grains, and a minimum dose of arsenious acid, should likewise be given nightly, for many months, in many cases, and as often as three or four times a day for several days preceding the time of an expected attack. Bromide of potassium, in forty-grain doses, three times a day, is of special service, if the patient is brought fully under its influence when the first ocular disturbances appear, as they do in many of these cases. Guarana may be used to advantage at this time, and subsequently during the attack, but it has not given me the happy results others have ascribed to it. The digestive and assimilative processes are never to be lost sight of, nor any other physical condition calculated in any manner to embarrass the mental movements—to directly or reflexly irritate the brain or to compromise its normal daily nutrition and nightly rest. Besetting sins and moral and physical vices that tend to organic or nervous exhaustion should be inquired into and remedied by discontinuance.

During the attack of migraine the bromides, if the stomach can be made to retain them, are always serviceable, and I give them in large quantities of peppermint-water and minimum quantities of creosote.

In the constitutional treatment of migraine, plenty of pure fresh air and sunlight and a nutritious and digested or digestible and easily assimilated dietary are the best

tonics. Spinal and epigastric sinapisms are also of value, and anodyne rubefacient liniments, as of chloroform or camphor and the volatile liniment, with turpentine, capsicum and oil of peppermint or wintergreen.

A predisposition to attacks of migraine is sometimes awakened by anæmic, cachæmic, or toxæmic states of blood, which especially interfere with normal nerve nutrition in the neurotically inclined. In the first state of the blood the anæmic reconstructives should be mostly ferruginous; in the second, ferruginous and specific; in the latter, mainly specific, conjoined with good food easily appropriated by the system, which is indicated in all impoverishment of blood. Quinine and arsenic in malarious districts, whether the patient have the usual visible malarial symptoms or not; mercury and potassic iodide in syphilitic migraines (such subjects do have migraine as well as the specific, constant cephalalgia); iodide of potassium and iodine in the migraine of lead workers; iodine and iron for the scrofulous. Strychnine, arsenic and cod-liver oil are seldom contraindicated in the anæmic, though the stomachs of many patients revolt at the oil, and it had better not be urged on them. Many subjects of migraine, however, are not anæmic, and some are actually habitually hyperæmic, so far as the head circulation is concerned, and their life habits are such as to keep up an exalted cerebral blood pressure; and, though migraine is to such the most fortunate circumstance that could happen them in putting periodical stops to their overwork and excessive worry, and enforcing resting spells at times in their over-active careers, they often finally die of grave cerebral affections after they have reached the period when excessive keenness of sensibility, emotional and sensory, ceases. But migraines, like constitutional neurasthenics, are often also long-lived, and not especially liable to grave cerebral disease.

The mistake that has been made in the medical conception and consequent management of migraine consists in its having been regarded as a *want* rather than as an

over-draught of cerebral power and consequent abrupt collapse in those who, fortunately, are prone to this collapse from exhaustion, short of destructive cerebral lesion. These patients become cerebrasthenic before brain structure gives way, while others not so hereditarily inclined go on till stopped by apoplexy or aphasia, etc. Subjects of migraine are usually among the milder class of the neurotically endowed, and they do not often have, or congenitally entail, the graver neuroses.

In consequence of this mistake, a coercive tonic plan, so called, but often more stimulating than tonic, has been thought generally the best, whereas the majority of migraines require repression and regulation of their nervous forces; the maintenance, by corrective restraint medication, of a judicious equilibrium in their mental movements, so as to balance daily the cerebral waste and repair. They need to be taught and medicated so as to stand life's frictions, so as to give their brain a reasonable chance for rest and repair, their stomach a fair opportunity to do its work and answer the encephalon's prayer for daily sustenance. They need a physician to constantly advise and regulate them, as they need an attorney in their business affairs to keep them safe from financial shipwreck in many of their ventures.

The business maxims, "never to postpone for to-morrow what ought to be done to-day," and "never to wait for the next train, if by any possibility the train that has gone can be caught," should be modified to read, what *ought* to be done to-day, only without violence to your organism, should be done;" and if to-day's train cannot be made without overstrain to the system, which may be the beginning of a subsequent breakdown of the cerebro-spinal system, wait for the next train and save yourself.

Migraines, in their best physiological condition, are mentally active, and prone to overwork under business stress. They are ambitious and restlessly inclined to constant endeavor, and seek occupations that readily lead to

final overstrain, for when they are busiest they are most happy.

The rational indications for preventing recurrences of attacks of migraine are repressive cerebral restraints and reconstructive medication. To this end the occupation of the patient should be regulated by his physician, and not alone the consequences of injudicious overwork treated. The nervous center should be tranquillized and the nerve-capital and brain-force economized during the longer or shorter interval between the attacks.

The patient's brain-power should never be squandered. The victim of migraine cannot afford to be prodigal of his mental power: if he does, the end of his prodigality will be husks, and he will sooner or later realize that he has unpardonably sinned against nature. It will be fortunate for him if, in his repentance, he seeks and finds a physician who, instead of goading, by a stimulating treatment, represses, conserves and regulates his powers.

Migraine, with melancholic complication some time preceding or following the attack, justifies opium and aloes, or codeine and aloin; but in the habitual management of frequently recurring attacks it is a most pernicious practice to use opium freely enough to subdue the pain, and the same is true of the free use of whiskey. Nature needs healthy rest, normal restorative tranquillization, and prolonged, healthy, refreshing sleep; not the enforced and fitful, dreamy somnolency or profound stupor of narcotics. If sleep does not come in due season with the administration of bromide of potassium or ammonium, chloral may be given in a thirty or forty-grain dose, largely diluted, when the night-time comes on, or when the vomiting and nausea have about ceased. The bromides are good remedies for the precursory restlessness and fidgets; so also the tranquillizing warm bath, if that be at the time convenient to the patient, so that he will not be too much disturbed in being put into it. Valerian-root added to the bath is of value in the hysterical. Under this treatment the tingling sensations and temporary numbness disappear. Hot

pediluvia, bottles and sinapisms to the feet, also to the spine or stomach, are serviceable in arresting temporary vital prostration. The baths and the bromides serve also to tranquillize the heart and relieve the head, by diverting the blood from them to the feet, for while the carotids are full the radials are small, and the peroneals and tibials are smaller. I have known the hemianopsia, which is a subjective phenomenon, due to encephalic sanguineous pressure, to disappear during the bath and to be averted by the bromide treatment preceding the coming on of the attacks; likewise the photopsia and photophobia.

Contrary to the statements of Latham and others, that bromide of potassium is more serviceable during the attacks than in the interim, I affirm that, if properly employed, so as to secure a restful state of the nervous system and a tendency on the part of the cerebrum, when not actively employed, to seek repose, its effect is decidedly beneficial in prolonging the intervals and shortening the attacks, and finally, in preventing the recurrence of the latter altogether. To accomplish this end, the bromide must not be given to sanguineous saturation; and, to be enabled to rely on the smallest quantities of this salt, galvanism must be conjointly employed, and with persistent regularity, if bromism is shown either in eruption, or impaired motility, or cerebral stupidity.

The temporary cerebral hyperæmia of migraine is induced by defective vaso-motor innervation and consequent paralysis of control over the caliber of the cerebral vessels, which are thus allowed to produce a painful degree of cerebral distension.

The turgid brain even robs the face of blood, and the pupil contracts, not only because the retina is hyperæsthetic, but because of irritation of the ophthalmic ganglion and the origin of the third nerve in the gray nucleus in the floor of the Sylvian aqueduct.

It is astonishing how descending cephalic galvanization, or galvanization over the cervical sympathetic center and under the ramus, and through the head, from the os frontis

over the eye to the occipital spine, will cause these symptoms to disappear by the restoration of tone to the vaso-motor system within the head; but, to make the relief permanent, sleep must follow, and rest absolute to the brain as tired nature demands, and recuperation from the exhausting causes that precipitated the attack comes in the course of nature's benignant *vis medicatrix*, assisted by our art. These conclusions are not conjectural, but based upon a success in the management of migraine that has not disappointed, and have been satisfactorily verified in the writer's own person also.

The view of Wilks and others respecting the eradication of migraine is too discouraging and unjustifiably hopeless, due to neglect of suitable management in the interim of the attacks, just as frequently recurring hysterias are thus too much and too often neglected. One of my patients, formerly (eighteen years ago) a two-days victim to migraine prostration every fortnight, now and for fifteen years past has only occasionally (once or twice a year) a reminder in the return of the boring sensation over the eye or on the temple, which a prompt electrization and a drachm of bromide of potassium in peppermint-water cause to disappear. The rest of the treatment he has learned himself: it is to cease going so fast with his work for the time, and take more rest for a few days, and not to fret because he cannot accomplish the work of two days in one.

I have encountered a form of migraine that sustains a relation to ordinary migraine, or migraine major, similar to that which *petit mal* bears to the *grand mal*, or *epilepsia gravior*, and it might justly be termed *hemisrania minor* or *mitior*. It sometimes follows, like epileptoid, the graver malady, and sustains the degree of relationship that the simple vertiginous seizures do to the convulsive attacks, or, like the epileptiform disease, it may precede the *haut mal* of megrim.

The case just referred to is an illustration: a patient now under observation had for eighteen months periodic attacks of photophobia, slight photopsia and confusion of vision,

cold feet, increased heat, and sense of fulness and slight pain in head, associated with general uneasiness, and indisposition to exertion, lasting for several hours of a day in each month—sometimes oftener, if she used the sewing machine to excess in making her own clothing, always a source of worry to her. The attacks no longer recur since the adoption of the treatment indicated for graver cases—the more moderate use of the sewing machine and the relegation of her best dressmaking to other hands. The making of a stylish dress is sometimes a great strain on a woman's mind. Migraine being self-limited in the duration of its attacks, as it is in its final recurrences, passing away with advanced age, if it does not develop into a graver malady, much of its former therapeutics has been misleading because the attacks have passed off pending the administration of certain drugs, which at best have been of secondary value. Such are valerian, camphor, hyoscyamus, asafoetida, Hoffman's anodyne, ether, etc. An attack may, however, be cut short with chloroform and camphor, or, preferably, chloral and bromide of potassium; but the sleep which follows should be a prolonged one, and the patient should awake refreshed and in condition to receive, and must have adequate nutriment to compensate for his exhaustive experience. If he does not, another attack will be likely to recur soon, unless the foregoing hints as to intermediate treatment are put into practice, and this the patient will not always acquiesce in; but migraine, in the intervals of the attacks, should be managed very much like the successful treatment of epilepsy. While relief during the attacks is desirable, it is all-important to the well-being of the patient to prevent their recurrence by intercurrent management.

The extemporaneous character of this paper precludes a full discussion of the asserted alliance between migraine and epilepsy; but there has been demonstrated no real pathological kinship between these two maladies of the nervous system, and the asserted connection between them cannot be shown clinically, unless in exceptional instances. True migraine victims comparatively seldom become epi-

leptics in later life, and the coming on of an attack of epilepsy or epileptoid and migraine are essentially different, the one being sudden, with momentary loss of consciousness, often with an aura, frequently in the night, but more often just on awaking from sleep in the morning, and often followed by headache; the other approaching gradually, never with loss of consciousness, generally preceding sleep, or passing away with it, or relieved by it, and never coming on after a profound sleep, as epilepsy so often does.

The general therapy of the two being quite similar proves nothing except that neurotic tranquillization and the balancing and conservation of force are equally valuable therapeutic procedures in each of these neuroses, and that tonicity imparted to the cerebral vaso-motor system, as by the minimum doses of nitro-glycerine, mild cephalic, descending galvanism, etc., is equally efficient in warding off the tendency to recurring exhaustion, which in migraine appears to be in the cerebral vaso-motor system, while in epilepsy it appears to be primarily in the psychical or psycho-motor area of the brain, with secondary and rapidly following vaso-motor paralysis.

The hyperæsthesia of migraine and the anæsthesia of an attack of epilepsy are as opposite as consciousness in the one, and the absence of it in the other. Headache is the sign essential of the one, while it is the sequel rather of the other.

The occasional beneficial effects of volatile inhalants and stimulants internally in the beginning of each, to postpone an attack, are due to their prolonging nerve tonicity, and preventing the vascular intracranial movement upon which the diverse phenomena of the two different morbid conditions depend. To abort epilepsy, nitrite of amyl, camphor, and the pungent ammonium salts must be inhaled in the very beginning of the aural stage; they are more or less serviceable at any time during an attack of migraine, except the amyl nitrite, the latter, which is the inhalant *par excellence* in epilepsy, often aggravating an established sick headache.

An epileptic subjected to the cerebral-vascular condition of migraine, vaso-motor exhaustion,—the *arteriole* spasm and relaxation, would always have epilepsy. There is an additional factor in epilepsias which is absent in the brains of migraines, viz: a tendency to further morbid movement, reaching to unconsciousness and convulsion, founded in the organic constitution of the cerebral texture. Neither of these conditions belongs essentially to migraine, though, when the epileptic diathesis co-exists with recurring migraine, the transition is easy and natural into confirmed epilepsy.

NOTE.—The foregoing paper was hastily written, in compliance with a promise to present the writer's views on the subject, inasmuch as they had been requested for publication. It was hoped that the discussion which might follow the reading of the paper would have enabled the author to elaborate his views, by answering objections which might be made to them, but the hour of adjournment having arrived at the conclusion of the reading of the paper, discussion was deferred, and the two next subsequent meetings of the Society were occupied exclusively with business matters.

This occasion is taken, therefore, to add that what the writer understands as migraine, as ordinarily seen, is a condition of somewhat precipitate brain fire in persons usually of slight neuropathic tendency, as contradistinguished from the more chronic—more complete and more tardily reached form of brain exhaustion which we see in neurasthenia and cerebrasthenia.

The intermittent hemicrania, or "sun pain," which seems only to remain with the patient while the sun is in the horizon, going away at night to return the next day, and so continue, may have malaria for its cause, since arsenic and the anti-periodics cure it; or it may be that each day's mental effort is sufficient to induce enough vaso-motor exhaustion to excite migraine in a brain constantly on the verge of exhaustion, which only sufficiently recuperates at night to admit of relief from pain, but not to bring about sufficient repair for the strain of the succeeding day. But most of these cases have been found among the malariously infected of malarial regions. It is not to be denied also, that true periodic migraine is sometimes associated with grave cerebral lesions, as with cerebellar disease and tumors and other lesions of the cerebrum and insanity, though ordinarily it is not. The writer has seen it so complicated, and relieved by measures which diminished intracranial arteriole distension and pressure.

A singular case of migraine which, until very lately, recurred every ten or fourteen days in an overworked lawyer under the writer's professional care, is associated with completely lost patellar tendon-reflex phenomena, every effort having failed to evoke it.

It is not intended in the foregoing paper to deny the influence of sick states of the stomach in precipitating, by transmitted irritation and interference with cerebral nutrition, attacks of migraine in the predisposed.

What is intended in the foregoing paper is to describe migraine as the writer has ordinarily observed and understands it.

Inebriety Associated with Imbecility.

By T. D. CROTHERS, M. D., Hartford, Conn.

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I BEGIN with this fact, that inebriety is not an artificially-provoked appetite for alcohol, but that it is a distinct defective development in many cases, and a neuroses, with special causation and symptomatology.

The demand for alcohol is often a symptom of a late stage of this neurosial disease. These facts are supported by clinical studies, and may be considered as fully established.

A comparison of the clinical histories of many cases will indicate three quite prominent ætiological conditions, under which nearly all cases may be grouped.

1. Inebriety, from injury both physical and psychical, including all that most complex class of reflex irritations—mental contagions, and the many states which come from anæmia, neuræsthenia, etc.

2. Inebriety, from all degrees of heredity, and from allied diseases, direct and indirect.

3. Inebriety, as an expression of defective development, arrested and perverted growth, marked by asymmetry of physical and mental powers. Degenerations that are confined to certain limits, and do not appear, except from a special study.

Often these conditions are seen together: then the diagnosis is distinct. But in cases coming under the last group alone, much obscurity and difference of opinion may exist, depending on the expertness in gleaning facts, and the accuracy of the observer.

My object is to group some of the facts associated with this condition, which may be termed grades of imbecility, that have a special tendency to develop inebriety.

Where heredity is not prominent, I have been led to believe that defective surroundings and training are most potent causes.

In some cases weak and backward children of very slow development, or the opposite, where extraordinary precocity is seen, are traceable in a large degree to the surroundings; in others, no connection is apparent.

I think a large class will be found where the arrested growth of some brain centers has not appeared in early life, but on the advent of the use of alcohol, became prominent.

The use of alcohol was both an expression of this defect and an intensifying cause in developing it.

The following case will illustrate some general characteristics that mark these obscure inebriates, and show a line of physical causation where wicked instincts were supposed to reign:

John Brown came under my care as an insane inebriate needing constant restraint and watching. There was no history of heredity, and in early life he was very backward, and of slow brain power. At twenty-four he graduated with some honor, as an orator, at college. Two years after, was admitted to the bar; and ten years later, came to me as a chronic inebriate. From various sources it was ascertained that in early life he had exhibited great uncertainty of judgment and control over himself. He was dull almost to stupidity, up to puberty. The strongest trait he exhibited was acute jealousy, and a savage disposition to revenge injuries, real or fancied. After puberty he was very egotistical, and when convinced that he was not what he boasted of being, set about to accomplish it, exhibiting great powers of memory and intellectual activity.

He would boast of being the best scholar, and when laughed at for his stupidity would apply himself with great energy for weeks, and out-strip all his class; then relapse into great lethargy. Thus, all through college and professional life he was strangely impulsive; at times

seeming to show great force of character, followed by states of abject weakness. When aroused, his adherence to a line of conduct or thought was fanatical, and passed all bounds of reason. As a politician, he was combative and excitable, and without tolerance or charity for anyone who differed from him. His zeal was offensive, and injured the cause he sought to promote. As a church member, he was involved in foolish conflict continually.

As a lawyer, he was equally impulsive and unreasoning, having only one view, and pressing this to its extreme limits.

His appetite had been always irregular from childhood. Dyspepsia came on soon after puberty; and nothing but excess, followed by severe pain, seemed to have any influence in checking the dyspepsia, and even this was soon forgotten. Inebriety grew out of this condition and the ill-nourishment and the irregularities of living. The year before he came for treatment, he exhibited marked criminal tendencies, and was full of delusions of persecution. He had a well-laid plan for avenging his fancied wrongs, but was restrained in a station house from enacting a fearful tragedy. After, his memory was not clear, and he was in a state bordering on dementia for some days. This was an outline of a long history, which I think was one of defective development and imbecility from the start. The early dullness and precocity, and the later impulsive irregularity of mental action, and want of normal control of the brain functions, pointed clearly to this condition. A defective brain force and want of judgment appearing all along his career, showed that inebriety was merely an expression of this degeneration, which originated at birth.

When admitted for treatment he was delirious, and criminal in his motives and talk. Had he committed murder the defense of insanity would have been doubtful to a jury, because no delirium tremens could be shown; and a general consistent course of life and recognition of his surroundings was apparent. In the defense only his impulsive irregularities of mental action and conduct, that

were out of harmony with existing ideas and events, could have been pressed as evidence of defective brain. The same line of action and conduct, when in defense of truth, and in the natural order of events, would only be evidence of his sanity, to a court or jury. No estimate of his mental state could be obtained, except from a careful study of all his history. No doubt many indications would have been found of the presence of a degree of imbecility in childhood, with hints of the explosion in inebriety later.

It is in this twilight region of infancy and childhood, that are found the keys which unlock and explain the strange blending of sanity and insanity that marks so many cases in after life. Often these cases come to us without any history of early life. They are found to have asymmetry of both body and mind, and to exhibit great extremes of mental character and force; also perverted and ungoverned appetites, and very great irregularities of living and activity. These and other indications show a probable imbecility early in life, that was unnoticed.

When the early history of such cases is obtained, in almost all instances, these conclusions are fully verified. In the study of a number of cases of inebriety in the period of childhood, I have found many of them possessing great mental power and genius in early life, which suddenly subsided when inebriety appeared.

Among this class are the prodigies at school and college, the boy orators, and the young men who embark in business projects that only mature men dare to engage in— young men who suddenly come to the front in responsible positions, and become leaders full of promise. In personal appearance they are always below the position and surroundings which they occupy. After a short, fitful career of promise and failure, they disappear, and are inebriates full of egotism and general degeneration.

A case of this kind was, at twenty, a daring, successful Wall street operator; then went down into an abject inebriate. Another case was a stump-speaker at eighteen

years of age, and was employed in the presidential canvass. Two years later, he was a low inebriate and barkeeper. A third case, carried on a large iron manufacturing interest, with phenomenal success, at twenty years of age, then became an inebriate and destroyed the concern. The history of all these cases showed imbecility from infancy, that was unnoticed.

No less prominent are the phenomenal school and college boys, who excite great admiration and promise for the future, then lapse into inebriates, and disappear.

Another class deserve mention, who soon after puberty exhibit great religious emotion, join the church, enter into the preparation for the ministry, or go into the missionary field. For years they are shining examples of zeal and fervor, and although mere boys, are thought to be giants of religious growth. Then they disappear, and are heard of no more, except in asylums and hospitals.

Another class are proverbially bad in impulse and instinct from childhood, and use alcohol from the earliest opportunity, and long before maturity are serving out sentences for crime. Sometimes the criminal impulse is more prominent than the inebriety, and *vice versa*.

Imbecility is present in all these cases. A malformation of brain centers, an asymmetrical development and growth, is apparent in their conduct and character. It is a condition of pathological change that must come from congenital causes, as well as surroundings.

Many of these cases are called moral insanities, where paralysis of all the higher brain functions is prominent. Inebriety is only a later expression of this state, and another mark of imbecility which either precedes or follows it. In some cases imbecility appears in childhood, in feebleness of mental powers, slow growth, or of unstable brain force; appearing very sensitive to light, sound, and surroundings.

They either develop a great indifference to all conditions of life, that excite apprehension of idiocy, or show extreme nervous agitation and suffering from changes of

food, climate and surroundings. They have weak eyes, and chorea symptoms, are emotional and change from the slightest cause. At puberty great changes take place: long before manhood inebriety comes on, and the causes of drink are not adequate to provoke this disorder in most cases.

In a case now under treatment: The first five years of life, he was thought to be nearly an idiot. The next ten years he was impulsive, passionate and irritable. He was placed in a store, and developed a very miserly disposition. At thirty he was wealthy, dishonest, and at the head of a large business, living in the most miserly way, and very temperate; with no friends, and no motive, except making money. He suddenly failed, and drank to excess; and was a constant inebriate from this time. His early history showed a degree of imbecility that would most naturally develop inebriety.

Some of these cases of weak intellect in childhood, by careful training become very healthy, reputable people in manhood, but they may be said to have a predisposition to lapse into inebriety or other diseases with but slight exposure.

Many cases which I have studied have exhibited, early in life, mental disturbances, such as delirium from slight causes, nightmare, sleep-walking, convulsions and insomnia from the slightest apparent conditions. This was the substratum upon which inebriety would spring up from the least exposure. I am convinced that in these cases of defective and retarded mental growths, or perversions of health and normal brain force in childhood, the present methods of education are most disastrous to their future welfare. In some cases the culture of the school, college and university, has been more certain bankruptcy to the victim than if brought up in the lowest ranks of life. simply because the weak, unstable nerve organization, is strained beyond its capacity; instead of being strengthened, it is made unfit to bear any shocks or storms that come. My experience indicates that a large number of inebriates are

the outgrowths of an extreme education, pursued along unphysiological lines, and based on a weak, imperfect brain and nervous system.

Inebriety, insanity, and a host of diseases are the penalties for this unnatural culture of unbalanced brains and nerve organization.

Where these varying degrees of imbecility are not recognized in early life, and are unprovided for in proper training and education, the result will be inebriety, and all grades of partial and complete insanities, that are such stumblingblocks to juries and courts and the average intelligence of to-day.

The inquiry often comes up in the study of inebriety, whether the imbecility of the patient is due to degenerations which have come on since alcohol was first used, or conditions which existed before. The answer is often very clear, and the imbecility is traced to childhood in a large number of cases. Had it been recognized, it might have been neutralized and guarded against. In other instances alcohol produces the most profound degenerations from the beginning; changes of character, conduct and mental force, etc., leaving a thin mask of his old individuality that covers up his real state from ordinary observation.

The relations of imbecility to inebriety are very intimate, and may be recognized before inebriety appears, indicating a field of prevention that is at present unknown. If the general practitioner can understand that the stupid or choreic boy, or the precocious and unstable brain force of childhood, are the hints of the future nerve storms and diseases that will appear in inebriety or insanity, he will become the teacher of preventive medicine, with more power than the ablest trained specialist of modern times.

To the student of inebriety the discovery of imbecility in early life varies his prognosis, and reveals the more hopeless condition of the victim.

To the scientific worker all these obscure grades of imbecility opens up a realm of psychological interest, of which inebriety is only one of its many divisions.

The more inebriety is studied the more positive its physical causation appears, and, like the landscape seen from the mountain top, widens and comes out into definite forms and shapes as we approach it.

Moral (Affective) Insanity — Psycho-Sensory Insanity.*

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

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THE real question in every discussion of moral insanity, is not whether there exists in the mind of its victim, any illogical reasoning based upon a false premise of wrong and morbid feeling, but whether the feelings or impulses are so primarily and chiefly and paramountly affected as to overshadow all other evidences of mental derangement that may exist in the individual, and give the distinguishing character to his disease, as depression of feeling gives to melancholia (which Prichard regarded as a form of moral insanity) and exaltation does to general paralysis, determining the nature of delusions, if they subsequently develop; fearful, dreadful, in the one case; hopeful and grandiose in the other.† Some cases of moral insanity are more typically free from *appreciable* reasoning aberration than others; some appear to be entirely so, just as some cases of the general paralysis of the insane are all grandiose delusion, while others are complicated with delusions of dread and persecution, and other states of lypemania.

Prichard's cases in illustration of what he meant by moral insanity, were not all equally free from the semblance of delusional derangement, and some alienists who have controverted the doctrine of moral insanity, have done so by seeking to show that Prichard did not understand himself and the meaning of his own definition. Blandford has analyzed this author's cases with this object, and

* This paper, except the cases which will appear in a subsequent number, is the hitherto unpublished remainder of the paper from which the abstract, *precis* presented to the International Medical Congress, at London, August, 1881, was made. *Vide ALIENIST AND NEUROLOGIST*, Vol. III, No. I. Read before the New York Medico-Legal Society, April 9th, 1884.

† It is not meant here to deny that melancholia and the delirium of grandeur, may not co-exist in the same person; on the contrary they do sometimes, as clinical observation proves.

so did Mayo,* before Blandford's criticism appeared. But illustrative cases speak plainer than definitions of insanity, a subject universally acknowledged to be extremely difficult, and by many psychiatrists asserted to be impossible to define. Georget, Pinel, and Esquirol, before Prichard, described *manie sans delire*, *manie sans lesion de l'entendement* and *folie raisonnante*, and Prichard, in illustration of what he termed moral insanity, introduced into his book their descriptions.

The vulgar idea of moral insanity (and this view has been adopted by some alienists, but without warrant from the founders of the doctrine,) is that it is always and *only* a form of immoral manifestation without disorder of the reason, which certain weak-minded and excessively sympathetic psychologists have sought to extenuate by supposing the co-existence of exculpatory mental disease, whereas Prichard said "the varieties of moral insanity are perhaps as numerous as the modifications of feeling or passion in the human mind," characterized by "excitement or the opposite state of melancholic dejection." "Propensities,"† he said "are so nearly allied to passions and emotions that they are generally referred to the same division of the faculties or of mental phenomena; both are included by metaphysicians in the ethical or moral department of the mind as contradistinguished from the intellectual."‡

Prichard, referring to the cases of *manie sans delire*, or *folie raisonnante*, described by Pinel, confesses that they "failed for a long time to produce conviction" on his mind, but he became persuaded that Pinel was correct in his opinion, and states that "Esquirol had assured him that his impression on this subject was similar." M. Esquirol, though his great work, "Des Maladies Mentales," bears indubitable evidence of his conviction of the reality of this form of mental derangement, at one time entertained strong doubts of the existence of insanity without

* Croonian Lectures, 1854.

† Treatise on Insanity, p. 24, 1857.

‡ Treatise on Insanity, p. 19.

appreciable intellectual error or delusion, but when convinced, as every one must be who will open himself freely to conviction, without any mental reservation as to the necessity of co-existent intellectual aberration, he candidly confessed his error without endeavoring, as medical writers of his day did, as Prichard complains, to reconcile the phenomena of affective aberration with preconceived opinion respecting the nature of insanity, "by assuming, on conjecture, the existence of some undetected delusion," an assumption unwarranted in the ordinary nature of insanity, because the disease, even when it finally displays itself in well marked delusion, is characterized in its earlier stages by morbid changes of feeling and conduct, not based upon delusive reasoning, but laying the foundation for the subsequently-developed delusions. But even if unappreciable, but theoretically probable, intellectual aberration exists in moral insanity, the doctrine must stand.

"There are madmen in whom it is difficult to discover any trace of hallucination, but there are none in whom the passions and moral affections are not disordered, perverted or destroyed." Esquirol records that in all his forty years of study and observation at Salpêtrière and Charenton, and in his private practice, he had seen no exceptions to this fact. The candor of Esquirol and Prichard are worthy of commendation and emulation. But it does not require, at this late day, the genius or experience of an Esquirol, to discover among the insane, those whose insanity is chiefly one of character.

A politic, but unscientific objection to the term moral insanity, relates to the disfavor with which the plea of moral insanity as a defence for crime is received by the courts and populace.

It is considered dangerous to the moral welfare of society, and tending to defeat the ends of justice, to recognize a form of mental disease which, in some of its features, sometimes counterfeits depravity and crime. To recognize insanity under such circumstances would be, as Mayo might say, "at great expense of public good," a

consideration which biased his judgment on the subject and the book he wrote, and which has likewise obscured the judgment of most of his cotemporaries and followers down to the present day, who have thought fit to deny the existence of insanity of conduct without appreciable intellectual derangement.

This objection, while worthy of consideration as to the propriety of so designating this state of mental alienation under certain circumstances, without a full explanation of its real nature, lest we should jeopardize the imperiled welfare of a really insane person on trial before a prejudiced and frenzied populace, clamorous for vengeance, whether the victim be mentally diseased or not, is not entitled to much weight in a scientific discussion when truth alone is sought. The same objection might be urged to any form of mental disease under the same circumstances, since the plea, under the name of "insanity dodge," of insanity in any form, has become so obnoxious, through the lax rulings of courts admitting as competent, incompetent expert testimony, that the rights of the really insane to its protection are in jeopardy whenever this defence is interposed, in many communities.

It might be profitable for us to acquaint ourselves a little more at length with Prichard's own words, to convey his understanding of the meaning of this term. In his preliminary remarks (p. 15) after referring to "affections of the understanding or rational powers," he says: "but there is likewise a form of mental derangement in which the intellectual faculties *appear* to have sustained *little or no* injury, while the disorder is manifested *principally or alone* in the state of feelings, temper or habits. In cases of this description the moral and active principles of the mind are strangely perverted or depraved; the power of self-government is lost or greatly impaired; and the individual is found to be incapable, not of talking or reasoning upon any subject proposed to him, for this he will often do with great shrewdness and volubility, but of conducting himself with decency and propriety in the

business of life. His wishes, and his inclinations, his attachments, his likings and dislikings, have all undergone a morbid *change*, and this change appears to be *the originating* cause, or to lie at the foundation of any disturbance which the understanding itself may seem to have sustained, and *even in some instances to form throughout the sole manifestation of the disease.*"

On page 16, he defines moral insanity to be "a morbid perversion of the natural feelings, affections, inclinations, temper, habits, moral dispositions and natural impulses, *without any remarkable disorder or defect* of the intellect or knowing and reasoning faculties, and *particularly* without any insane illusion or hallucination."

Referring to the first and third divisions of insanity adopted by Heinroth, he says his definition comprehends all the modification of feeling or affection which belong to the first division as well as the disorders of will or propensity, which constitute the third department of that writer.

Heinroth's first kind of mental disorder consists of, says Prichard, disorders of the moral dispositions.

The first division consists in disorders of passion, feeling or affection (of the *Gemueth*), or moral disposition. This has two forms.

Heinroth's first form was: 1. Exaltation, or excessive intensity; 2. Undue vehemence of feeling; 3. Morbid violence of passions and emotions.

Second form: Depression, simple melancholy, dejection without delusion of the understanding.

Heinroth's third division comprises disorders of the voluntary powers or of the propensities, and of will.

Heinroth's first form was: Violence of will and of propensities; *Tollheit*, or madness without lesion of the understanding.

His second form embraced weakness, or incapacity of willing, and moral imbecility. (See pp. 18 and 19, Prichard's Treatise for the verification of the quoted language.)

On page 20, beginning chapter II. of his work, Prichard again defines moral insanity with the qualification

that "*it sometimes co-exists with an apparently unimpaired state of the intellectual faculties.*"

"Persons laboring under this disorder are capable of reasoning," he continues (p. 22), "or supporting an argument upon any subject within their sphere of knowledge, that may be presented to them; and they often display great ingenuity in giving reasons for the eccentricities of their conduct, and in accounting for and justifying the state of moral feeling under which they appear to exist. *In one sense indeed their intellectual faculties may be termed unsound; they think and act under the influence of strongly excited feelings, and persons accounted sane, are, under such circumstances, proverbially liable to error, both in judgment and conduct.*"

The varieties of moral insanity, he says (p. 24), "are perhaps as numerous as the modifications of feeling or passion in the human mind. The most frequent forms however, are characterized either by the kind of excitement already described" [referring to his preceding descriptions], "or the opposite state of melancholic dejection." "The faculty of reason is not manifestly impaired, but a constant feeling of gloom and sadness clouds all the prospects of life." (Ibid. p. 24.)

"There are many individuals living at large, and not entirely separated from society, who are affected in a certain degree with this modification of insanity. They are reputed persons of a singular, wayward, and eccentric character. An attentive observer will often recognize something remarkable in their manners and habits, which may lead him to entertain doubts as to their entire sanity; and circumstances are sometimes discovered, on inquiry, which add strength to his suspicion. In many instances it has been found that an hereditary tendency to madness has existed in the family, or that several relatives of the person affected have labored under other diseases of the brain. The individual himself has been discovered to have suffered, in a former period of life, an attack of madness of a decided character. His

temper and dispositions are found to have undergone a change; to be not what they were previously to a certain time; he has become an altered man, and the difference has, perhaps, been noted from the period when he sustained some reverse of fortune, which deeply affected him, or the loss of some beloved relative. In other instances, an alteration in the character of the individual has ensued immediately on some severe shock which his bodily constitution has undergone. This has been either a disorder affecting the head, a slight attack of paralysis, a fit of epilepsy, or some febrile or inflammatory disorder, which has produced a perceptible change in the habitual state of the constitution. In some cases the alteration in temper and habits has been gradual and imperceptible, and it seems only to have consisted in an exaltation and increase of peculiarities which were always more or less natural and habitual.

“In a state like that above described, many persons have continued for years to be the sources of apprehension and solicitude to their friends and relatives. The latter, in many instances, cannot bring themselves to admit the real nature of the case. The individual follows the bent of his inclinations; he is continually engaging in new pursuits, and soon relinquishing them without any other inducement than mere caprice and fickleness. At length the total perversion of his affections, the dislike, and perhaps even enmity, manifested towards his dearest friends, excite greater alarm. When it happens that the head of a family labors under this ambiguous modification of insanity, it is sometimes thought necessary, from prudential motives, and to prevent absolute ruin from thoughtless and absurd extravagance, or from the results of wild projects and speculations, in the pursuit of which the individual has always a plausible reason to offer for his conduct, to make some attempt with a view to take the management of his affairs out of his hands. The laws have made inadequate provision for such contingencies, and the endeavor is often unsuccessful. If the

matter is brought before a jury, and the individual gives pertinent replies to the questions that are put to him, and displays no particular mental illusion,—a feature which is commonly looked upon as essential to madness,—it is most probable that the suit will be rejected.”

Moral Insanity is insanity of conduct, feeling or impulse, or all combined, without such appreciable intellectual derangement that it would be recognized as insanity without the display of morbid feeling, impulse or conduct. It may, as Esquirol thought, include *delire partielle*, and undoubtedly does in many cases, and still be entitled to be designated moral insanity, because of the predominance and overshadowing and overmastering character of the aberration of the moral faculties over the faculties of the understanding.

It expresses itself rather in action than in speech, though it may utter itself in both, but unlike pure intellectual mania, which is often only recognized in the patient's language, it never expresses itself alone in written or spoken words.

Before the time of Pinel or Prichard, morbid changes in the appetites, propensities and feelings were recognized by medical nosologists. The *morosities* or *morbi-pathetici* of the older nosologists embraced them. A little later, Rush, in this country, also described some of them.

Since Prichard wrote his essay on moral insanity many terms have been invented to designate varieties of affective aberration, thus contracting the morbid area over which he extended the term in his discussion of his subject.

In the discussion of his subject he refers to some that already existed, as certain forms of melancholia, satyriasis and nymphomania, nostalgia and erotomania, characterizing the two latter as disorders of sentiment. The *folie raisonnante*, or reasoning mania of Pinel, he also referred to, and justly included, under the term moral insanity.

We now have varieties of moral insanity designated

as emotional insanities, and the various destructive manias, which are characterized by impulse rather than delusion, as the homicidal, suicidal, kleptomaniacal and pyromaniacal impulses, so-called, which, when delusion is not prominently present really belong, like some varieties of lypemania, to the class of affective aberrations, as some forms of melancholia without delusion do. Some varieties of *primære Ver-ruecktheit* or congenital moral aberration, might likewise be classed where Prichard placed them, among the moral insanities. Some of the limited or monomanias belong to-day where Prichard placed them, notably some of the recorded instances of motiveless morbid impulse to destroy and steal, and to do other acts at variance with the unprovoked natural impulses of the human mind, though the majority of the monomanias or limited maniacal displays, undoubtedly have delusion associated with them after they have reached that stage when we are willing to recognize them as insanities.

From the foregoing and other considerations well known to observant alienists, it is obvious that the term moral insanity is no longer so essential to designate certain forms of real affective aberration, for which there was once no other satisfactory name, except that of reasoning mania, and through usage of the best and most observant writers, even of those who recognize this form of insanity, as they of necessity must, because, since it is founded in clinical fact, they have not failed to see it, the term has become somewhat more restrictive than formerly. Some have sought, and now attempt, to erase it altogether, and in seeking to do this, think they may expunge the disease from the imperishable records of clinical psychiatry. But this is impossible. It matters not materially what becomes of the name. It may ultimately even become politic to abandon it, though the time is not yet for such abandonment. Yet the clinical fact will remain. Its indubitable features, under any and every christening, will be plainly recognized by the true clinician in psychiatry; and they should be, for the

welfare of the most pitiable, but often least commiserated, because less understood, of all the pitiable victims of mental disease, may depend upon their being recognized.

As the practical student of mental disease in all of its protean forms of manifestation, asks, "What is the form and meaning of this term moral insanity?" he is compelled interrogatively to answer, as one of the earlier of Prichard's English critics did, by asking, "What insanity is not moral?" and if the earliest indications of approaching insanity are moral, as pointed out even by Mayo, in his "Elements of the Pathology of the Human Mind," where is the logic in denying the possibility of its existence without the co-existence of appreciable intellectual aberration? Its existence is confessedly recognized and conceded as the earliest indication of approaching insanity, but although the person be morbidly deranged in his moral faculties, the insanity must not be conceded till the theoretical perceptible lesion of the reason appears! How unreasonable! How inconsistent! How unscientific! How unmedical! How absurd! not to recognize mental disease, which is confessedly apparent, until certain other symptoms appear, which shall bring the disease within the pale of preconceived and ideal boundaries, on the line of which we have written or rather have permitted the law to write its criterion of responsibility! Reason and observation unite to impel the recognition of this plain clinical fact in psychiatry, while prejudice and policy, or the erroneous association of immorality as its invariable accompaniment and characteristic, are permitted to obscure perceptions of plain medical truth.

If co-existent epilepsia, delusion or congenital imbecility can be proven some will concede the existence of moral derangement, and name it something else. If they do not find these or other morbid conditions affecting the intellect they explain it away by suggestions of "innate viciousness," "defective education," or even "hysteria," though the latter is sometimes one of the gravest of neurotic disorders and an important link, often, in the chain

of neuropathic descent, and a precursory condition of unmistakable delusional aberration.

Why make the recognition of one form of mental disease depend upon the co-existence of another? This is not the rule in the diagnosis of mental maladies. To do this is to confess ourselves handicapped by an unwarranted skepticism in regard to the existence of this disease which we do not permit to embarrass us in the study of any other.

Moral insanity presents two plainly recognized clinical aspects.

1. Those cases in which there is neither a perceptible hallucination, illusion or delusion of the special senses; and

2. Those in which delusions exist, but constitute a secondary and minor feature of the *tout ensemble* of morbid phenomena.

It is not denied that imperative conceptions or morbid impulses exist in many of the morally aberrated. They are indeed quite characteristic of this form of mental disease. Nor is it denied that delusive feelings exist as well as impulses. It is in the delusive feelings as contradistinguished from delusions associated with special sense perceptions, and what Mayo called notional delusions, that the foundations of the subsequently-developed delusions of the morally aberrated are laid, which often appear as these cases progress toward universally recognized intellectual aberration, and the natural termination of progressive insanity in dementia.

Having cleared away the mists of obscurity from Prichard's definition by letting him describe, instead of others for him, the types of mental disease which he meant to include under his definition, it now only remains for us to narrate some of our own confirmatory cases.

Preliminary to their introduction it will not be amiss to select a few cases from Mayo, which, while they serve to prove at least the possible existence of moral insanity,

also answer to establish the mental bias of one of Prichard's most vigorous critics, whose analysis of Prichard's cases has repeatedly been imitated but never surpassed, and whose power of analysis was only equalled by his unconscious prejudices.

SOME OF MAYO'S CASES IN ILLUSTRATION OF HIS OBJECTION
TO MORAL INSANITY:

CASE I.—“The Honorable Mr. Tuchet, put to death by a pistol-shot; the marker of a shooting-gallery. The act was sudden, and there was no apparent motive; but it was not performed under any semblance of delirium. Mr. Tuchet was eccentric, and he was *blasé*. He fancied that he desired to be hanged; at the gallows he would probably have thought differently; and he was reckless and brutal enough to give himself a chance of his fate at the expense of the life of a fellow-creature. I have noticed him since, in the criminal department of Bedlam, *insouciant* and indifferent enough, but certainly not insane in any sense of the word that would not entirely disintegrate its meaning.”

CASE II.—“A nursery-maid, placed in Bethlehem Hospital, 1846. A trifling disappointment relative to an article of dress had produced in her a wayward state of mind. She labored at the time under diminished catamenia. An object to which she was generally much attached came in her way, namely, the infant whom she nursed; and she destroyed it, as a fanciful child breaks, in its moodiness, a favorite doll. No fact more nearly approaching to delirium than the above was stated in exculpation or excuse at the trial. But Dr. Prichard's work on “The Different Forms of Insanity, in Relation to Jurisprudence,” was published in 1842; and, by 1846, juries had learned to convert the uncontrolled influences of temper into what he terms Instinctive Insanity. As an instance of this class of cases, in which the judicial authorities came rightly to a very different conclusion, I will quote to you the following one from Sir Woodbine

Parish's last work on Buenos Ayres. Having spoken of a certain wind occasional in that climate, which in some persons produces peculiar irritability and ill-humor, almost amounting to a disorder of their moral faculties, he proceeds as follows:

CASE III.—“Some years ago, Juan Antonio Garcia, aged between thirty-five and forty, was executed for murder at Buenos Ayres. He was a person of some education, and rather remarkable for the civility and amenity of his manners; his countenance open, his disposition generous. When this *viento norte*—this peculiar north-wind—set in, he appeared to lose all command over himself; and such became his irritability, that during its continuance he was engaged in continual quarrels and acts of violence. Before his execution, he admitted that it was the third man he had killed, besides being engaged in various fights with knives. When he arose from bed in the morning, he told Sir Woodbine's informant, he was ‘always aware at once of its accursed influence upon him; a dull headache first, then a feeling of impatience at everything about him. If he went abroad, his headache generally became worse; a heavy weight seemed to hang over his temples. He saw objects, as it were, through a cloud, and was hardly conscious where he went. He was fond of play; and if, in such a mood, a gambling-house was in his way, he seldom resisted the temptation. Once there, a turn of ill-luck would so irritate him, that he would probably insult some one of the by-standers; if he met with any one disposed to resent his abuse, they seldom parted without bloodshed.’ The relations of Garcia corroborated this account, and added, that no sooner had the cause of the excitement passed away, than he would deplore and endeavor to repair the effects of his infirmity. ‘The medical man,’ says Sir Woodbine, ‘who gave me this account, attended him in his last moments, and expressed great anxiety to save his life, under the impression that he was hardly to be accounted a reasonable being.’ ‘But,’ he adds, ‘to

have admitted that plea would have led to the necessity of confining half the population of the city when this wind sets in.' I quite agree with the conclusion which this remark implies, as to the fate of Garcia, says Mayo. He was himself aware of the murderous instinct to which he was liable, and of its exciting causes. Surely, when such knowledge is in the possession of the delinquent, he must be made responsible for the non-avoidance of exciting causes."

CASE IV.—"M. Georget gives a case, which may be usefully contrasted with the above as to its claims on the plea of insanity. Hypolite Mendic, a non-commissioned officer in the French service, had gradually become morose, capricious, and brutal in his conduct, so as to excite the disgust of all his companions. This ends in disobedience of orders, and such violence towards his commanding officer as to render him liable, on trial, to the sentence of death. The trial proceeds, with the customary anxiety of the medical witnesses to make out a plea of insanity; and the tendency of the court, observable indeed in all M. Georget's reports, to give the criminal the benefit of the most careful inquiry into extenuating circumstances, and at the same time to protect the public against that plea, when overstrained. The symptoms of this case wanted the acuteness of character which alone tended to palliate the crimes of Garcia; but, in the course of Mendic's trial, one weighty fact was made out—namely, that before his outbreaks he was subject to an epileptiform seizure, out of which he emerged into the wayward state above noticed. This might fairly justify an hypothesis of delirium, as present at those paroxysms. If judgment was overpowered in Garcia, it was suspended in Mendic.

Mayo concludes case four with the following reflection, which indicates how questions of consciousness and responsibility constitute with him pre-established criteria of mental aberration, whereas it is the duty of the physician to determine first the question of mental disease, and

after that the degree of consciousness and of responsibility associated with or dependent upon it. "There are shades of distinction in the amount of man's presumed responsibility to society, which should be indicated by corresponding shades of punishment when offences come; but, in all cases, consciousness is presupposed as a condition of responsibility; so that a disease affecting consciousness renders the agent, so far forth, unfit in kind as well as in degree, to become an object of punishment." Certain phases of irresponsible insanity undoubtedly exist in association with consciousness, while unconscious automatism may be self-induced by certain persons neuro-pathically endowed, while in a state of responsible sanity. But the degree of insanity should determine the responsibility, not the degree of responsibility the question of insanity.

CASE I, he characterized as simply one of brutal recklessness, because the act was not performed under any semblance of delirium, though it was "sudden and without apparent motive," and the perpetrator was remorseless, perfectly indifferent to the crime of having killed without motive or provocation, an inoffending person who had done him no harm, and was "eccentric and *blasé*." Brutal recklessness explains, to the mind of Mayo all of the conduct of this man, who, "without the semblance of delirium," "fancied that he desired to be hanged." The crown thought otherwise, and confined him in Bedlam.

CASE II, he regarded as one of hysteria and temper, as if there could be no insanity in hysteria or temper displayed in killing an infant to whom one is much attached, and because of a trifling disappointment which the infant could have had no hand in causing. This was a natural and rational act, as natural as for a "fanciful child to break, in its moodiness, a favorite doll!"

CASE III, he would have conceded to have been one of insanity, "*but to have admitted that plea would have led to the necessity of confining half the population of the city when the wind set in.*"

CASE IV.—“One weighty fact was made out, namely, that before his outbreak he was subject to an epileptiform seizure, out of which he emerged into the wayward state above noticed. This might fairly justify *an hypothesis* of delirium as present at those paroxysms,” says Mayo. Saving clause!

Thus have all subsequent objectors to moral insanity blindly reasoned under the unconscious bias of previous hypotheses or the impolicy of its recognition, even those who have not mistakenly regarded moral insanity as invariably a form of very immoral insanity, or who do not demand that before insanity shall be recognized it shall appear in its unconscious forms. If the hypothesis of delirium can be sustained the insanity will be conceded, but why not recognize the insanity without the hypothesis?

Consciously or unconsciously, they reason it is not wise to recognize forms of insanity in which there appears a degree of responsibility; hence such insanity must not be accepted as an observed fact in science.

But what has the question of responsibility to do with a question of disease? and what if science should find a form of mental disease in which responsibility does really exist?

The fear of the church once deterred men from uttering the convictions of scientific discovery. Now it is the fear of public policy.

In the present day, as in the past, society has nothing to fear from the honest discriminating disclosures of true science. Society will remain as secure from the encroachments of crime with moral insanity boldly proclaimed as distinct from voluntary viciousness, as the church is unharmed by the universal acceptance of the doctrine of the rotation of the earth on its axis. The foundations of the teachings of Pinel and Prichard are as securely laid in mental pathology as those of Galileo are in the laws of astronomy, and they will become as universal. Possibly this disease may bear some other name, but the morbid mental condition of moral insanity is a basis fact in

psychiatric symptomatology which cannot be reasoned away.

Delusion is comparatively exceptional, while perverted feeling is never absent in mental disease. Some of the features of moral insanity are psychically typical of all insanity with intellectual derangement. Why then seek to exclude moral insanity from recognition because intellectual derangement is not apparent, but if present, only inferentially so in certain cases? As well might those who believe in the existence of moral insanity deny the reality of delusional insanity where derangement of the affective character might not be discernible to confirm the delusion. But psychiatric science gives us no warrant for thus seeking to reason out of existence any of her facts. On the contrary she shows by clinical confirmations unmistakable to the faithful student of mental pathology who does not suffer his perceptions to be blinded to the truth by theoretical preconception and misconception of the improbable and unproveable invariable unity and harmony of the mental operations under all circumstances of health and disease of mind, how psycho-sensory or preceptual mental aberration may precede or co-exist with psycho-reflective or conceptional insanity.

She not only shows the reason to be primarily or chiefly touched by disease, but "the wishes, inclinations, attachments, likings and dislikings" morbidly changed, "*and this change appears to be the originating cause or to lie at the foundation of any disturbance which the understanding itself may seem to have sustained, and even in some instances to form throughout the sole manifestation of the disease.*"*

Let us then, like the true artist, study and copy, not ideally fashion nature. Fancy pictures of imaginary sanity are the more fatally misleading when skillfully painted by the hand of a master in psychiatry, and have sent many an undeserving lunatic to the stake and the gallows. Victims enough have been thus executed to counterbalance

* Prichard on Insanity, p. 15, Bell's Library, Philadelphia; Edition, 1857.

in all probability, the blunders of ignorance in finding insanity where none existed.

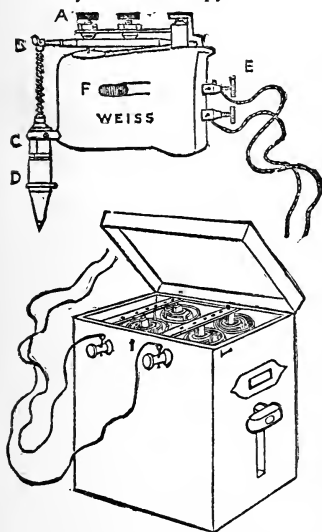
The unthoughtful populace may applaud when they are misled by inconsiderate or pliant pseudo-science, as they approve the counterfeit resemblances of spurious art; but if we would have our pictures of mental disease endure the test of time and our names as discriminating observers survive with them, its every phase must be faithfully painted, regardless of any theoretical notions we may entertain of the supposed nature of mind or the imaginary demands of public interests or policy, with strict fidelity to nature. It is no part of the physician's province to adjust the phenomena of mental disease before admitting its existence, to the supposed exigencies of society or state polity. No question of expediency should be permitted to obscure even the faintest feature of real disease presented to the mind of the physician, notwithstanding such questions may totally eclipse the judicial vision whenever directed to certain (to them, inexplicable and dangerous,) phases of mental aberration. The true physician will diagnose real disease in whatever form it may be presented, regardless of such irrelevant considerations.

Note to conclude fourth paragraph on p. 312.—Questions of responsibility belong to Law; questions of disease, to Medicine. Law may find responsibility and testamentary capacity, where we physicians find disease, and it has found both co-existent with, sometimes much and sometimes little, disease of brain affecting the mind, but its conclusions do not change the facts of pathology. It is our duty to find out the facts, and so far as practicable in the nature of mental disease, to enlighten Law as to the bearings of our facts on the legal question of responsibility, but not to be blinded by it so that we can no longer see disease where it exists.

SELECTIONS.

NEUROTHERAPY.

PROGRESS IN NEUROTHERAPY.—It is gratifying to this JOURNAL to observe the growing appreciation of neurological methods in therapeutics, and we note with special pleasure the progress in this direction displayed in the pages of our city contemporary, *The Weekly Medical Review*, as its frequent extracts from current neurological literature, evince. The number for February 7th contains an interesting cut and description of Dr. Mortimer Granville's *percuteur*, which we here briefly present through the courtesy of our enterprising contemporary. Many of our readers have for some time been familiar with this instrument for vibratory neurotherapy.



E, in the figure, shows the connection with the battery. A regulates the length of the vibration, and B, C and D, are appliances which only a study of this instrument itself will render perfectly clear; pressure on F sets the percuteur at work. Other vibrators accompany the instrument besides the one seen in situ. Dr. Granville began his observations using clock-work, instead of electricity, but for office work he prefers electricity, and uses the clock-work only at the patient's house. Dr. Granville uses the *percuteur* in locomotor ataxia, some cases of chorea, for the relief of cerebral and

cerebro-spinal irritation and distress, and to elicit energy from torpid centers; and he claims that in no case should

nerve stretching be resorted to without having previously given vibration, in some form, an intelligent application. His theory is that the mind is the nervous organism in function; that the function of nerve structure is exhibited by vibration, and that pain is one form of disturbance of that vibration, and that the diminution of pain by the percuteur is effected by a restoration of that equilibrium, by establishing either a synchronous or a harmonious vibration of the disturbing element.

“The hypothesis of dissolution, by Hebert Spencer, and applied by Hughling Jackson, to the elucidation of morbid phenomena, receives pointed illustration in the pathognomic symptom, so-called, of locomotor ataxia. The patient cannot preserve his equilibrium, but begins to reel when his eyes are closed, being unable to stand, or walk, without the assistance of the sense of sight. Why is this? I reply because the automatic function of balancing the body and maintaining the erect posture, has been learnt—as all functions which are performed by the co-ordination of muscular movement must be learned before they can be relegated to the domain of sub-consciousness, and become automatic—by sight; and the ataxic subject is reduced by dissolution to the position of a child just learning to stand and walk. He has lost the nervous bases of the organized movements which are essential to the performance of these muscular acts automatically. The records are either isolated from the current of energy, or obliterated so far as the active vitality of the cells or molecules composing them is concerned, although the germinal points of the latter are not, perhaps, destroyed, and recovery is possible; or those elements of the brain, or cord on which the lessons have been impressed are atrophied, and the records are finally effaced.

“The infant fixes its gaze steadily upon some object when it first tries to stand, and it is by the aid of sight it at length succeeds in balancing the weight its lower limbs have to carry and its vertebral column has to hold upright. The process by which the child learns first to stand and then to walk is identical with that by which the tight-rope walker learns to perform his feats of equipoise. In both cases the gaze is centered on a fixed object, and the muscular sense trained to control the movements of the body so that the direction of the line of sight may not be disturbed. When the child has once acquired the power of standing, the so-called ‘muscular

sense' is able to balance the body without the aid of sight, and under normal conditions, it is as easy to stand or, so far as muscular action is concerned, to walk with the eyes closed as open. When, however, disease of a paralytic type assails the organism, the most recently acquired faculty is the first to be lost. This rule of denudation, from the surface downwards, governs, as we know, the demoralization of character in brain disease, and the disorganization of function throughout the system. In the particular manifestation of disease called locomotor ataxia, the power of balancing the body by the muscular sense is lost, and the subject unconsciously falls back on the method of performing the act of standing which he adopted when first learning the process."

Without sharing Dr. Granville's enthusiasm over the percuteur, because in our hands it has not proven equal to either galvanic, Faradic or static electricity in the really organic neuroses, it may nevertheless find a permanent place in the therapy of hysterical neuropathic simulations; possibly it may supplement in certain other psychical states, the use of electro-therapeutic methods, but it can never supplant them. At least such are our present convictions, from a faithful trial and comparison of the percuteur.

COTOIN AND PARACOTOIN IN DIARRHŒA OF THE INSANE.—Albertoni concludes (*Archivio Italiano per la Malattia Nervosa*, 1883) that unlike any other known drug, cotoin and paracotoin produce an active dilatation of the abdominal vessels. This action of cotoin is unique. Salvioli showed that opium increased the blood-supply of the intestine, and Mosso that chloral had the same effect on the kidneys. The dilatation caused by chloral and opium is not active, but rather paralytic, depending upon vessel paralysis. Chloral and opium diminish blood-pressure. That cotoin should cause active dilatation of the abdominal vessels only, and have no influence on others, is in accord with what is known of the influence of other substances. Mosso has called attention to this subject; and Albertoni demonstrated (*La Sperimentale*, 1881) that atropine, in certain doses, while causing dilatation of peripheral vessels, induces contraction of cerebral vessels, and that both are contrary and independent. Cotoin is indicated in the diarrhœa which often occurs in various psychoses. It is certain that in the diarrhœa of the insane defective absorption plays a notable part. In simple chronic intestinal catarrh, in the diarrhœa of wasting and

cachexia, and in atonic diarrhœa, cotoin gives the best results. In the intestinal catarrh of drunkards, and in the accompanying hepatic cirrhosis, it has not been of much service. In the diarrhœa of phthisis it is very valuable if intestinal ulceration does not exist. It is very useful also, in the diarrhœa complicating pellagra, which certainly depends on intestinal rheumatism. In the diarrhœa of dentition it is of great service. In ulceration of the intestine, and where there exists a hyperæmic condition of the intestine with liability to hæmorrhage, it is contra-indicated. Albertoni recommends large doses, 15 to 20 centigrammes (2.3 to 3 grains). These are well borne, and cause no unpleasant symptoms. It may be given in a wafer, or suspended in mucilage, which is the best if the stools be frequent, as absorption is easier. His formula is—Cotoin, 40 centigrammes (6 1-2 grains); bicarbonate of soda, 1 gramme (15.4 grains); water, 100 grammes; glycerine, 20 grammes. The solution made by heat, is not perfect; the bottle must therefore be shaken before the dose is poured out. He also gives it with bismuth, in mucilage. It is very useful in the night-sweats of phthisis. Paracoto bark and paracotoin have the same physiological and therapeutical effects as coto bark, but less active. Cotoin has no influence on the peristaltic action of the intestine, nor has it any direct astringent effect; its antiseptic and antimycotic properties are very feeble; it does not prevent decomposition of the urine. It possesses a special action on the intestinal epithelium, stimulating its nutrition by its power of causing active dilatation of the abdominal vessels. When the function of the epithelium is disturbed, absorption is impeded, and food, etc., remains in the intestine, only to be expelled by diarrhœa. In intestinal catarrh, epithelium is thrown off in great quantity; the denuded mucous membrane allows matter to pass as through a filter. Cotoin does not cure all cases of diarrhœa, and is not always indicated; but if its rationale be borne in mind, and it be only given in suitable cases, it will prove a most valuable remedy in diarrhœa.

NASAL NERVE ELONGATION AND STRETCHING.—Abadie (*Annales d'Oculistique*, May-June, 1883) cites the case of a lady, aged thirty-five, who ten years before lost the right eye from glaucoma. Iridectomy had been done, but the result was unfavorable. The similar symptoms began in the left eye, and when Abadie saw her the glaucomatous condition was present. He sclerotomized her, but, after

a week had elapsed, pain and increase of tension returned. He then iridectomized, but in three weeks the symptoms returned. He then stretched the nasal nerve. An incision was made perpendicularly to the course of the nerve, extending from the pulley of the superior oblique to the tendon of orbicular muscle. When the nerve was uncovered it was seized by forceps, and stretched so vigorously that it broke. The wound was then washed with a boric acid solution, and a simple dressing applied. The next day all pain ceased; in three days tension was normal, and vision began slowly to improve. Four months later, tension remained normal, and the vision was still improving. Abadie has since performed this operation eight times with encouraging results. Care must be taken in making the incision to avoid cutting the nerve before it is laid bare. Badal performs the operation on the external nasal nerve in the following manner: After dividing the skin and muscular layer with a bistoury, the subjacent cellular tissue is dissected away with two strabismus hooks, and then scraping along the periosteum from below upward with one of the hooks, the vasculo-nervous bundle is pulled out. The vessels are then separated from the nerve to avoid unnecessary hæmorrhage. The nerve is then stretched as may be necessary. The stretching or laceration of the nasal nerve seems well adapted to various cases, and like iridectomy, is capable of combating various conditions. Abadie prefers laceration of the nerve to simple stretching, for the following reason: The nasal nerve is very delicate, and hence, to exert an efficacious traction which will really modify nervous conductivity, laceration is necessary. The nerve is seized with flat, smooth forceps, and drawn out; as it elongates it is seized with another pair of forceps, and thus stretching it till it ruptures.

DEATH FOLLOWING NERVE STRETCHING. — Westphal (*Centralbl. für med. Wiss.*) has recently described the case of a man, aged 30, who had chronic motor paresis of the lower limbs, with contractions, heightened reflex excitability, increased knee-jerk, disturbances of sensibility. The latter affected chiefly the sense of temperature, over legs and buttock, and were very variable. Energetic stretching of the right crural nerve caused immediate transitory disappearance of the knee-jerk, and rigidity of the side operated on; followed by permanent incontinence of urine and feces, flexion with rigidity in the lower limbs, and

greater inability to move, gradual increase of the symptoms, intercurrent right-sided hemi-anæsthesia and ataxy, and death, three days after the operation. Diseased spots in the brain, pons Varolii, and medulla oblongata; diffused sclerosis of the spinal cord in the cervical and dorsal regions (most intense mid-dorsal), and multiple foci of degeneration in the right half of the lumbar region, were found post-mortem. Here there existed chronic cerebral degeneration, in spots, with diffused spinal degeneration.

ESERINE SULPHATE IN TETANUS.—Dr. T. Layton (New Orleans *Medical and Surgical Journal*, January, 1883) reports a case of tetanus occurring in an eleven-year-old boy, following, after an interval of three weeks, the wounding of the sole of the foot with a splinter. Chloral, potassium bromide and cannabis indica, were employed without benefit. Eserine was then administered, in doses of 1-64th grain every hour. The child took a full adult dose of eserine sulphate every hour for several days, and not only were there at no time symptoms of poisoning, but the beneficial action of the remedy was apparently manifest. There was never the least contraction of the pupils. On two occasions the pupils were dilated; at all other times they responded to light in a normal manner. It was not noticed that eserine sulphate increased either the secretion of tears and saliva, or defecation. The child recovered perfectly. A similar case has been recently reported (*Gaillard's Medical Journal*, Feb., 1884) by Dr. F. B. Norcom, of Chicago, in which a child of a similar age recovered from tetanus under the use of the same drug.

ELECTRICITY IN INSANITY.—Dr. Tigges (*Allgemeine Zeitschrift für Psychiat.*, Band XXXIX.) has endeavored to affect the sympathetic system in the insane by placing one pole of the galvanic battery to some one of the cervical sympathetic ganglia, and the other pole on the continuation of the sympathetic nerves or upon the transverse processes of the cervical vertebræ, on the arm, or one electrode was placed on the first cervical sympathetic ganglion and the other on the occiput. Marked effects were produced on stuporous insanity or on melancholia attonita, in this way. By the use of the constant current in hallucinations no very decided results were obtained; the anode placed in the auditory canal and the cathode applied to the neck, had a soothing effect; and when reversed, an exciting effect was observed.

KAIRIN. — Dr. C. G. Comegys (Louisville *Medical Herald*, February, 1884) thus records his experience with kairin, the new antipyretic: "I have employed it in my hospital and private practice in all forms of fever, and among men, women, and children, with the same happy results. My largest observations, however, have been in cases of typhoid and typho-malarial fevers. I have had but a single opportunity of trying its qualities in pneumonia, and that in a child in its fourth year. Its power in reducing a fever four degrees in from one to two hours I have repeatedly seen, at the same time reducing the respiration and pulse proportionately."

ESERINE IN INSANITY. — Dr. Eschle (*Neurologisches Centralblatt*, May 15, 1883) states that he has had very satisfactory results from eserine in mania, and in such cases of parietic dementia as were not liable to apoplectic attacks. The drug's action is very similar to that of hyoscyamine, though its effects are not so transitory. Dr. Eschle injected .001 gram to .0015 hypodermically. The use of the drug is always attended by alteration of the digestive functions. One maniac was quieted by an injection of .0025 gram, which dose was attended by vomiting, and pretty free catharsis effects not produced by the smaller doses cited.

SIALORRHOEA IN THE INSANE is often a very disagreeable complication. Among the measures prescribed for its relief is atropine. Dr. E. Duiat (*Giornale Internazionale de Science Med.*, July, 1883) has had very good results from the hypodermic use of one to three milligrammes of this drug. Belladonna is an old and good remedy for excessive salivation.

FAMILY COLONIES FOR THE INSANE have been found of most benefit in the case of incurable insane. Helweg (*Hospitals Tidende*, Band IV., 1883) is of opinion that in certain curable cases similar colonies would have beneficial results.

NEUROLOGY.

CEREBRAL CENTER FOR THE IRIS. — Bechterew (*Archiv für die gesammte Physiologie*, Band XXXI.) concludes: First, that fibers which preside over the contraction of the pupil, are not to be found either in the optic tracts or in central terminations in the corpora geniculata and corpora quadrigemina of mammals, or in the corpora bigemina of

birds. Second, while these fibers begin in the retina and run in the optic nerve, they enter behind the chiasm directly into the central gray matter surrounding the cavity of the third ventricle, and run toward the nuclei of the oculomotor nerves, whence they return in the trunk of these nerves toward the periphery. Third, throughout their entire course in the central gray substance these fibers, which preside over the contraction of the pupil, are uncrossed. Fourth, each eye possesses an independent reflex band, which runs through the optic nerve, the corresponding half of the central gray substance, the nucleus and trunk of the oculomotor nerve on the same side. Fifth, between the reflex fibers of the sides there is a connection, by means of which the one-sided reflex action can be carried to the other. This connection is maintained by commissural fibers between the two oculomotor nerve nuclei. Sixth, the centers for the reflex contraction of the pupils do not lie at the bottom of the third ventricle, nor behind the corpora quadrigemina, but are in all probability, located in the nuclei of the oculomotor nerves. Seventh, there are no centers for contraction of the ocular muscles in the bottom of the third ventricle. Eighth, the changes in the ocular position, which, together with general motility disturbances (disturbances of equilibration and forced movements), always appear after irritation or destruction of the region of third ventricle, are exactly similar to changes in position of the eyes after destruction of the semicircular canals, or olivary bodies of the medulla oblongata. This only proves that this region, like many others just mentioned, exerts an influence upon the entire sphere of motility, including the eyes. Ninth, the centers for the eyeball voluntary movements must be located in the nuclei of the nerves innervating the ocular muscles, since static changes in eye position are only produced by destruction of these nuclei, or of roots proceeding from them. Tenth, the localization of a center for accommodation in the region of the floor of the third ventricle is finally settled. Eleventh, the dilating effects on the pupil, of painful irritation, is not by means of the fibers of the sympathetic nerve, but occurs independently through stoppage or hindrance of the light reflex. Twelfth, the so-called reflex pupillary rigidity, is caused, in all probability, by such pathological processes as interrupt the path of the light reflex in its course from the optic chiasm to the oculomotor nucleus.

OPTIC NERVE DECUSSATION.—Marchand (*Archiv für Ophthalm.* B. XXVIII.) has had under observation a number of cases which support the theory of the decussation in the chiasm. In one case of optic nerve atrophy successive microscopic sections were made of optic chiasm, nerves, and tracts, which showed that a portion of the atrophic nerve fibers, which at first ran in the upper region of the chiasm, and afterward in the middle region, were uncrossed. Another portion passed gradually to the opposite tract, and here appeared in the inferior region of the tract, and toward the inner side. The narrow border zone in the upper region of the chiasm, which at first appeared at the external border, next the uncrossed bundle of fibers, and gradually spread over the upper region of the tract of the same side, did not correspond to any atrophic zone of the other side. There must, therefore, be a system of commissural fibers, not distinguishable from the uncrossed bundle of fibers. In Marchand's opinion it is certain that the uncrossed bundle contains the fibers for the outer half of the retina; but it may be assumed, from the shape of the visual defects, and from the by no means rare occurrence of a zone of transition between both halves of the visual fields, that the region of the macula and that part of the retina; between it and the papilla receive fibers from both optic tracts. It is evident that the fibers which supply the lower part of the retina do not necessarily run in the lower half of the tract and chiasm. If there were complete destruction of the tract, the hemiopia would be complete; but it is different in partial destruction of one tract. If the fibers in the optic tract ran crossed and uncrossed through the entire cross-section, then large defects of any size of the tract would be constantly followed by entirely similar defects of the visual field, for there would be the same number of fibers destroyed on the one side as on the other. This is opposed, however, both by anatomical investigation and the nature of the optic defects.

RETURN OF TENDON REFLEX IN LOCOMOTOR ATAXIA.—Dr. G. M. Hammond (*New York Journal of Nervous and Mental Diseases*, July, 1883) reports the case of a young man, who, about ten years ago, came under the care of Dr. Anderson, with chancroid, or a chancre of the glans penis, without secondary symptoms. The patient had two children perfectly healthy. He had been a drinker for several years, and in 1882 had an attack

of delirium tremens. There was no bladder paralysis, but partial loss of sight and defective memory existed. Dr. Anderson administered potassium, iodide and corrosive sublimate. The patient was sent to Dr. Hammond, who applied the actual cautery to the spine, Faradaic and galvanic electricity. From this time the patient began to improve, and at the present time is apparently in normal health; he walked perfectly, could jump on to a car, while in motion, and could stand with the eyes closed; tickling of the feet was felt distinctly, and tendon reflex had partially returned. This was the only case in which Dr. G. W. Hammond had known the tendon reflex to return even partially. In the discussion of this paper Dr. W. A. Hammond said that during the past ten months he had treated a similar case in which the tendon reflex had markedly returned, especially in one knee, and most of the ataxic symptoms had disappeared. Dr. Putnam said that one or more cases had been reported by Baerker, in which tendon reflex had returned. Schuster had reported a case, also seen by Erb, in which the patient recovered from the ataxic symptoms, and in which, after death, characteristic lesions of locomotor ataxia were found.

Three cases have occurred in the practice of the editor in which the lost knee-jerk has reappeared. They will be made the subject of extended record, later.

CEREBRAL CROSSED AMBLYOPIA AND HEMIANOPSIA.—Grasset (*Ophthalmic Review*, March, 1883) discusses thirteen published cases of crossed amblyopia and hemianopsia in cerebral lesion, in the light of Charcot's explanation and the explanation modified from it by Féré. He rejects Charcot's scheme, since according to it, hemianopsia could only be produced by a lesion of the optic tracts. Féré's scheme does not explain the facts of crossed amblyopia. At no point of his schematic figure is there any point of union of the external and internal nerve fibers of the same eye. Grasset proposes a new explanation for these cases: The theory of the chiasmatic semi-decussation is not apparently contradicted by the facts; lesion of the optic tract behind the chiasm causes hemianopsia. Hence, 1, the internal fibers at the optic nerves decussate in the chiasm, while the external fibers continue straight on. 2, the external fibers decussate behind the chiasm (near the tubercula quadrigemina) in such a way that decussation is there complete for all the optic nerve fibers, and in each internal capsule all the fibers coming from the opposite

eye are found united. But when a lesion exists in the cortex, for example in the occipital lobe, bilateral hemianopsia results, as in lesion of the optic tracts. A decussation of the external fibers of each retina is necessary to explain this, and then each hemisphere contains the homonymous fibers of the two eyes; hence, 3, the external fibers undergo a second decussation beyond the internal capsule before reaching the convolution, so that each occipital lobe contains the external fibers of the eye of the same side, and the internal fibers of the eye of the opposite side.

PSYCHIATRY.

ATTEMPTED MURDER OF A PHYSICIAN BY AN HALLUCINATED LUNATIC.—Dr. Legrand du Saulle (*Gazette des Hôpitaux*, October 11, 1883) has had under observation an hallucinated lunatic with delusions of persecution, who attempted to kill the health inspector of the French shipping. The would-be homicide was illegitimate; his ancestral history was not obtainable. Details of his life were meager. He had changed from one occupation to another. He was naturally of a saturnine disposition. To rid himself of his depression he drank freely. In 1878 he believed himself poisoned, and in consequence entered a hospital. At this time he accused a hotel keeper of persecuting him; later he believed himself the victim of a conspiracy on the part of this hotel keeper, and followed the latter in the street with criminal intentions. He then heard noises in his ears, and invisible persons worked on him with little machines, compelling him to alter his lodging to avoid them. Later on he heard voices saying aloud what he thought and did. As he had a mirror in his room he believed these to be reflected sounds, and removed the mirror, but the sounds did not cease. He claimed that once some one tried to shoot him with a revolver, and others spied upon him, torturing him physically and morally. He was worked on by the telephone, the microphone and by electricity, in all sorts of ways. Once a voice told him to throw himself out of the window, but he refused to do this till he had unmasked his tormenters. In 1879 he was sent to a hospital for the insane, and improved so much that, strange to say, it was deemed safe to discharge him. On being discharged his former habits were resumed, and his old troubles

reappeared. A voice told him to buy a knife, and he did so. Feeling the need of protection he placed himself under the ægis of a deputy with whom he was slightly acquainted, who wrote to a police prefect that C. (the patient) was a decided lunatic. In December, 1880, Dr. du Saulle examined him and certified that C. then had the scheme of killing a policeman. In consequence C. was again sent to a hospital, from whence he escaped in April, 1882. For a long time he remained quiet, temperate and worked hard. September, 1883, he again became intemperate, and his delusions and hallucinations resumed their sway; and, fearing poison, he believed himself doomed to starvation. September 25, 1883, not having eaten anything for four days, he was feeble and broken down. He felt that his head had been electrified, and walked up and down without knowing where he was going. He heard a voice saying, "Kill yourself!" but he said, "Why should I kill myself? the guilty kill themselves. Why give my persecutors the satisfaction of my suicide?" Then the voice said, "If you don't wish to kill yourself, kill him!" At this time the rain was pouring down, and he saw a man under an umbrella, at whom he fired twice. He read in a newspaper soon after, that he had shot a physician, to whom he wrote an anonymous letter stating his persecutions. He went to an infirmary near a police station, and asked for meals and a bed. One of the assistants refused him these without an order. He then went to a magistrate and accused himself of his crime. When examined he had olfactory hallucinations. In Dr. du Saulle's opinion the alcoholic intemperance only increased a pre-existing insanity. It must be obvious that the case is of much medico-legal importance.

INSANITY FROM SCARLATINA.—Of insanity caused by scarlatina, Mendel (*Deutsche medicinische Wochenschrift*, March, 19, 1881); Kräpelin (*Archiv für Psychiatrie*, Band XI, Heft 1.); Schulz (*Archiv für Psychiatrie*, Band II, 721); Rabuske (*Deutsche medicinische Wochenschrift*, October 13, 1881); Krauss (*Zeitschrift für Psychiatrie*, Band XII); Spitzka (*Journal of Neurology and Psychiatry*, Volume I.); Prichard (*Gaillard's Medical Journal*, Volume XXXV.); Weber (*Medico-Chirurgical Transactions*, Volume XLVIII.); Thoré (*Annales Medico-Psychologiques*, 1850, p. 586); Bucknill and Tuke (*Psychological Medicine*, p. 257), and Thomas (cited by Kräpelin) have all reported cases, the predominant characteristics of most of which were casual hallucination

accompanied by marked motor excitement. Cases of dementia are also reported as having resulted from a meningeal change secondary to the scarlet fever. Kiernan (*Journal of Nervous and Mental Disease*, January, 1882) comes to the following conclusions: First, that three groups of mental phenomena are produced by scarlatina, independently of delirium. Second, that the first is a species of melancholia agitata, attended by hallucination, and its inception is preceded by a decline to normal of the high temperature previously existing. Third, that the second group consists of cases of dementia, due to meningitis of scarlatinal origin, the patient passing from the hyperpyrexia of scarlatina to that of meningitis, on recovery from which he is found to be demented. Fourth, that the third group of patients show either marked change from the character antecedent to the attack of scarlatina, or else retain in after life some of the juvenile characteristics of the period prior to the attack of scarlet fever, or occasionally, become victims of moral insanity. Dr. Wick (*Cincinnati Lancet and Clinic*, March 10, 1883) reports the following case: Last December he attended a young man, æt. 18, during a severe attack of scarlet fever, a typical case in which the rash came out fully and the throat trouble severe. Just after the fever subsided, and recovery promised to be rapid, he showed signs of delirium; was affected with hallucinations, restless, sleepless, talkative and very humorous at times. He imagined some one was after him with firearms; would jump out of bed and run into another room or get under the bed; he could only be kept in bed by his father at the bedside. His temperature during this time was normal, and appetite good, appeared to relish his food. This condition lasted nearly a week. He was controlled with full doses of chloral and caused to sleep soundly during the last few nights of his insanity. He made a good recovery after about two weeks' illness in all. Desquamation began about this time. This, it will be obvious was a case of the kind which Thomas classes among the psychoses of convalescence.

VISCERAL SYPHILITIC AFFECTIONS IN THE INSANE.—
Dr. W. J. Mickle (*Journal of Mental Science*, January, 1884) has observed two cases in which very decided visceral syphilitic lesions were found. One case of marked mental deterioration had been insidious in origin, but was preceded by frequent manifestations of constitutional syphilis. The patient muttered to himself, was morose,

unsociable, wandering about with depressed appearance and bowed head, but was easily roused to violence. He collected rubbish, under the delusion that it was jewelry. Later on he was restless and incoherent, but worked well and laughed without cause. He died from exhaustion produced by tertiary syphilis. Pulmonary renal, splenic, and osseous tertiary syphilitic disease was found on autopsy. The brain and membranes did not differ from those of non-syphilitic terminal dementia. The second patient was maniacal, incoherent and had exalted delusions. He subsequently became silent, under the delusions that his speech had been stopped by the power of a former medical attendant; that his speech was visible, and that his words flew into others in his vicinity, and affected them injuriously. Transient delusions of ill treatment and neglect were manifested during the last days of his life. On autopsy, hepatic, vascular and pulmonary syphilitic disease was found. The meningo-encephalic changes were those of terminal dementia. Dr. Mickle says that in this class of cases constitutional syphilis acts either as producing an acquired predisposition to insanity, or produces a psychosis from toxæmia, or syphilitic cachexia, and anæmia combined with syphilis, as has been shown by recently reported cases (*Journal of Nervous and Mental Diseases*, July, 1880), may produce insanity without causing other than bio-chemical changes. On the other hand, encephalic changes, clearly dependent on syphilis, cannot be demarcated from those of non-syphilitic origin, as these researches of Dr. Mickle tend to show. The question is incidentally raised by Dr. Mickle whether pre-existing insanity predisposes to cerebral syphilis.

HEREDITY.—MORANDAN DE MONTEVEL (*L'Encephale*, No. 4, 1883,) concludes: First, that families in whom insane heredity is present are characterized by relatively great sterility of the majority of marriages, while such as are fertile are excessively so. The large proportion of children die in early infancy. Second, that from the union of these three circumstances in one family's descendants the physician is justified in diagnosing vesanic heredity. Third, the influence of vesanic heredity on the fecundity of marriages varies according to the generation. Fourth, extreme fecundity is produced in the earlier generations, followed and ending in sterility in later generations. Fifth, vesanic heredity, by producing exaggerated mortality in infancy, as well as by its sterilizing influence,

tends to extinguish the families on which it exerts an influence. Sixth, these conclusions are confirmed by the circumstances that if the marriages of the earlier generations result in much offspring, the marriages of later generations produce fewer and fewer children, who are more and more puny. Seventh, it is probable that the mortality of early infancy increases with the generation, and that the vitality of the children decreases with their number. Eighth, maternal or paternal vesanic heredity, considered by itself, tends to confirm these conclusions. Ninth, paternal vesanic heredity is more powerful than maternal, in producing fecundity, sterility and early infantile mortality. Tenth, the preponderant influence of the mother on the descendants cannot but be diminished by the paternal influence just mentioned, and is demonstrable in ten per cent. of the cases. Eleventh, the paternal influence is exerted early in life; the maternal, later.

EYE AFFECTIONS IN THE PSYCHOSES.—Dr. Borrysiekiwicz (*Centralblatt fuer Augenheilkunde*, S. 494, 1883) finds, after an examination of one hundred and seventy one insane, that there were two very frequent ocular lesions. Lesion I., consisted in a diffusely dim and irregularly sized pupil and retinal opacity, which was most frequent in parietic dementia. Lesion II., consisted in bluish discoloration of the optic nerve on its outer half, and in toto; and was frequent in alcoholic cases. Of twenty-eight parietic demented, fifteen gave positive results. In eight of these lesion I. was found, in atrophy of the optic nerve; in one neuro-retinitis exudat. In three cases lesion II. was found. Pupillary aberrations occurred twenty times. Pupillary reaction was normal in seventeen cases; not taken in one and abnormal in ten cases; in one of which one side reacted normally, the other did not. Facial paresis was found in fourteen cases, in four cases mydriasis, and facial paresis were on the same side; in five cases on opposite sides, two cases of mania presented the first lesion, and in two pupillary indifference. Of twenty-nine cases of monomania there were four presented lesion I.; three, lesion II.; one, retinal anæmia; one, retinal hyperæmia and one, retinitis. Of the one hundred and seventy-one, eighty-four presented anomalies. Of these, eighteen presented lesion I.; forty-two, lesion II.; nine, retinitis; seven, *Hyperæmia opt. et ret.*; six, atrophy of the optic nerve; two, *anæmia opt. et ret.* It will be obvious

that these findings, while of interest, are scarcely *en rapport* with the patients' mental condition, and are accidental complications.

DIFFERENT UNILATERAL AUDITORY HALLUCINATIONS ON OPPOSITE SIDES.—Magnan (*Journal de Médecine de Bordeaux*, Sept. 30th, 1883) states that hallucinated individuals exist, who hear on one side, agreeable things, and on the other side unpleasant. Magnan had under observation four cases of this kind, one of which he reported in detail. The case (primary monomania) was complicated by epilepsy. On the right side, disagreeable statements were made; on the left, ambitious ideas were enunciated. These latter hallucinations were obviously secondary to the first. Magnan concludes: First, these unilateral hallucinations on opposite sides are independent of local lesion. Second, they do not differ from other hallucinations. Third, they prove the double action, and the functional independence of the two hemispheres. Fourth, analogous phenomena are noticed in hypnotic states. Fifth, their existence demonstrates the action of separate sensorial centers in the cortex.

CRIMES OF PARETIC DEMENTS.—Le Grande du Saule (*Gazette des Hôpitaux*, Sept. 18, 1883) says that these, as a rule, are not the result of delusion, but of sudden impulse and of a demented type. One patient carried off a tool placed near him, without being able to give any reason therefor, it being impossible that he could derive the least profit therefrom. Another, seeing a cask of wine before a grocery store, asked two policemen, in the gravest manner, to aid him in rolling it off. Another, suddenly set fire to a house, without the least reason for spite or profit from so doing. Le Grande du Saule appears to differ from the New York Medical Society men who passed the resolution about a physician having no right to draw conclusions as to responsibility, from crime, for he says the absurdity of the crime is a proof of its pathological nature.

MELANCHOLIA IN A BOY OF ELEVEN.—Dr. Kowalewsky (*Medic. Westnik*, No. 11, 1883) has reported a case of an eleven-year-old boy, without hereditary taint, who after several severe attacks of the exanthemata became depressed, lost all interest in his surroundings, sought solitude, cried all day; at night had hallucination of sight, and during the day delusive conception that he was unlucky,

and incapable, and ought to die. After five months of hospital treatment with tonics, warm baths, and fresh air, the boy recovered, the affection having lasted a little over a year.

INSANITY FROM SIMULATION.—Dr. Koster (*Irrenfreund*, No. 10, 1883) has reported the case of a somewhat hereditarily defective man, who simulated insanity, with religious ideas predominating, to avoid military service, but from the mental strain of the simulation became insane; and a case was cited by Dr. H. M. Hurd (Pontiac, Mich., Hospital for the Insane, Reports 1881-82), in which a patient became insane from feigning insanity.

SEXUAL DIFFERENCES IN THE CEREBRAL SURFACE.—Dr. T. Dwight (*Boston Medical and Surgical Journal*, September 6, 1883) states, that but very little notice has been taken of the influence of sex in the size and shape of the brain, and more especially the convolutions. Nearly thirty years ago, Husckle maintained that differences in the convolutions of the male and female brains could be detected, and that, as a rule, the fissure of Rolando was more nearly vertical in woman than in man, so that the distance of the top of the fissure from the posterior end of the brain was relatively greater in the former. Consequently in man the frontal lobes, and in woman the parietal, were relatively the larger, and the female brain was rounder. Rüdinger, of Munich, states that in most male foetal brains the frontal lobes are more massive, broader, and higher than in female ones; that the convolutions in the female foetus of seven or eight months are much simpler than in the male. He finds that the fissure of Rolando is more oblique in the male than in female, and hence that there is more cerebral matter in front of it in the former, and behind it in the latter. Dr. Passet has made careful measurements of twenty male and seventeen female brains, and finds that the fissure of Rolando is more oblique in the male than in female, and is longer and more curved. It lies absolutely and relatively further back in man, hence there is more cerebral matter in front of it. The male brain is longer, broader, and higher than the female. As the male brain is the larger, it follows that the fissure of Rolando is more distant from both the coronal and lambdoidal sutures than in the female. The parieto-occipital is usually in front of the lambdoidal suture in both sexes, but is more distant from it in the male. Most of the essential points of these discoveries were

anticipated by Clevenger, in his researches on the relations between the suture, Rolando, and intelligence. (*Journal of Nervous and Mental Disease*, April, 1880.) At the same time the generalizations of Dwight, and the authorities cited by him, are based on too few observations, and the matter requires further investigation.

NEUROPATHOLOGY.

CONVULSIONS IN CHILDREN. — Kjellberg (*Archiv für Kinderheilkunde*, B. IV.) classifies convulsions in children as symptomatic and sympathetic. Symptomatic convulsions are due to direct irritation of the medulla oblongata, convulsion center, brought about either by changes in cerebral blood, quantity or quality. Changes of the first kind result from anæmia (which must be sudden in development), active (fluxionary) hyperæmia, and passive (venous) hyperæmia. Cerebral anæmia in children may be due to sudden hæmorrhage, to excessive loss of fluid from diarrhœa or vomiting, to arterial spasm, to skull compression from without, to intracranial pressure from external brain changes, and to certain general diseases. Active hyperæmia, which really produces cortical anæmia by constriction of the cerebral capillaries due to reactionary pressure exerted upon them by the circumvascular lymph-fluid, occurs very frequently in children, brought on by anything which will increase cardiac action, emotion, febrile states, etc. Passive cerebral hyperæmia in children occurs as the result of laryngeal or intrathoracic obstruction to air entrance, or cardiac disease or gastric distention exciting both respiratory and cardiac embarrassment. Changes in cerebral blood quality, constituting the second class producing convulsions by direct irritation of the medulla, are induced by pyrexia, by toxic substance (atropine, tobacco, alcohol, poisonous gases) from without, or by poisons within the circulation (pyæmia, cholæmia, etc. Whether uræmic poison acts upon the medulla directly or indirectly by cerebral anæmia, is uncertain. The second division of cases producing convulsions includes all agents acting under the peripheral nerves and producing spasm by reflex irritation (sympathetic convulsions). Such causes are irritations due to wounds, burns, and other lesions of the integument, foreign bodies in the ear and nose, renal calculus, etc. By far the most frequent

seat of irritation is in the alimentary tract. Among other causes included under this latter head, are teething and worms in the intestines. Both have their influence, but this is certainly limited, and not every attack of convulsions in children who have worms should be set down to the account of the latter.

LARYNGEAL CHOREA.—Dr. F. T. Knight (New York *Medical Journal*, June 2, 1883) makes three varieties of this affection: That in which the adductors of the larynx were involved, together with the expiratory muscles, giving rise to paroxysms of coughing, and a barking or crowing sound; second, that in which the muscles of the larynx alone were involved; third, but not properly belonging under this head, that in which the expiratory muscles alone were involved. The author mentioned a case which, so far as he was aware, was unique, in which the laryngeal muscles alone were involved, and a clicking sound, heard by himself and by the patient, was produced, apparently, by the rhythmical contraction of the vocal cords. Arsenic and quinine had had but little effect upon the spasm. In the discussion of this paper Dr. E. C. Morgan mentioned the case of a girl in which both the laryngeal and the expiratory muscles were affected, and the crowing cough could be heard the distance of a square. He had obtained most benefit from Fowler's solution and mono-bromated camphor. Dr. E. F. Ingals related a case in which there were peculiar movements of the levator palati muscle, each contraction of the muscles being accompanied by a clicking sound. Dr. Langmaid remarked with regard to treatment, that in one case falling under the first division, which he believed had been excited by the influence of harsh methods of the music teacher upon the nervous system of the patient, the barking sound was found always to be preceded by opening the mouth. The girl carried out his instructions to close the mouth immediately when an attack was about to occur, and it was thus aborted.

LEFT FACIAL HEMIATROPHY.—Eperon (*Archives d'Ophthalmologie*, May-June, 1883) reports a case of facial hemiatrophy in a forty-one-year-old man. The left orbital cavity was more pronounced at its upper part than normal, and the left eye much more sunken. The left cheek was without whiskers, and markedly diminished in volume. The nose, mouth, tongue and uvula were turned to the left side. The two lips were divided into two unequal parts by a furrow apparently cicatricial. The chin was furrowed and thrown

toward the left. The left ear was slightly atrophied, and the hearing on that side slightly impaired. The patient had been healthy up to nine years of age, when he was attacked by measles. Six months later a tumor appeared under the angle of the left side of the jaw, which disappeared at the end of six weeks, and from this dated the left unilateral atrophy of the face. Eperon thinks that this case is a striking confirmation of the theory that hypermetropia is the result of an arrested development of the eyeball. The arrest of development of the left side of the face, with its cavities and organs, was most pronounced.

ENCEPHALIC HÆMORRHAGES SECONDARY TO SPINAL LESIONS.—At a late meeting of the Société de Biologie, Brown-Sequard (*Progrès Medical*, April 14th) called attention to the fact that section of the inferior part of a pigeon's spinal cord produced an abundant hæmorrhage in the center of the medulla oblongata. The pathogeny of these accidents depends upon the vaso-motor system. They, in Brown-Sequard's opinion, serve to explain the cerebral hæmorrhages which come on suddenly at several points, and which can without difficulty be referred to the simultaneous rupture of a great number of miliary aneurisms.

EDITORIAL.

Van Andel on Non-Restraint.*—At the International Congress, at Amsterdam, in 1879, Van Andel read an interesting paper on Non-Restraint. We gave, in 1880, his conclusions. We here present, in brief, the remainder of the paper. The impropriety of calling the views of the author *non-restraint* becomes apparent as one reaches the close of his interesting survey of the field of psychiatry, over which the *minimization* of restraint has been steadily making progress since the beginning of the century. This distinguished alienist then said: "A misunderstanding still exists in the minds of the non-restraint votaries towards those of their *confrères*, who, like them, would reduce mechanical restraint to such a minimum as to amount to its practical abolition as the *rule of practice* in asylums for the insane, but who consider the term non-restraint a misnomer. From the tone of the literature of the subject examined the author sees that there is, as yet, no question of a *general* abolition of mechanical restraint. In England, in 1856, Conolly writes that in forty public asylums, with an aggregate of 14,000 inmates, mechanical restraint was not employed at all, while in the private institutions it was still used to a great extent. In 1862 Dr. Bucknill writes: "In the Devon County Asylum restraint is never employed, except in surgical cases." In 1869 Dr. Pelman, after an extended tour through England and France, writes: "The question of the possibility of the treatment of the insane without the use of restraint one sees practically answered everywhere in England, and I have gained the impression that thereby more also is accomplished than we can accomplish with the assistance of our appliances for restraint." Dr. Ripping, after a tour through England and Scotland, says: "I must confess that I have never seen mechanical restraint used, either in the asylums in which non-restraint is advocated or in those in which it is reserved for suitable cases." No further proof is needed of the general adoption of non-

* "Upon the employment of Mechanical Restraint in Psychiatry," by Dr. Van Andel, Director of the Asylum at Zuetphen (an Address delivered in the Sixth Section of the International Medical Congress, held at Amsterdam, in September, 1879).—*Allgm. Zeits. fuer Psychiatrie*, Bd. XXXVI., Heft 6.

restraint in England. In France the reform has made but little progress. Dr. Jules Dragon writes, in 1875, of "Reprimands, camisoles, douches and baths," as punishments to be inflicted upon patients; and of the jacket, he says: "Unfortunately we cannot hope for its total abolition. The watchword of the day should be no longer *camisoles*, but *as little as possible of camisoles*." Still more is it to be wondered at that in various asylums of North America mechanical restraint seems to be still in vogue. In Germany the non-restraint system has not been received with open arms. In the Rhenish Provinces the non-restraint system will soon be universally adopted—at least I have gained that impression. In Switzerland, as early as 1863, the Society of Alienists unanimously voted for the abolition of mechanical restraint. Finally, in the Netherlands, only in the last report of the inspectors Ramaer and Van de Capelle, has the non-restraint system been recommended for universal adoption in the state asylums.

"In the war that has been waged over this question the great mistake was made of regarding restraint and non-restraint as the antipodes of each other; and such exaggerations were indulged in, on both sides, that whoever made use of these terms at once excited the prejudices of his opponents. This general sketch shows that non-restraint is making slow, but unmistakable progress, in other countries besides England. While there are many examples of those who have abolished mechanical restraint, I know of none who, having once done so, have returned to its employment. I take the liberty of quoting from Griesinger, to show how far the system can and must be carried out. He says:

The negative side of this method consists in the principle that no mechanical means that prevent the use of the limbs are allowed in the treatment of the insane. The patients are not put in the straight-jacket, nor in locked chairs, nor secured, or tied in any way. He must not experience those sensations which are aroused by having his limbs bound or restrained. Mechanical means which do not limit the free use of the limbs, and therefore do not excite these feelings, are not only allowable, but valuable and welcome aids in the treatment of a certain class. For instance, a patient may be furnished with clothes and shoes so arranged as not to allow of the patient's taking them off. The clothes may be only buttoned behind instead of before, with a view to this end. This is no more restraint than it is to give a patient a bedcover which he cannot tear. The patient in such shoes or clothes, is not limited in the use of his limbs. There are devices which stand just on the boundary line between restraint and non-

restraint. When, for instance, a patient who has the habit of scratching his head to pieces, is supplied with sleeves that are so long as to cover his fingers, or with heavy gloves (that allow of the movement of the fingers), he can use his limbs freely in most directions, only he is limited in the use of his fingers. In England these devices are perfectly consistent with non-restraint.

"I will not say that in all surgical cases the straight-jacket and camisoles can be dispensed with, but even in these cases I have been able to do without them since the introduction of non-restraint in my asylum. The most important side of the question—what Griesinger calls the positive side—is the *favorable moral effect* which the *freie Behandlung* exerts upon life in the asylum. And how could it be otherwise! The more mechanical restraint is abolished the more nearly does one approach to the full acknowledgment of the dignity of even the insane. I heartily endorse what Griesinger says: 'Then there is introduced into the asylum a totally new spirit—a different tone—a different manner, that soon elevate everything to a higher plane in the asylums that have adopted the non-restraint system.'"

These views are in accord with our own, and yet to apply to them the term *non-restraint* is to misname them.

Van Andel, like every enlightened alienist having the care of the insane, would rationalize the employment of restraint, and so reduce it to the lowest possible practicable minimum. This is the rational minimization, not the abolition of all restraint, and as such we commend it to all asylum superintendents, but not under the misleading misnomer of "non-restraint."

Too much restraint is yet used in many American asylums for the insane, especially by new political superintendents, and in some other establishments not subject to state inspection; and we take pleasure in presenting these enlightened views to our readers, as very approximatively, if not quite fully practised in most American asylums. Let no one suppose that because the real reformation of Conolly was misnamed, that we regard the doctrine of little mechanical restraint for the insane, as a heresy.

On the contrary, all other things being equal, the less the insane are subjected to irritating restraint in asylums, the better for the progress of their malady toward recovery. It is possible, with proper personal precautions and safely constructed buildings, and judiciously chosen surroundings, to greatly reduce the direct restraint of the insane, and to abolish all forms of it with the majority.

The question is a practical one, to be solved practically, not theoretically, and no one has a right to say to what extent he can not go in the direction of non-restraint, until he has made a faithful trial of its principles. No theoretical barriers should be permitted to stand in the way of an honest and faithful effort to give the insane all possible liberty, while under asylum care, compatible with their welfare. No consideration of convenience should ever be permitted to stand in the way of the insane man's rights. To all the liberty his welfare and the safety of others will allow.

In illustration of how little mechanical restraint is used in some of our American hospitals, which do not class themselves as non-restraint institutions, it affords us pleasure to extract the following record from Dr. Nichols' last report of the Bloomingdale Asylum :

MECHANICAL RESTRAINT.

No mechanical restraint was used in the course of the year. One patient only, a man of powerful frame and courageous will, suffering from acute mania, and exhibiting the strongest tendency to personal violence, was secluded the most of the time for about three months, as the means best calculated to husband his strength and secure the safety of others.

**The varying requirements of treatment are strikingly illustrated by the practicability of refraining from the use of mechanical restraint for a whole year, and the necessity of resorting to it in two different cases between the close of the year and the presentation of this report, to prevent self-mutilation, which could not be prevented by the personal restraint of one or many attendants without a constant struggle that was most exhaustive and injurious to the patient.*

This tells the whole story. Restraint is an appliance for conservative use only, but like the knife, there are times when it were cruelty not to employ it.

The Psychic Factor in the Ætiology of Disease.—The *Albany Medical Annals*, referring to the "Provisional Nomenclature of Diseases," officially sanctioned in Great Britain, by the Royal College and Surgeon-General, and adopted in the United States Marine Hospital Service, thus comments on this subject :

It is not easy to understand why this competent authority has failed to introduce it in a list which has been entirely recast from the older one, and is intended to be not only as much as possible in accordance with the most recent pathology and the most critical classification, but is also intended to be entirely exhaustive. There can be no doubt of the propriety of accepting nervous shock as a source of various clinical disturbances, and it is even a well-conceded cause of death. No doubt it acts to produce these often by precipitating a physical pathological condition, which

* We italicise the last paragraph because it contains a practical precept.

might, perhaps, be regarded as the predominant feature in the case, but death from this cause has frequently been reported when an abnormal pathological condition could be found after death. In either case, however, there is propriety in regarding it as a factor. A case illustrative occurs to the writer in which passion was clearly a factor in determining apoplexy and death. An irascible old man, 72 years of age, engaged in an altercation with a tenant over a question of rent, in the course of which he was struck by the latter, a weak, one-armed man, a blow on the side of the head with the fist, which was hardly sufficient to cause a little tumefaction. He fell, and when seen, after several hours, was comatose, and died in thirty-six hours. At the autopsy an apoplectic clot was found on the surface of the brain beneath the point of injury, which, however, was so slight as to cause no contusion of the temporal muscle beneath it. No doubt here, as in many cases that will be recalled, the rupture of the weakened vessels was determined by psychic cause. Cases are reported, however, where it has more directly caused death. Dr. Tschainsky, as noted in the *Medical Record*, has noticed several curious instances where this cause alone operated. Cazenave, desiring to operate on an exceedingly nervous patient without chloroform, in order to deceive him, held a bag of pure air before his mouth; he breathed four times and died. Desault, being about to cut for stone, drew his finger-nail across the perineum to indicate the line of incision; the patient, in his alarm, gave a shriek, and died. Tschainsky attributes to a similar cause, death in a case where hardly two whiffs of chloroform had been taken, the necropsy revealing fatty degeneration of the right ventricular wall of the heart, the left appearing normal. The following case of death from fright is reported by the *British Medical Journal*:

"The serious effects of shock to the nervous system, especially by fright, are constantly witnessed, the results being most commonly syncope and convulsions. Death itself is, fortunately, comparatively rare. It is reported in the newspapers to have occurred at Brockley, on March 21, in the case of a girl aged 18 years, who was frightened to death by a man dressed as a ghost, near the Deptford Cemetery."

The pathology of emotional death is of great interest, and varies in different cases. In some cases a fatal issue results from sanguineous apoplexy; in others, and much more frequently, from shock to the heart. Examples of the former are recorded by Dr. D. Hack Tuke, in his "*Influences of the Mind upon the Body*." Thus, a woman at Bradford, received a fright from a man throwing a stone against her window. He had previously threatened her. She soon afterwards complained of numbness, and rapidly became insensible. There was right hemiplegia. She died in seven hours, and on post-mortem examination, a clot of blood was found in the left lateral ventricle. The cerebral vessels appeared to be healthy. In the well-known example of death from the heart which occurred in John Hunter's own case, we have an illustration of the cardiac class. The organ was extensively diseased, and the left ventricle was strongly contracted. Other instances of death from emotion, in which the stress had fallen upon the heart, and not upon the brain, are recorded in the collection of cases of death from powerful emotion, to which we

have referred. In some cases, however, there was no evidence of disease of the heart or of any organ of the body, as might, indeed, be expected. For instance, a man is reported to have died at Twickenham, after witnessing the death of a neighbor. He made the remark, "I have never seen any one die before, and I hope I never shall again." There was a post-mortem examination made by Dr. Ward, but nothing was found to account for death; both ventricles of the heart contained but a little fluid blood, the organ itself being normal in size, and healthy. There is no doubt that in such instances fatal syncope may arise simply from the action of the heart being inhibited, whether by direct excitation of the vagus, as maintained by Dr. Brown-Sequard, or by the acceleration of the heart in the first instance, followed by exhaustion and the unantagonized play of the former. Anyway, if the heart, as in Hunter's case, be strongly contracted on its contents, and the blood expelled, one efficient cause of syncope, with fatal results, is present. Probably this was the pathological explanation of this unfortunate girl's death from the silly, practical joke played upon her. She arrived home after her fright on the road by the Deptford Cemetery, Brockley, looking very ill and excited. She is said to have taken off her waterproof, drawn a chair to the table to take supper, then fallen forward with her head on the table, and died after a short struggle. Mr. Hollis, the medical man who was called in, made a post-mortem examination, and reported that all the organs were healthy, but that the state of the heart, combined with the fright, would account for death.

While psychic influences have filled a considerable place in the realm of emotional literature, as causing physiological and pathological changes, such as the complete blanching of the hair in the course of a single night, still there can be no question as to the propriety of admitting them to a place in the nosological tables under the class of nervous diseases, and no recorder of vital statistics will refuse to accept such a reported cause of death.

Miryachit.—This peculiar psycho-motor reflex imitation phenomenon, known in Siberia as *Miryachit*, whose counterparts in this country have been described by Beard, and called by the people of Maine and Northern New Hampshire "The Jumpers" or "Jumping Frenchmen," has been made the subject of a late communication by Dr. Wm. A. Hammond, before the New York Neurological Society.

It seems, from all the descriptions, to be an abeyant state of the inhibitory area of the cortex over such psycho-motor movements as are excited by external impressions. The natural propensity to imitate seeming to be unrestrained, and to have been freed from the modifying influences of that educated restraint over the tendency to immediate reflex movement, responsive to external stimuli, which grows with the evolution of the cerebro-spinal axis, from simple modified and direct, to complex and deliberate movement. Dr. Hammond regards these cases as

"analogous to certain epileptic paroxysms due to reflex irritation," and refers to certain cases of sleep drunkenness, as like them.

The resemblances are too divergent (if we except the automaticity) to justify this comparison with epilepsy, and there is no evidence of the vaso-motor disturbance, or of unconsciousness or incoördinated motor movement in these cases of *Miryachit*, which ordinarily characterizes epilepsy. Besides, it is a community rather than a distinctly individual disease, spreading by imitation like certain epidemic choreas and convulsions. Epilepsia, except its hysterical simulations, never spreads in this way. The Camisards, or French Prophets of the 17th century, were convulsive imitators of each other; and in the religious convulsions which became epidemic in Scotland in the following century, when one shouted, the same shout was answered back by others.

The pathological condition of the "Jumpers" probably does not greatly differ from that of the dancing maniacs of the middle ages, except in degree and surrounding external circumstances.

Many of these were seized by the sight of those affected with a resistless propensity to imitate the dancers. In *St. Vitus' Dance*, *Tarantism* and the *Tigretier*, it was the suspension of volitional inhibition that chiefly characterized these disorders.

"In a Methodist chapel at Redruth, a man, during divine service, cried out with a loud voice, 'What shall I do to be saved?' at the same time manifesting the greatest uneasiness and solicitude respecting his soul. Some other members of the congregation following his example, cried out in the same form of words, and seemed shortly after to suffer the most excruciating bodily pain." The history goes on to relate that "hundreds of people who had come hither to see the sufferers, fell into the same state." The convulsionaires of the 18th century, like the St. John's dancers, and the Tarantati, were cured by methods which restored the normal inhibitory psychomotor influence. Among the English Jumpers, a sect founded by Harris Rowland and William Williams, of Cornwall, 1760, could be found many counterparts of the Moosehead Lake neurotics, and the *Miryachit* sufferers of Siberia, the exciting cause of the nervous phenomena only being different, while the morbid conditions of its display were probably the same.

Instances enough of similar ideo-motor and ideo-sensory reflex phenomena may be found among the "Barkers" and "Jerkers," described by Dr. David W. Yandell, in his account of the epidemic convulsions of Kentucky, in No. 3, Vol. 4, of *Brain*.

"It would seem," says Dr. Hammond, "as though the nerve cells were very much in the condition of a package of dynamite or nitro-glycerine, in which a very slight impression is sufficient to effect a discharge of nerve-force."

Morbid central inordinate nervous excitability makes all of these abnormal nervous displays possible, *Miryachit* included.

The Role of the Bacillus.—Dr. H. F. Formad, the distinguished lecturer on Experimental Pathology and Demonstrator of Morbid Anatomy in the University of Pennsylvania; Mütter lecturer in the College of Physicians of Philadelphia, in a second communication to the Philadelphia County Medical Society, on the 14th of last November, thus plainly presents the views of the clinical school of sceptics, not as to the existence of the tubercle bacillus, but as to its being the sole ætiological factor. As Formad's views, like those of Spina, are more in harmony with the observed facts of neuropathic heredity, we give the following extracts from Prof. Formad's interesting paper:

To-day, while the bacillus is acknowledged as a common morphological concomitant of tubercle, the pathogenetic properties are denied it by the best pathologists and clinicians, on account of a want of sufficient confirmation of the evidence thus far offered.

I admire the beautiful bacteridian discoveries of Klebs, and particularly those of Koch in connection with the etiology of tuberculosis. The accomplishment of these results is a triumph for mycology and scientific botany; but these studies are too much one-sided to have an application to scientific medicine. The bacillus is there! It is concomitant with most tubercular lesions. It is diagnostic of tuberculous change. It is, on account of its irritant properties, one of the causes of tuberculosis. But this forms no reason for asserting that tuberculosis should be considered a contagious disease, without further investigation and proof. A contagious disease can have only one cause. I cannot agree with those who define the predisposition to phthisis as being a condition of the organism which offers a favorable soil for the tubercle bacillus. Nor can I believe that inheritance is explained by subsequent infection from cohabitation, *e. g.* that children become scrofulous by living with consumptive parents.

Who, that is observant of neuropathic heredity, especially in forms of atric descent, has not seen tuberculosis take the place of insanity in families started on the

downward road to extinction by ancestral degeneracy of the cerebro-spinal axis. Who, even in the direct descent of grave neuroses has not seen one branch of a family extinguished by phthisis, another branch destroyed by epilepsy, insanity, etc., and mixed destruction in other members of the same nerve-degenerate branches.

There is a special human organism for the tubercle bacillus, in which it best flourishes, else all clinical observation has for half a century been gravely at fault. If phthisis itself is not hereditary, there are undoubtedly organic conditions transmissible, which make it a possibility, even a certainty in some organisms, while in others it never occurs. If it were not for variable organic hereditary aptitudes, the so-called galloping consumption would not be the rule in one organism, while the slowly progressive forms of phthisis are only possible to others.

We watch with interest the investigation of this subject, to learn the final decision as to whether phthisis is all bacilli, or whether, like most diseases, it has both remote and proximate causes for its development.

An International Medical Congress is announced to be held at Copenhagen, from August 10th to 16th, 1884, with a section of Neurology and Psychiatry, under the chairmanship of Prof. Steenburg, and for secretary, Dr. Friedenreich. The programme of subjects and questions for discussion, is as follows:

Psychiatry.—1. Statistics of mental diseases and asylums of the countries of the North. 2. A proposition for uniformity in the annual reports of the insane asylums of different countries. 3. Treatment of insane in the colonies. 4. Value of exercise in the treatment of mental diseases. 5. The effect of schools in the production of mental diseases. 6. Temperature of the body during the primary stages of mental disease. 7. Insanity in infancy. 8. Perversity of sexual instinct. 9. Mental troubles following epileptic attacks. 10. The part which syphilis plays in general paralysis. 11. Anatomical characters of the brains of idiots. 12. What is the best method of treatment for the morphine habit—and in what condition is it the best?

Neurology.—1. The effect of lesions of the peripheral nerves in producing anatomical changes in the nerve centers. 2. Secondary degeneration in the brain and spinal cord. 3. Difficulty in speech, of cortical origin.

4. Difficulty in vision, of cortical origin. 5. Cortical epilepsy. 6. Vaso-motor and trophic neuroses. 7. The value of the affection of the peripheral organs (particularly the sexual organs) in producing functional diseases of the nerves, especially hysteria. 8. Amyotrophic lateral sclerosis, or amyotrophic progressive bulbar paralysis, especially in regard to the constancy of anatomical lesions and to its difference, or its identity with progressive muscular atrophy (Aran-Duchenne.) 9. The curability of *Tabes dorsalis*. 10. The role played by syphilis in the ætiology of *Tabes dorsalis*. 11. Is the paralysis of *Laudry* a particular disease, or only a symptom which is produced by different pathological processes? 12. The value of nerve stretching as a means of cure.

Those who wished to make additions or modifications in this programme were invited to communicate with the president of this section before December 1st, 1883.

Professional Degradation.—The name of the causes of professional degradation in this unfortunate country of ours, cursed as it is with medical mediocrity and pretense, and public indifference to the kind and quality of its physicians, is legion.

Pæans may be justly sung to the glory of true scientific medicine, but the voice of praise, if medicine's dead victims could speak, would be drowned in a sepulchral chorus of reproach and anathema, hurled at legally licensed medical incompetency.

We cannot, in a single paragraph, or in a score of them, hint at the remediable, but not remedied causes, which are now contributing to degrade, in America, the noblest of human callings.

A journalistic cotemporary points out the evil of cheapening medical service, and the tendency to decry those who demand adequate compensation for specially skillful service; and instances the small fees awarded members of our profession in the case of President Garfield, with the approval of medical men, as compared with the fees of the government attorneys in the "Star Route" prosecution. Another journal laments the multiplicity of low grade medical schools, and another shows, in one of our metropolitan medical schools, practices which would degrade a lightning rod peddler, or a runner for the bath houses and quacks of hot springs.

We concede the low degree of average medical education by the necessity which we recognize of, and the

patronage we bestow upon, the post-graduate medical schools, now springing up all over the country, a hopeful though degrading spectacle, even though the chairs of some of these *post-gradum* faculties are filled by *ante-gradum* capacities.

Finally, in confirmation of our degradation comes the state enactment, not such as recognizes the diplomas of our colleges as conferring qualification to practice medicine, but such as was lately incorporated in the law of a proud old historic commonwealth, (aforetime among the greatest of states, mother of states and statesmen, who made American history, whose bosom nourishes the Virginia University), an enactment that makes an American medical diploma worthless. Recognizing the professional mediocrity, or worse, of her own medical children, she adopts this harsh, and to some of our American medical schools, unjust enactment. Doubtless this brand of our degradation was fashioned in part by sons of Æsculapæus, not unworthy, who thought it best to try alike the deserving and the undeserving in the same fiery ordeal; but is not the lesson plain and painful? Will it be heeded by us to our profit? or will the quantity rather than the quality of medical teaching continue to increase in America? Will the three-year graded schools still be at a discount? We hope not! We hope, rather, that the time is not far off when four years of continuous study will be the average time in which doctors of medicine are made in America. When that time shall come States will not have to legislate against American medical diplomas, to the degradation of American medicine.

Uterine Lesions and Insanity.—Dr. H. C. Byford (*Chicago Weekly Medical Review*, July 14, 1883) reports three cases of what he terms melancholia, but which are possibly cases of hysterical insanity, from the results obtained mainly through gynæcological procedures. The cases having been kept only a few months under observation after their recovering, he concludes: 1. There is some direct relation between uterine flexure and hysterical symptoms, especially melancholia. 2. This melancholia is not altogether dependent upon occlusion, since sometimes neither occlusion nor dysmenorrhœa exist. A primipara with anteflexion without occlusion, who was subject to despondency, fainting spells, and excessive irritability, experienced no relief from tonics, local stimulants, or glycerine plugs, but improved from the first

introduction of an elm bougie. Ammoniated tincture of valerian had afforded *temporary amelioration*. 3. That the peculiar straightening action of the elm, affords much relief. 4. That the beneficial action of the slippery elm bougie does not result from stimulation, since sometimes the symptoms are worse until stimulation subsides. There are cases in which the bougie increased local discomfort and yet caused improvement in the nervous condition after its removal. 5. That uterine congestion is not a constant factor. 6. That ovarian irritation does not cause this hysteria, since bougies have rather an irritating than soothing effect upon the pelvic organs. 7. Dragging of the uterus upon the ovaries through the broad ligaments does not cause it, since the change produced in position is scarcely appreciable at first, and not comparable to the change constantly produced by filling the bladder. 8. That iliac pains accompanying anteflexion are not of ovarian origin. 9. That pessaries do not afford as decided relief to the general nervous symptoms as elm bougies. 10. That cutting operations, which endanger the life or health of the patient, are not justified in stenosis until gradual dilatation has been tried. *The lower part of the cervix incised in stenosis should be sewed up, and the physician incising the same compelled to pay the bill for sewing it up.* He further says that he has seldom failed in relieving the nervous symptoms by dilatation with the elm bougies, although the occurrence of pregnancy, the irregularity or entire cessation of attendance by the patient, the co-existence of pelvic inflammation, and the "natural cussedness" of the disease, have sometimes baffled him. It is obvious that the procedure is not as infallible as Dr. Byford claims, and probably produces its alleged effects like incision of the cervix, by an impression on the imagination. That the latter has good effects is shown by the cases repeated by Dr. H. Marion Sims. Certainly the results of Dr. Byford's cases are not distinguishable from those of Dr. H. Marion Sims obtained by incising the cervix. In all nervous diseases, and especially the psychoses, the question of diagnosis settles the question of cure, for genæcological alienists cure cases which subsequently re-enter asylums with the same psychical disturbance they had before and during the cure. In contrast with these results are those obtained by Dr. Peretti (*Berliner klinische Wochenschrift*, 1883), who

has not had any marked results from gynæcological procedures in the psychoses; where local irritation tinctures delusions such procedures might have some effect. Dr. Cleaves is unwittingly driven to give similar testimony (*Western Lancet*). What is the explanation of these facts so seemingly contradictory. One explanation has already been given, and another has long been insisted on by superintendents of hospitals for the insane, that in most cases the psychosis is the cause of the female disease—not *vice versa*; and to this view Dr. Goodell (a gynæcologist) has recently given the following confirmation. He says (*Medical and Surgical Reporter*, November 10th, 1883) that worry and mental shock produce dysmenorrhœa, menorrhagia, and even uterine vegetations. The various gynæcological procedures rouse the element of hope in those cases and produce recovery. Thus one gynæcologist rips where another sews, and results are the same in restoration of self-limited psychoses—self-limited, if rest and recuperation are secured, even through ill-advised surgical treatment of the os, the cervix or the ovary. Poor sinful ovary, cervix, os! how many pathological crimes not exclusively thine own have been unjustly laid at thy door! How many gynæcological sins have been committed in thy name! Triune Pandora's box of female fleshly ills! May the Jupiter of gynæcology yet relent, and plague thee less.

The Thirty-Eighth Annual Meeting of the Association of Medical Superintendents of American Institutions for the Insane will be held at the "Continental Hotel," in the city of Philadelphia, on Tuesday, May 13, 1884, commencing at 10 A. M.

Resolved—"That the Secretary, when giving notice of the time and place of the next meeting, be requested to urge on members the importance of prompt attendance at the organization, and of remaining with the Association till the close of its sessions."

The trustees of the several institutions for the insane are cordially invited to attend the meetings of the Association. When an Assistant Physician represents an institution, that fact should be certified to the Secretary.

The proprietors of the hotel have agreed to charge from three to four dollars a day, according to location of rooms.

JOHN CURWEN, *Secretary*.

The following addresses, commemorative of the Fortieth Anniversary of the Association, may be expected: 1—"History of the Association, and its Necrology," Dr.

John Curwen; 2—"Causes of Insanity in America," Dr. G. A. Shurtleff; 3—"Progress in the Treatment of the Insane," Dr. H. P. Stearns; 4—"Progress in Provision for the Insane," Dr. W. W. Godding; 5—"Progress in the Pathology of Insanity," Dr. Daniel Clark.

The following Standing Committees are expected to present their reports: 1. "On the Annual Necrology of the Association"—Dr. Theo. W. Fisher, of Massachusetts; Dr. J. C. Hall, of Pennsylvania; Dr. C. C. Forbes, of Arkansas. 2. "On Cerebro-Spinal Physiology"—Dr. R. Gundry, of Maryland; Dr. J. Rogers, of Indiana; Dr. R. S. Dewey, of Illinois. 3. "On Cerebro-Spinal Pathology"—Dr. W. B. Goldsmith, of Massachusetts; Dr. Geo. C. Catlett, of Missouri; Dr. R. M. Bucke, of Ontario. 4. "On Therapeutics of Insanity, and New Remedies"—Dr. J. B. Andrews, of New York; Dr. C. K. Bartlett, of Minnesota; Dr. James Rodman, of Kentucky. 5. "On Bibliography of Insanity"—Dr. H. M. Hurd, of Michigan; Dr. P. Bryce, of Alabama; Dr. A. M. Shew, of Connecticut. 6. "On the Relation of Eccentric Diseases to Insanity"—Dr. J. H. Callender, of Tennessee; Dr. T. M. Franklin, of New York; Dr. E. A. Kilbourne, of Illinois. 7. "On Asylum Location, Construction and Sanitation"—Dr. S. S. Schultz, of Pennsylvania; Dr. W. Kempster, of Wisconsin; Dr. E. T. Wilkins, of California. 8. "On Medico-Legal Relations of the Insane"—Dr. A. E. Macdonald, of New York; Dr. E. Grissom, of North Carolina; Dr. J. Strong, of Ohio. 9. "On the Treatment of Insanity"—Dr. O. Everts, of Ohio; Dr. J. T. Steeves, of New Brunswick; Dr. Joseph Draper, of Vermont.

Oöphorectomy.—Dr. McNutt has (*Western Lancet*, March, 1883) lately operated in a case in which the patient had severe mental disturbance at the periods of menstruation. She had been confined in an asylum. The patient died four and a half days after the operation, from the inability of the attendant to keep her in bed. The ovaries and tubes were found to be healthy. It is obvious the case was one of periodical insanity where oöphorectomy was at best useless. Drs. Goodell and Pallen advise that the ovaries should be removed in all insane women. This is certainly taking very strong and unwarranted ground, for a sufficient number of cases have not been reported to justify such statements. Dr. Cushing says that in cases where insanity is manifestly associated with, or caused by a morbid state of the ovaries, their

removal would be justifiable, and would perhaps be the only means left towards effecting a cure. On the other hand, Dr. T. G. Thomas reports three cases of insanity following oöphorectomy. Dr. Putzel found no trace of disease of the ovaries in over one hundred post-mortem examinations made upon the bodies of women dying in the New York City Lunatic Asylum.

The Case De Lunatico Inquirendo *vs.* the Bloomingdale Asylum.—Dr. C. H. Nichols, Superintendent and Physician of the Bloomingdale Asylum, thus refers to this case :

Having referred last year to a patient who had been declared sane by a commission and jury *de lunatico inquirendo*, against very strong, and every way competent testimony to the contrary, and who, after the verdict, had returned to the institution, where he persisted in remaining, I should this year inform you of the sequel of that case. The patient (a man, as you will recollect, of respectable character and inventive genius) could at no time be persuaded to leave Bloomingdale, and he was permitted to remain until February 19, 1883, about seven months after the inquiry and verdict, when his delusions became more active, and he began to hint at self-vindication by homicide and arson. He was then arrested for trespass, and having been sent by the magistrate to the Bellevue Hospital, for examination as to his state of mind, by physicians connected with the public service, he was found to be insane, and sent to another institution, where he has since committed suicide and closed an ample vindication of the truth, if not the ability and conscientiousness, of the discredited testimony of the inquiry.

We venture the assertion that the sensational press, ever clamorous for a startling item, will have little to say about this case. There is a rebuke and a moral in it which they will not see.

Abolish the Crowded Ward, and restore the single room and small dormitory in hospitals; corridors for convalescents, private rooms for the sick, should be the future idea of hospital construction, that we may be in accord with the progress of hygiene and the ways that hitherto have been dark, of the bacteria and the bacillus. Let us pattern after the insane hospitals, save in their height and except their bars, and give patients plenty of rooms as well as room. There are reasons, too, of a psychological character too obvious to need repeating, why large hospital wards for the sick should be abolished. No immediate economical consideration should stand in the way of their abandonment, for when the long line of sick beds is no longer seen, then will the ratio of recoveries of the sick increase.

Hydrobromic Acid for Epilepsy.—Dr. H. C. Wood (*Medical News*) prefers this medicine to potassium bromide in epilepsy, because it is more pleasant to take and does not cause acne so readily as the bromide salt. Its reported failures he attributes to insufficient doses. He has given as much as an ounce of the officinal solution of hydrobromic acid (which equals about seventy-two grains of potassium bromide), three times a day, with good results in inveterate cases. Good enough, but extremely sour.

The Alienist and Neurologist.—The January number of this most excellent journal contains several interesting articles, among which we name an article on "Medico-Legal Relations of Epilepsy," by Jas. G. Kiernan, of Chicago; "On the Insanity of Doubting," by Prof. A. Tamburini, of Italy; and "The Opium Psycho-neuroses," by C. H. Hughes, M. D. This journal should be taken by every physician.—[*Indiana Medical Journal*].

Dr. Julius Wise, late editor of the *Mississippi Valley Medical Monthly*, and Professor of *Materia Medica* in the Memphis Hospital Medical College, has become the St. Louis editor of the *Weekly Medical Review*. The *Mississippi Valley Medical Monthly* pays a high and merited compliment to Dr. Wise's fitness for his new position, and we think Messrs. Chambers & Co. have secured the right man in the right place.

Medico-Legal Society.—At the regular meeting, April 9th, 1884, the programme consisted of a paper by C. H. Hughes, M. D., of St. Louis, on "Moral (Affective) Insanity;" a paper by J. G. Johnson, M. D., of Brooklyn, on "Poisoning by Canned Fruits and Meats." At the ensuing May meeting Dr. Carnochan will read a paper on "Cerebral Localizations."

"**The Proceedings**," published by the Medical Society of the County of Kings, Brooklyn, N. Y., with the completion of its eighth volume, will be discontinued, by order of the society. We regret to see it disappear from our exchange list.

Riverside Retreat, Painsville, Ohio, was burnt April 5th, and Drs. Marshall and House, the proprietors, announce that they are consequently compelled to suspend for the time being.

Philadelphia Neurological Society.—The following are the newly elected officers: President, Dr. S. Wier Mitchell; Vice-Presidents, Drs. Chas. K. Mills and I. N. Kerlin; Secretary and Treasurer, Dr. J. Hendric Lloyd; Recorder, Dr. Lewis Brinton; Council—Drs. Whar-ton Sinkler, L. Preston Jones, J. T. Eskridge.

CORRESPONDENCE.

MR. EDITOR:—Will you kindly permit me to say a few words about Sexual Perversion, in reply to Dr. Rice's paper. The latter says that it has but little forensic interest in this country, and I beg to differ with him. In the first place, it is quite generally admitted that lunatics and maniacs are not responsible, and irresponsible people are not to be punished for a thing that they cannot help doing.

When a man dons female attire, or *vice versa*, he either has an object or he has none. If he has an object, it may be good, bad or indifferent. If it is to conceal past crime, or as an aid to future crime, it is bad, and deserves punishment. If he seeks the disguise to enable him to ferret out a crime, the object is praiseworthy,—detectives are allowed it. In the third case, it must be said that the sole object is pleasure or satisfaction of some sort. Crime may be a pleasure to some, but if we exclude all evil intent, is it not harmless? Another case that resembles, sometimes one and sometimes another of the above, is when it is done for a livelihood; women give this as an excuse, a plea to be allowed men's dress; men rarely.

Quite a large number of cases are occurring in all large cities, of persons arrested for dressing like the opposite sex. But few are criminals; many are highly respectable and honorable. Should they be punished as criminals? If the object is good, No! If bad, Yes! If neither, what then?

It is self-evident that no sane man will take the pains and go to the expense of obtaining a full set of female attire, and persist in the practice of wearing it until he becomes expert in its uses, initiating himself into all the mysteries of a lady's toilet, submitting voluntarily to the tortures of tight corsets and high-heeled boots and false hair, hoops, pull-backs and frizzes, unless impelled thereto by some motive stronger than mere

mischief. There can be no doubt in my mind that such a miserable being deserves pity rather than punishment.

There have been several arrests in this city within five or six years for wearing female attire, and I believe nearly all the victims belonged to that innocent class, since no other object or purpose was ever proved against them.

Why should it be a *crime* to dress as you please? The dress itself inflicts punishment enough on its wearer. No one but the wearer is injured, nor need others be any the wiser for it. Certain it is that many of these poor people have suffered severe punishment at the hands of our judges, and with no one bold enough to defend them.

Is it not sad enough that they must suffer daily between two fires—love of this dress, and fear of punishment, which they have known to be swift and certain? Would the world be any the worse for allowing them this little modicum of comfort, the only pleasure they have in life, under proper restrictions? What these restrictions should be I am not prepared to say. Perhaps an asylum or retreat might be provided, where they could resort when these paroxysms came on, and there enjoy (?) in seclusion from the public eye, where the law could not reach them, such indulgences as might be deemed proper, or compelled to follow these practices until they were thoroughly cured of such desires. I know of one case, at least, that would be benefited, perhaps cured, by suitable treatment of this sort. I should be glad to hear the opinion of those of greater experience than myself.

E. J. H.

IN MEMORIAM.

DR. GEORGE ENGELMANN.—The death of Dr. George Engelmann was a serious loss to St. Louis and to science, especially to botany, to which he was a distinguished and enthusiastic devotee. In this allied department of medical science his reputation, as an original contributor, was cosmopolitan. Although a successful practitioner of medicine, it was in this department that he achieved the great distinction. He died in St. Louis, on the 4th ult., at 75 years of age. He was a native of Frankfort-on-the-Main, but St. Louis had long been his adopted home. In his twenty-fourth year his first contribution upon botanical subjects began, and he continued a faithful and accurate student and author up to the time of his death. His contributions, conjointly with Dr. John M. Bigelow, on the American Cactaceæ, prepared for the Government Surveys for the Pacific railroad in 1883-4, is a complete guide to this important order of plants. Only a few years ago he rewrote the entire genus *Pinus*, a work requiring such knowledge as he only possessed. This contribution was published by the St. Louis Academy of Science, in a handsome pamphlet, illustrated by a beautiful lithograph of *Pinus Elliottii*, a new pine discovered by Dr. Melli-champ, of South Carolina, and thoroughly identified by Dr. Engelmann as a distinct species. Several species of plants bear his name, and one sub-genus among the *Euphorbias* was named *Engelmannia* for him by Klotsch.

DR. LUNSFORD P. YANDELL.—In the death of Lunsford Yandell, of Louisville, Ky., on the 19th of last March, the medical profession of our sister Southern city loses from its constellation of illustrious medical names (past and present) a brilliant star, not so lustrous perhaps as some who have gone out before in that city of famous medical names, not greater than the Elder Yandell, nor yet so brilliant as the surviving brother, yet had there been but one Yandell in Louisville, the brightness of the departed Yandell's genius would have shone with transcendent brilliancy. But stars do not shine so brightly in the day-time, when all is light, as in

the night-time. Lunsford P. Yandell was a worthy son of a noble sire, an honor to the profession and to the medical university in which he taught so well. He died too soon to realize the expectations of his friends, or to reap the fruition of his own hopes, though in his time he did much to benefit the generation in which he lived. He was born on the 6th of June, 1837, in Rutherford County, Tennessee. His father, the late Lunsford P. Yandell, Sr., who died a few years since, was for more than fifty years one of the foremost medical men in the Southwest. Lunsford received his scholastic education in the school of Prof. Noble Butler. He graduated in medicine from the University of Louisville, in 1857. He was a classmate of the Junior Gross and Flint.

“ Who, looking backward o'er his manhood's prime,
Sees not the specter of misspent time?
Or from beneath the shade of funereal cypress,
Planted thick behind,
Hears no reproachful whisper on the wind,
From his loved dead?

Yet, who, thus looking backward o'er his years,
Feels not his eyelids wet with grateful tears,
If he hath been permitted,
Weak and sinful as he was,
To aid and cheer, in some ennobling cause,
His fellow-man?

If he hath been permitted to lift up the outcast,
Or let in a ray of sunshine to the cell of sin;
If he hath lent strength to the weak,
Or in an hour of need, mindless of his home or creed,
O'er the suffering form hath bent,
He hath not lived in vain.”

So lived not Lunsford P. Yandell in vain. For in his breast beat a philanthropic heart, always in sympathy with mankind, and his head and hand responded with skill and alacrity to every demand of duty.

The following, taken from the Louisville Sunday *Argus*, indicates the esteem in which the departed was held at home, and reflects also the regard in which his professional colleagues and the public held him abroad:

“ The death of Dr. Lunsford P. Yandell awakened a sense of profound grief throughout the city. Until within two hours of death he was active in the profession which he adorned by his learning, his genius, and his skill. His career had been marked by triumphs that might have filled the ambition of an older man. There had gathered about him a phalanx of friends, and the highest honors of his profession had blossomed on his

brow. He was an embodiment of manliness. His whole character was high, noble, and broad. Endowed with rare intellect, he had enriched it by studious culture. He practised his profession in the spirit of a humanitarian, and taught its great principles with a scholarly pen and an eloquent tongue. Dr. Yandell was an example and a pattern to his race. His life seems extremely brief, because it was unutterably precious to all who knew him. The community is filled with sorrow for the loss which has thus been inflicted upon them. It cannot be repaired. The name of Lunsford Yandell will survive the shadows of the grave."

His death was sudden, of paralysis of the heart, though he had had previous attacks. Regardless of their significance, he worked on, till he suddenly fell in life's battle, like the true warrior falls, fighting with face to the foe.

REVIEWS, BOOK NOTICES, &C.

BODY AND WILL; being an Essay Concerning Will in its Metaphysical, Physiological and Pathological Aspects. By Henry Maudsley, M. D., pp. 333, 1884.

To any one already acquainted with Dr. Maudsley's earlier works, nothing essentially new will be found in the present volume. In this as in all his earlier works, the writer is apparently animated with a grim, undying spirit of opposition to the "Introspective Psychology," and the "Metaphysical" and "Theological" theories of mind and mental operations. Indeed the preface to the present work is occupied almost alone with a declaration of hostility, to what he believes to be the mistaken views of the thinkers in question. The work is divided into three portions: "Will, in its Metaphysical Aspect;" "Will, in its Physiological, Social and Evolutional Relations," and "Will, in its Pathological Relations." The last two parts have been the subjects of extended discussions in his earlier productions. It is chiefly to the first part that the attention of the reader will be directed in this notice. Dr. Maudsley insists, in the strongest manner, on the necessity of having clear ideas and for attaching clear and therefore definite meanings to terms.

Everywhere he charges on "metaphysicians" and "introspective psychologists," as a chief sin, the lack of clear ideas, and of using words empty or nearly so, of real meaning. Under such circumstances we may naturally expect a practised author not only to have clear ideas, logically and scientifically well based, but that his ideas should be set forth in the most precise and simple terms, particularly, when discussing difficult and controverted subjects. But, after an attentive perusal of the work, we feel convinced that Dr. Maudsley has neither stated correctly the positions of those he opposes, nor has he placed himself above the charge of having used imperfectly defined ideas, and hence, of having used words devoid of clear significance.

In the present case we propose to enquire briefly what, according to Dr. Maudsley, are the views of his opponents to which he objects in such vigorous terms. Has he stated them fully and clearly? From the mass of his utterances on the subject in question, we select the following:

Says he, "Many of the advocates of the freedom of the will, * * * *
"are accustomed to speak of an act of the will, as if it were a chance event;
"thereby meaning, or persuading themselves they mean, not that some
"part of the will, its inmost essence, is outside the reach of present
"explanation, but that it is actually outside the order of natural causation: That will is essentially, a *self-procreating*, self-sustaining spiritual
"entity, which owns no natural cause, obeys not law, and has no affinity
"with matter. An immaterial entity in a material world, the events of
"which it largely determinates—such is the signal and singular position
"claimed for it." (P. 1.)

Again: "The initial difficulty is the capital one—namely, the conception in any degree of a power in nature so extraordinary, coming from an unknown without, has no genesis but an auto-genesis, deriving its subsequent energy from nothing but itself, subject to no laws of growth, though manifestly growing in the individual with his mental growth; a power which is not of the same kind nor has anything in common with anything else there, is without sympathy, affinity or relationship with the things which it works in and upon." (Pp. 2, 3.)

Or again: "If there be a power of this kind in the universe the obvious and instant reflection is that causation; not universal, as all the world is in the habit of thinking and saying; that there is a large region of human events which lies outside the otherwise uniform law of cause and effect." (P. 3.) "Unawares we find ourselves drifted by the theory [of his opposers] into the startling necessity of supposing that the sum of energy in the universe is not a constant quantity! that the law of conservation of energy, though a most useful work-a-day theory, is at bottom an illusive hypothesis, even within the limits of human experience." "Is it true then that we know immediately by consciousness that we have such an *entity* as the metaphysician means by will?" (P. 15.) "Consciousness tells us nothing whatever of a *general* will or an *abstract* will—entity." (P. 16.) "What the metaphysician has done is plain enough: he has converted into an entity the general term which embraces the multitude of particular volitions themselves varying infinitely in power and quality, and has then referred them all to it as cause. So he talks habitually as if will had always the same nature, whereas there is no such thing as one and the same will-nature; such will having its own nature and development, being itself an independent reality. With the disposition, powers and habits of each mind as different as the constitution, temper and activity of each body * * * A general will is not an entity; it is no more than a notion." (P. 17.) "Are they [the metaphysicians, etc.] thereupon willing to maintain, in opposition to the overwhelming evidence of facts, that animal volition [volition in the lower animals] is of essentially different kind from the lowest human volition, no animal possessing jot or tittle of ultra physical essence." (P. 120.) Finally he says, "Let us now inquire closely what are the grounds of the metaphysician's clear conviction that he has a will, and that it is free. His consciousness makes him the revelation in so plain a way that all the counter arguments in the world cannot invalidate its direct and positive testimony. * * * * Is it true then that we know immediately by consciousness that we have such an entity as the metaphysician means by will?" (P. 15.)

To these few passages many more might be added of the same tenor, all however, going to show what the understanding is by Dr. Maudsley, of the nature of the views held by another respectable class of thinkers. We will abstract in brief from the quotations just made a few of the doctrines referred to.

Metaphysicians, introspective psychologists and theologians, hold, it would appear, to the following among other notions respecting the will:

1. The will is a self-procreating, self-sustaining entity; has "*no genesis*

but an auto-genesis," and hence, derives and renews its energy "from nothing but itself."

2. The will has no "affinity," "sympathy," or "relationship" whatever with the material world [including in this category the matter of the brain] the events of which [the material world] it largely determines notwithstanding.

3. The will is not subject to any law [natural law?], but instead, its action is wholly arbitrary, unless perhaps, when under the direct constraint of an exercise of the will of God.

4. That there is such an entity as "a general or abstract will," common to the human race as to the individual.

5. That the metaphysician holds that his "consciousness reveals to him immediately will as an entity."

6. That will in the lower animals is probably essentially different in kind from the human will, even in the lower manifestations of the latter.

7. That the metaphysical and theological theories of the nature and action of the will involve what is tantamount to a denial of the generally acknowledged relation of cause and effect.

Such, briefly stated, are a few of the erroneous notions found by Dr. Maudsley as held either explicitly or implicitly by the classes of thinkers already named. It is true, many isolated passages may be found in the body of the work the tone or substance of which are more or less contradictory to the plain meaning of the quotations made from the formal utterances of the author in the first part. But we do not recognize it as a duty in this case to endeavor to harmonize what appear to be contradictions. We adopt simply what seem to be the most careful and deliberate utterances found, as representing an author's matured views, as criteria in estimating the consistency and value of his productions.

If we accept the above, as fairly correct abstracts of Dr. Maudsley's statements of the views of others, we feel justified in declaring that no respectable "metaphysician" or "introspective psychologist" in modern times would acknowledge the above list of characteristics as properly belonging to his philosophy of the will.

It would lead us too far to enter on a closer discussion of the meaning of terms like "nature," "law," "cause and effect," "entity," "essence," etc., which Dr. Maudsley nowhere adequately defines in this work. But nothing is better known to respectable thinkers, than that satisfactory definitions of the above and other radical terms, are all but impossible in the present state of knowledge; and that but few independent definitions of such terms, even by the most critical and careful writers, agree in many essential particulars, and yet these are the very words applied to the things under discussion. But perhaps we may find some help by ascertaining, if we can, what Dr. Maudsley understands the words "will," "motive," "responsibility," etc., to mean.

What is will, according to Dr. Maudsley? "Will, as it works in human affairs, is a power which does not stand outside the range of natural causation." (P. 14.) Here, will is admitted to be a power, but what are the precise limits and meaning of the term "natural" as here used? In the following passage is stated, by implica-

tion, the same idea as in the paragraph just quoted. He says, "For the most part those [metaphysicians, etc.] who upheld a power of this kind [free-will], self-determined and self-determining, free not merely to act, but to be, do not go so far as to say that motives are not at work continually in the mind, or that the will takes no account of them; but what they do earnestly protest is, that in the motivation of will there is not the uniform, inseparable connection between motive [cause] and will [effect] which there is between cause and effect in physical nature."

* * * "The particular will [act of will or volition] is not the unconditionally necessary consequent of antecedent motives." These quotations, with many others of the same tenor, show that Dr. Maudsley considers that an act of volition (whatever else may be said as to its nature) comprehends two factors; first in order being a *motive*, and next, the *act*. This order is not only chronological, but logical. The motive is not only the *invariable antecedent* of an act of will, but its necessary and *efficient cause*. In cases where a special motive, or group of motives, cannot be found as the immediate and natural antecedent of an act of will, Dr. Maudsley labors through dozens of pages of his work to show that we are obliged to postulate efficient causal motives, even if these have to be sought in the fathomless abyss of conjectural volitional experiences of past generations along the lines of man's assumed descent from the lower animals. Throughout his work, Dr. Maudsley clearly shows he is a partisan of the necessitarian view of will as against the doctrine of a free-will. The final appeal, as usual, is made to our ignorance rather than to our knowledge, as against the common sense view of mankind; that in human beings when sane and healthy, and after reaching "years of accountability," the will, whatever it may be, is *free on moral grounds*. His argument on this point is elaborate, tiresome, is not novel, and exhibits an almost pitiable sacrifice of sound logic, particularly when the point is reached of reconciling his doctrine of will to the stern facts of moral responsibility for the consequences of conduct. But it is practically impossible to critically define the position of Dr. Maudsley, in respect to the fundamental nature of will, without a clearer understanding as to what is his view as to the *nature of causation*. Does he, as Hume did, for example, degrade cause to the level of a mere antecedent in time of its alleged effects, or does he, like most other thinkers, charge the antecedent with *power* to evoke or produce effects? Certainly the position he assumes in common with many others, is a strange one, in view of all the facts.

The position to which we refer, is essentially: that motives are not simply the mere *occasions*, furnishing rather the *reasons*, than the *causes* for will action; but that motives are the *deus ex machina*, the actual *forces* or *powers* of volition, as truly such, as is the power in a magnet the cause of motion of the bits of steel it attracts; motive being compared to the magnet, and will, to the bit of steel set in motion.

The deep-rooted belief, among all peoples, in all ages, that sane and healthily constituted human beings are responsible for the consequences of their deliberate or purposive acts, and that they should be punished or rewarded, according as the consequences are good or bad; and on which

view, all moral systems worthy of the name, all law, etc., are based, is consistently pronounced by Dr. Maudsley, an "illusion."

But it would be a long, and in a measure unprofitable task, to follow Dr. Maudsley any farther, in his discussion of the nature of the will. Happily, the practical part of his book, in which he, for the time forgets his formal doctrines, is much to be commended. For there are many acute and suggestive statements, concerning real or supposed disorders of the will. But these are not novel. In them we do not find the main purpose of the work; which is manifestly to set forth the author's long meditated theory of the nature of will, in unfavorable contrast with what he understands to be, the theory of the "introspective Psychologists" and "Metaphysicians." We are sorry to feel obliged to think, that this little book is not likely to enhance the reputation of its author.

J. S. J.

CHEMICAL DISEASES OF THE BRAIN AND SPINAL CORD.—Such is the title of a paper recently published by Dr. Thudichum. As examples of these chemical diseases Dr. Thudichum instances locomotor ataxia, chronic alcoholism, lead and arsenic poisoning, etc. Locomotor ataxia, from a pathological stand-point, is an affection of the white substance of the cord, consisting essentially of the gradual destruction of nerve-fibers. This is accompanied by the formation of microscopic bodies having a reaction with iodine analogous to that of lignin, and not starch. Hence the name of these bodies, *amyloid*, is incorrect, as is the title of the change with which they are associated, viz., *amyloid degeneration*. The same error, says Thudichum has been propagated regarding the so-called amyloid degeneration of the liver, spleen, etc. The iodine reaction of this latter substance is mahogany brown, a color not diagnostic of any chemical principle with which we are acquainted. Another error into which physiological chemists have fallen is that of calling the so-called amyloid matter an "albuminous" matter, an error dating from the results of Prof. Kekulé's analysis of an amyloid liver treated by extraction with caustic alkali and subsequent precipitation by an acid. Naturally and necessarily, continues Thudichum, the *precipitate* had the composition of albuminous matter. True amyloid matter, however, is not precipitated by caustic alkali, nor does it contain nitrogen, and it is very probable that it is nearly related to, if not identical with cellulose

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It would be interesting to notice Dr. Thudichum's remarks concerning the cerebrosides or cerebral amylosides in their relation to *cerebrose diabetes*, a kind of acute glycosuria, but space does not permit. We pass, therefore, to a consideration of the phosphorized and nitrogenized principles of the brain. These principles, by their faculty of assuming and maintaining the colloid state, may be said to build up the nerve-fibers and the accumulation of nerve-fibers known as nerve-centers, which enable the brain to maintain its accurate distribution in the cranial cavity. Not only is Thudichum willing to admit the truth of Moleschott's aphorism, "no thought without phosphorus," but he thinks it highly probable that phosphorus, the ingredient of the brain present in smallest quantity, may be the most indispensable. The phosphorized substances are present in all nerve-matter, particularly in the gray substance, and are found in every

center of life-action. Bearing this in mind, and considering that, in the water-swelled colloid state, these substances combine with almost all chemical reagents with which they come in contact, provided these reagents are in relative excess, and that the combinations are broken up by a simple process of dialysis, we have a key to the *raison d'être* of a great deal of brain disease—probably also to diseases not referred to the brain.

For the present purposes, says Thudichum, we may lay aside our knowledge of the anatomy of the brain, and consider it a mere lump of matter, endowed with chemical properties maintained by its own life—or as a colloid septum with arterial blood on one side and venous blood and cerebro-spinal fluid on the other. If now, the blood carries a lead salt to the brain or nerve, a combination is immediately formed between it and the cephalin, or myelin; the combination with myelin being very stable, that with cephalin quite unstable. Other proximate principles, such as lecithin, apomyelin and anilin, do not combine with the lead salts. The reason is apparent. Cephalin and myelin have acid characteristics; myelin, indeed, behaves as a dibasic acid, while in lecithin, apomyelin and anilin the alkaloidal character prevails, and these bodies combine more readily with alkaloidal reagents, as cadmium chloride, platinum, chloride, etc. Recognizing lead-poisoning, therefore, as nerve-poisoning (from the formation of lead salts with cephalin and myelin), our therapeutics must be directed toward breaking up these combinations by the administration of an agent which will itself be broken up by contact with the lead, and form another lead salt. In seeking for this agent we find that we have been anticipated. Iodide of potassium has long been recognized as an efficient agent in chronic lead-poisoning. It is known, too, that it will act more readily when large quantities of water are administered with it. From a chemical point of view it will be seen that a better antidote to lead-poisoning could scarcely be given than iodide of potassium and large quantities of water; for iodide of potassium being comparatively unstable, the contact of it with a solution of a lead salt immediately causes the formation of iodide of lead, thus setting free the potassium. The water administered now comes in for its share of the work. The vessels are deigned with a solution of potash, a highly diffusible liquid, and a stimulant of liquid secretion. The iodide of lead is soluble in the potash solution, and fresh quantities of potassium iodide being constantly added to break up the new combinations between the lead solution and the cephalin and myelin, the system is gradually rid of the offending substance. We have thus a *rational* basis for the administration of potassium iodide in lead-poisoning.—[Abstracted from editorial in *New York Medical Record*, of March 8th.

THE AMERICAN PSYCHOLOGICAL JOURNAL (the first and only number yet received being Vol. I., No. 4, January, 1884), a Quarterly, issued by the National Association for the Protection of the Insane and Prevention of Insanity. Edited by Joseph Parrish, M. D., of Burlington, New Jersey; and C. L. Dana, M. D., New York City; Alice Pennett, M. D., Norristown, Pa.; W. W. Godding, M. D., Washington, D. C.; A. H. Bannister, M. D., Kankakee, Ill.; J. C. Shaw, M. D., Brooklyn, N. Y., as Associate Editors,

Is before us, with the following Table of Contents: *Original Articles*.—

Our Asylums and Our Insane, by Samuel Ayres, M. D.; Punishment a Factor of Inebriety and Insanity, by T. D. Crothers, M. D.; Our Insane Neighbor; His Rights and Ours—Rights in the Community, by W. W. Godding, M. D.; The Progress of the Non-Restraint System, by J. C. Shaw, M. D.; The Psychological Aspects of the Trial of Edward Newton Rowell, at Batavia, N. Y., by Edward C. Mann, M. D. *Editorial Department.*—The Past and Future of the Journal; The Cure of Insanity; The Employment of the Insane; The Treasurer's Call; Prevention of Insanity; Tests for Insanity; Medico-Legal Society of New York; The State Lunatic Asylums of New Jersey; A New Definition of Insanity; Book Notices. *Correspondence.*—The Rights of the Insane. *Selections.*—Is Gouldstone Sane? The Promotion of Sanity; The Better Treatment of the Insane; The Insane at Home; The Cure of Insanity; Humanity's Bonfire, 1883; Insanity and Somatic Disease; Mischievousness; Epidemic Religious Excitement. *Miscellaneous.*—National Association for the Protection of the Insane and the Prevention of Insanity—List of Officers and Members. P. Blakiston, Son & Co., Philadelphia, 1012 Walnut Street, 1884. There is a field and a work for this new journalistic enterprise. If the field be worked judiciously, good will come of the work to society and to the insane. If it is not worked wisely much harm may be done to both. Here, as always, power comes of knowledge, and harm cannot come from a thorough knowledge of the wants and rights of the insane. The spirit to protect the insane is a good one, and it will lead to a wider knowledge of insanity outside of asylums, and that is what the welfare of the insane requires. Emotion has sometimes taken the place of reason in the conclusions of the National Association for the Protection of the Insane, but more knowledge will lead the emotions in right channels.

The editorial conduct of this journal is in good hands, and we indulge the hope that it may labor not in vain to extend a knowledge of the insane and advance their interests.

SHAKESPEARE AS A PHYSICIAN, is one of J. H. Chambers & Co.'s recent publications, from the pen of Dr. J. Portman Chesney, Professor of Gynæcology, in the Northwestern Medical College, St. Joseph, Mo.

This book is nearly the size of "Shakespeare's Medical Knowledge," written in 1860, by Dr. John Charles Bucknill, of London, but the arrangement is quite different.

Bucknill takes up the different plays of the great dramatist, seriatim, picking out their medical language, while the author before us introduces "Shakespeare's Medical Knowledge" under various headings, which he has indexed as Abortion, Ague, Anæsthesia, Cæsarian Section, Dyspareunia, Epilepsia, Madness, etc. The index contains no reference to feigned insanity, nor have we noted any discussion of this subject in the book in our cursory glance through it. Yet the characters of Edgar and Hamlet are good examples of simulation, coupled probably with some real insanity. The author's criticism on the passage, "His sleep was hindered by the railings, and thereof comes it that his head is light," viz: that the pathological condition upon which the morbid mental manifestation depends, has precedence always, to the morbid vigi-

lance—the sleeplessness being but a symptom is only partly correct, as insomnia may be induced in the beginning of a cerebral instability which may be the precursor of insanity in the psychopathically predisposed, or it may be enforced by conditions totally extraneous and disconnected from neuropathic heredity; and yet, if it be sufficiently prolonged it may engender a state of cerebral instability incompatible with the persistence of sanity.

The author has made a novel and interesting arrangement of Shakespeare's medical knowledge, and has written a book of exceeding interest to every physician accustomed to read and admire the versatile genius of the great dramatist.

He has not, however, we think, comprised every word which in any way relates to medicine, in the department of psychiatry, and we can but regret that Bucknill's "Shakespeare's Medical Knowledge," and "Shakespeare's Illustrations of Insanity," by Ray, were not familiar to the author at the time he was preparing this new book. The author's "conception of presenting Shakespeare's medical knowledge in a complete and connected form" is not, therefore, original, as he conjectures, but his style is, and very agreeable and instructive, especially to the medical reader.

The medical discussion, such of the different subjects as we have carefully read, is intelligently done, in accordance with the enlightened knowledge of our time, and reflects credit upon Dr. Chesney, who is a well-known and capable practitioner, of St. Joseph.

We regret that the book has not come to us sooner. The book is gotten up in good style, on good paper, cloth bound, and is for sale by Chambers & Co., the well-known publishers, of St. Louis, Chicago and Atlanta, and by dealers in Medical Books generally.

Studies from the Biological Laboratory of Johns Hopkins University, of Baltimore. Editor: Newell Martin, M. A., D. Sc., M. D. Associate Editor: W. K. Brooks, Ph. D. Vol. III. No. 1. Contents: I.—Significance of the Larval Skin of Decapods. By H. W. Conn. With Plates I and II. II.—Life History of *Thalassema*. Abstract. By H. W. Conn. With Plate III. III.—Of the Gill in some forms of prosobranchiate Mollusca. By Henry L. Osborn. With Plates IV., V., VI.

The Studies from the Biological Laboratory, issued from time to time, contain the majority of the original scientific papers published by members of the Biological Department of the University. The subscription price, for the volume of about 500 pages, is \$5.00, payable in advance to Mr. N. Murray, Johns Hopkins University. Single numbers may also be purchased, at a price varying with their size and the number of plates they contain.

The Proceedings of the Naval Medical Society. Contents: Double Aneurism of the Arch of the Aorta; Dr. Joseph H. Bryan, U. S. N. Case of Oxalic Acid Poisoning; Dr. John C. Wise, U. S. N. Hypertrophic Nasal Catarrh; Dr. Presley M. Rixey, U. S. N. Yellow-Fever on the U. S. S. *Iroquois*, 1883; Dr. J. W. Ross, U. S. N. Conclusions as to the Outbreak of Yellow-Fever at Pensacola in 1882; Dr. William Martin, U. S. N. Notes on the Yellow-Fever at Pensacola in 1883; Dr. Daniel M.

Guiteras, U. S. N. Remarks on Yellow-Fever; Dr. Adolph A. Hoehling, U. S. N. (Vol. I., No. 5.)

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Cosmetics; their Constitutents and General Effects, with a few Special Cases other than Saturnism. By James P. Tuttle, A. M., M. D., New York. This is an interesting and instructive contribution to this subject, which appeared in the *New York Medical Record* of March 8, 1884.

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A contribution to the Morbid Anatomy of Pons Lesions, including a Description of a Descending Degeneration of the Stratum Intermedium. By Edward C. Spitzka, M. D., Professor of Neuro-Anatomy and Pathology at the New York Post-Graduate Medical School, etc. (Reprinted from the *American Journal of Neurology and Psychiatry* for November, 1883.)

The Disease of Inebriety and its Social Science Relations. By T. D. Crothers, M. D., Superintendent of Walnut Lodge, Hartford, Conn., Editor of *Journal of Inebriety*, etc. (Read before the American Social Science Association, at Saratoga, New York, September 5, 1883.)

Aneurism of the Femoral Artery, and a Knife-Wound of the Intestines. By W. O. Roberts, M. D., Professor of Surgical and Operative Surgery in the University of Louisville. (Reprint from *American Practitioner*, October, 1883, and January, 1884.)

Arrest of Development caused by Intra-Uterine Pressure. By H. F. Hendrix, M. D., Lecturer on Obstetrical Emergencies, in the College for Medical Practitioners, of St. Louis. (Reprinted from the *St. Louis Medical and Surgical Journal*, February, 1884.)

Clinical and Pathological Reports of Cases of Insanity. By S. V. Clevenger, M. D. (Reprinted from the *Chicago Medical Journal and Examiner* for February, 1884.)

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Announcement of the Baltimore Polyclinic and Post-Graduate Medical School, 112 Hanover street, Baltimore, Maryland. Session of 1884.

Disadvantages of the Upright Position. By S. V. Clevenger, M. D., from the *American Naturalist*. Vol. XVIII., No. 1, January, 1884.

The Reciprocal Attitude of the Medical Profession and the Community. Alexander Hutchins, A. M., M. D., Brooklyn, N. Y.

Tribute to the late James Marion Sims, M. D., LL. D. By W. O. Baldwin, M. D., of Montgomery, Ala., November, 1883.

Descriptions of Matley Hill. (Reprint from an editorial in the *Maryland Medical Journal* for November 15th, 1880.

Sixth Inaugural Address of Clark Bell, President of the Medico-Legal Society, delivered January 9th, 1884.

Medical Symbolism. By T. S. Sozinsky, M. D., of Philadelphia.

Palato-Plasty. By David Prince, M. D., Jacksonville, Illinois.

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ORIGINAL CONTRIBUTIONS.

On the Aberrations of the Genesis Sense.

By DR. P. MOREAU (de Tours), Paris, 1880.*

AS we have not the above work in possession, and it is not likely that it will soon appear in our own tongue, we are constrained to avail ourselves of a rather lengthy review of it, by the distinguished Dr. B. Salemi Pace, Professor of Phreniatría, University Palermo, presented in that excellent periodical of the medical and psychological sciences, *Il Pisani Gazzetta Sicula*, Palermo, 1880.

It may be that some of the more fastidious of the readers of the ALIENIST AND NEUROLOGIST will regard the subject treated of by Dr. Moreau, as one unsuited to the taste and the moral delicacy of American psychologists, yet it will hardly be denied that whatever relates to the afflictions of humanity, and may contribute to a clearer knowledge of their intimate nature and their most rational treatment, falls legitimately within the province of phreniatric science. We can no more see why the alienistic specialist should ignore the unpleasant facts, which are but too often, in his peculiar sphere of action, obtruded on his observance, than that the gynecologist should, through a similar mistaken delicacy, abstain from a thorough clinical examination of the organs whose

* Translated by Joseph Workman, M. D., Toronto.

morbid conditions he is called upon, and is imperatively required, to treat with all possible competency; nor certainly will his patients regard him with less favor, or place less reliance in his skill and ability, because they have learned that he has made himself well acquainted with the wide literature of his art.

Whether Dr. Moreau is right in his belief, that we ought to admit, as a demonstrated fact, the existence of a sixth special sense, designated by him as the *genesisic*, is a question which may, for the present, be left *sub judice*. Our concern is with the rational etiology and the actual pathology of those psychological aberrations which he has delineated under such strong, but doubtless very faithful colors.

However repulsive may be some of the historic facts given by Dr. Moreau, we think a very profitable application of them will be made by every enlightened and candid reader, as to the moral influences under which modern society has been brought to its present elevated condition. Paganism, even in its close association with Grecian and Roman philosophy, was but the prolific parent of moral corruption, and the fostering nurse of human depravity. Christianity, even in its infancy and its corrupted adolescence, inculcated the lessons of moral purity, which, though often disobeyed, and often hypocritically acknowledged, yet never lost the spirit that inspired and pervaded them, nor the vitality which has preserved them through so many centuries. It is our blessed privilege, to-day, to live under their benign and elevating dominion.

TRANSLATION FROM THE ITALIAN.

Part 1st.—This is a fine volume of about 300 pages 8vo, of which the polite author has made us a gift, for which we are very grateful. It is intended as an investigation of the causes, and the nature of attempts at sexual violation, which are presented in France in very deplorable increase. The returns of the administration of criminal justice show, as offenses against public order, in 1876,

the terrible number of 875 rapes and attempts against chastity, all upon young persons. In 1872 there were 682; 1873, 703; 1874, 825; 1875, 800, bordering on 4,000 of these unfortunates in five years.

“For many years past,” says the author, “my attention has been directed to this subject, and therefore I propose to search for the prime cause of such disorders and aberrations, and to study them by passing under review the different forms assumed by them.

“The assemblage of the facts which have suggested our labor have led us to accept, as an absolutely demonstrated fact, the psychical existence of a sixth sense—the *genital sense*.

“Supported by numerous examples, we trust to show that this sense has special functions, distinct from those of other apparatus, and that as happens to the other senses, it may be lesed psychically without the integrity of the mental functions, whether affective or intellectual, having suffered with it.

“Alongside, however, with certain evident facts of the morbid nature of which there cannot be the least doubt, there are some others which do not, properly speaking, throughout appertain to mental alienation; but their analogy to it is so great as to decide us to assign to them an important position in this work.

“Under these points of view we do not, however, intend to exculpate the miserable beings addicted to the base vice; we would have them to be considered not as true *malefactors*, but as *diseased* persons, whom, because of being such, it is not the less necessary to prevent injuring society.

“This affection, which falls upon the genital sense, dates from a very remote antiquity. Who does not recall to mind the orgies of the famous times of the Twelve Cæsars in Rome?”

At this point, the author, wishing to pursue the historic study of the aberrations of the genesic sense, divides them into three groups.

1st.—*Antiquity*; represented by the history of the emperors and empresses of Rome.

2nd.—*The Middle Ages*; represented by the great neuro-pathic epidemics of every sort, and above all, by that of belief in the incubi and the succubi.

3rd.—*Modern Times*; represented by the saturnalia of the regency and reign of Louis XV.

As the complement of this résumé the author next passes rapidly under review the different religions which have elevated genésic insanity to the height of a homage rendered to divinity.

As regards the first group he passes under notice the lives of Julius Cæsar, Augustus, Tiberius, Caligula, Claudius, Nero, Galba, Otto, Vitellius, Titus, Domitian, Elagabalus, Trajan, Adrian, and Commodus, who were all given over, more or less, to unbridled luxury and lust, which were frequently accompanied by ferocious and brutal sensuality, so that well might the spontaneous exclamation be uttered, "But they must have been mad, to commit such monstrous acts!" Yet how explain this strange mixture of horrid extrahuman vices conjoined with the rare intellectual qualities with which almost all these personages were gifted? Was it not under their reign that the artistic military and literary glory of the Roman people was raised to its summit?

There is nothing strange in these facts, says the author, when we reflect that they were but the consequence of that genésic erethism which throughout two centuries reigned as an epidemic in Rome, and that the ferocious and base vices of the emperors were a necessary effect of their hereditary organization. Have not recent publications demonstrated that the intimate nexus between the most splendid mental faculties and affective and moral aberrations of every sort, is a fact at once physiological and pathological, emerging from the laws which preside over the evolution of our organs?

The same reflections apply to the Roman empresses,—Agrippina Massalina, Poppea, Domizia, Soemis, the two

Faustinae, Crispina, Titiana, the two Juliae, Nona, Celsia and Lucilla, all corrupt and corrupting women, who have left in history a lurid path-mark of ignominy, though some of them were conspicuous for great spirit and talents. There can be no doubt, the author thinks, as to the morbid nature of the disorders and unheard-of infamies of which these empresses made a show to the world; and among the most frequent causes of aberrations of the genital sense, heredity, according to Lucas, Moreau de Tours, etc., holds the first rank; so also in these personages there were present the hereditary germ and the predisposition to mental alienation.

[NOTE.—In *Il Pisani*, 1881, Dr. P. B. Ribaud has published an article on “Nymphomania and Transfusion of Blood” (into the peritoneal cavity), in which he has dealt even less delicately with the Roman emperors and empresses than Moreau de Tours. It would indeed be impossible to turn the disgusting details, which have been derived mainly from the Roman historian Suetonius, into any sort of English garb that would be inoffensive even to the readers of works on insanity. What must have been the moral condition of the empire, not only when such deeds were common, but even when the bald records of them were perused with gratification by the cultivated and refined?]

The Middle Ages.—These are represented by great neuropathic epidemics of every sort, but above all, by the belief in *incubi* and *succubi*; the former were demons transformed into men, for the service of women; the latter were the same demons transformed into women, for the service of men.

Demonomania predominated in those times, often concomitant with genesic insanity, a neuropathia capable of appearing in epidemic form, on a par with those of hysteria, convulsions, chorea, etc., etc. Here the author proceeds to narrate not a few examples of individuals, among whom were several religious men and women in the cloisters. The illusions and hallucinations in these,

associated with genital hyperæsthesia, were such as to lead the unfortunate victims to the most strange manifestations, which, in those lovely times, ended at the stake.

At the very time that the fires were lighted for the incubi and succubi, illustrious persons who have left behind them merited renown, yet obscured it by their unbridled and monstrous lewdness. Such, not to cite other examples, were Maria of Aragon, Joanna of Naples, Sextus IV., Leo X., Julius III., Francis I., Henries III. and IV., and Louis XIV.

Modern Times, are represented in France by the saturnalia of the regency and reign of Louis XV. They commenced with Philip of Orleans, in the beginning of the last century. This prince was a mixture of great and little things, of duties and infamies, and he thrust corruption into his own family and the whole court. Endowed, however, with an ardent spirit and great aptitude, he passed for one of the most distinguished men of his age.

What shall be said of Louis XV., who, like Henry III., lived in a perpetual alternation of libertinage and devotions? Here the author exclaims "devotions altogether Italian!" These words, in truth, bring to my remembrance those others uttered by General Trouchu on the Italian corruption as the cause of the French disasters at the hands of the Prussians. Truly there is in such words something of a rather watery spirit, but not of wisdom or truth, at least according to history.

These sovereigns, before giving themselves up to the most unbridled lust, prayed to God, with their concubines, for some hours, and then drowned their heavenly inspirations in the most brutal luxury.

The Princess Elizabeth, daughter of the Regent, queen of Spain, the Count de Charlais, and the celebrated Marquis de Sade, with other high personages, rendered the era in which they lived horribly scandalous. It is related of the last-named, that in a sumptuous banquet with a ball, he made the guests eat the most savory pastries, spiced with cantharides. At a certain point of

the festivity they, both men and women, became so excited by genesic fury, that, having lost all shame, they transformed the halls into so many brothels,—a spirited invention, and altogether French. It is also related of this same Marquis, that he drove the brutality of his obscene acts to such a pitch, as to cut away the pudendal parts of a woman, whom he had previously tied down, to open her veins, and in the midst of blood he accomplished his brutal purpose.

All this, says the author, leads us to conclude that these persons could not have abandoned themselves to so many brutalities, unless they were mad. The historical picture is completed with a notice of the principal religions, which have elevated genesic insanity to a homage rendered to divinity.

All the ancient ceremonies in honor of the active principle of generation passed from India into Greece, Italy and Egypt. It is easy to be understood to what excesses luxury, fanaticised by the spirit of religion, may attain; and not few in number were the festivals devoted to the solemnization of this holy lust.

After this brief résumary history, we believe, writes the author, that the existence of the genesic sense will no longer be doubted by any one. And it is a *sense of distinct individuality*, having its appropriate function, which may, as the other senses, be lesed psychically and physically. It is therefore necessary to report the facts under their just point of view, in conformity with modern science. The present study of morbid psychology, by rendering clear the nature of mental affections, permits the entrance of all the phenomena into the great family of the neuroses. Examination of the different forms of the lesions, which may fall upon the genesic sense, will prove that we have not been led astray by fantastic conceits; this will be proved by what follows:

Part 2nd.—Etiology.—The author, without denying the influence of provocative, determining and objective causes, reasonably adds that these do not act undistinguishingly on

all persons, a *special soil* is wanted, a soil prepared either by the particular circumstances of the individuals' surroundings, or one prepared by heredity. Under these points of view, in order to give a little order to so great a variety of causes, he groups them in the following manner:

General Physical Causes.—Misery, age, constitution, temperament, the seasons, climate and nutrition, have no little influence in constructing those circumstances under favor of which the genestic sense acquires abnormal development. Misery, from the close assemblage of the sexes in limited spaces, and where the bad example of adults corrupt the younger; the age, from the greater *stimuli* at the period of *puberty*, and from the loss or diminution of the moral sense in *senility*; *constitution* and *temperament*, as the physical source of the passions; erotic tendencies are in fact most peculiar to sanguine and nervous temperaments; nor less doubtful is the influence of the *season* and of *warm climates*, so that from the burning skies of the East the most voluptuous rites and religions have descended. In France, statistics show the greater number of rapes and attempts in the months of April, May, June and July. Lastly, *nutrition*, when it over-excites the nervous system, may produce its pernicious consequences.

Individual Physical Causes.—Under this head are comprehended the defects of conformation, congenital or acquired; as hermaphroditism, phymosis, hypospadias, anorchidia, castration, etc. Now, asks the author, may not each of these causes, in consequence of the lesions of disorders in the organism, produce a lasting disturbance in the exercise of the intellectual faculties? He instances some demonstrative facts, resting on the relations between the sexual appetites, or better to say, between the sexual centers, and the intellectual; in fact, hypochondriasis and lypemania are common in individuals who have undergone genital mutilation.

Diseases of the Genital Organs.—These are frequently causes of genestic insanity, and these diseases are in their

turn, the consequence of scrofula and arthritis, but chiefly of skin diseases. Pruritus, invading the genital parts, may incite to abuse of coitus, or to Onanism, and thus devolve a sympathetic excitement on the principal nervous centers, with all its consequences.

Among the uterine affections capable of greatly altering the cerebral powers, and above all, in the sphere of illusions and erotic hallucinations, are enumerated cancer, ulcerations of the cervix, vegetations, depressions, displacements, metrites, and not to be forgotten, the presence of foreign bodies. In man, tubercles of the testicles, syphilitic testicle, pruriginous irritations, and in general all the grave affections of the genital organs.

Disturbance of the Physiological Functions.—Any alteration that may happen in the physiological functions of the organs, may, according to the peculiar individual dispositions; cast an abnormal consensus on the cerebral organs.

The author, in considering all the circumstances capable of producing hallucinations and genesic aberrations, notes injuries of the spinal cord, and medullary affections; the ingestion of cantharides, cannabis indica, etc., and alcoholic liquors. In rare instances, some diseases, as chlorosis, pulmonary irritation of phthisis, dysmenorrhœa, amenorrhœa, leucorrhœa, convulsive affections and rabies, evoke a consensus of excitement in the genital organs. The author supports his views by some examples.

Sexual relations abusively practised, illicit movements, and the different forms of gratification, whether solitary or associate, may, by altering the cerebral and sexual sensibility, induce psychical disorders which are sometimes incurable. "Masturbation," wrote Esquirol, "by exalting the sensibility of the nervous system, predisposes to erotic delirium.

In the origination of these ideas, extreme continence has not failed to produce, in both men and women, mental affections, preceded or not by other nervous disturbances. In truth, the commands of the laws of

nature will not be thwarted with impunity, and any violence whatever offered to the physiological destinations of organs, it matters not by what name it is called, must not only pervert their functions, but also surely evoke a consensus on the others, and chiefly on the psychical.

General and Individual Moral Causes.—Heredity, direct or transformed, holds the first rank. The physical nature, in like manner as the moral, has really its anomalies, and of all the passions, the sexual presents the largest number of transmissions, if history is to be believed.

An affection which may have appeared in ancestors, may, in passing over another generation, assume a new form; thus insanity may be inherited from consumptives, and *vice versa*. From a due valuation of the transformations which constitute *transformed heredity*, many facts otherwise incomprehensible may receive a plausible explanation.

Depraved instincts, a vicious, indulgent education, which keeps the senses in a state of erethism by lascivious readings, use of perfumes, etc., as also evil examples, imitation, impressions received in early age, intense and unrequited love, and prolonged sexual preoccupation occupy a large field in the exaggeration, or the aberration of the genital sense.

Pathological Anatomy.—In this chapter the author makes a brief and judicious résumé of the different opinions tending to the localizing of the *genesic sense*, and then concludes thus: "Who must we say is right? Gall, who localized this sense in the cerebellum? Budge, who placed it in the medulla spinalis? *Luys*, who makes the conducting fibers of the genital incitations terminate at the level of the third ventricle?" On the other side, not a few experimental and clinical facts given by Valentin, Wagner, Lusanna and others, seem to favor the hypothesis of Gall, in assigning to the cerebellum, *though to the median lobe alone*, an important action in the manifestations and exercise of the genital instinct. And now the author concludes with the words of Esquirol, "We know nothing of it."

Symptomatology.—The symptoms which distinguish the genesic delirium from others, and permit its being held as a special affection, vary, yet there is always a common foundation for all the numerous forms under which it may be presented. The delirium arising from lesion or aberration of the genital sense may, in like manner as all the other affections of the sentiments, disturb the imagination, pervert the judgment, and render intolerable the unfortunates who become the victims of an alienation that spares neither sex, age nor rank.

The demeanor soon discloses genesic insanity, by its softness of manner, its sparkling glances of voluptuousness, the peculiar color of the skin, its loose conversations and actions, etc., etc. The alteration produced on the nervous system and the intelligence is very profound, and it is easy to foresee the consequences.

The different states under which insanity connected with the sexual function is presented, are, according to the author, the following: 1st, Intellectual anomaly; 2nd, The different insanities of puberty, the post-connubial, etc., etc.; 3rd, Erotomania; 4th, Nymphomania; 5th, Satyriasis; 6th, Absolute genital perversion, bestiality, etc.; 7th, Violation or rape.

There is, the author says, a class of individuals (anomalous intelligences) who cannot be confounded with either the truly reasonable or the truly insane. It is a class between these two; and the nature of its members is such, that its explanation is to be found only in *heredity*.

These persons are of a vesane temperament, or, as Labroso styles them, they are maddish (*mattoidi*), and in some of them, among surprising qualities, they present the *moral sense* depraved, or totally defective. It is well understood that these unfortunates may show different gradations, the lowest of which may consist of *turbulent eccentricity*, and thence ascend to the pinnacle of iniquity. Such was the Marshal Gilles de Rays, a brave warrior, the companion of the celebrated prowess of Joan of Arc, who confessed before ascending the scaffold,

that through the *secret temptation of the devil*, he had sacrificed more than eight hundred youths to his heinous pleasure.

The author relates next other facts of *insane moral perversion*, either from invincible impulse or irresistible tendency, or from congenital imbecility. In this class are comprised the *pederasti* and *sodomisti*, and the *filopodii* (best out of English) among males, and the *tribide* among women.

Both ancient and modern history furnish no few examples, the majority of which were connected with hereditary or morbid conditions of the genital organs. "How," says the author, "shall we explain these infamous habits, with instructed, well educated and high ranking persons, if not by an anomaly of the genital sense, determining sympathetically a true moral perversion?" These passions, as all the others, may assume a morbid character and give place to a true partial delirium, limited to the genital sense, and sparing the integrity of the other faculties. These individuals are anomalous intelligences, real candidates for insanity, and for the most part, inheritors of the evil.

Various Forms of the Insanity Connected with the Genital Function.—A few morbid species are represented in a certain manner by exaggerations of physiological phenomena that degenerate into true vesanias. Of such is the insanity of puberty, as well because of the considerable modifications which the organism undergoes at this epoch, especially in women, as also the vice of masturbation then contracted. Menstrual disturbances contribute not a little to the psychical and genital alterations, as well at the period of the first appearance of this discharge as at the menopause, and hence the form, *insanity of the critical age*. Affections of the ovaries or of the neighboring organs have, in some cases, determined a mental aberration connected more or less with sexual passion.

Examples of insanity determined by the first conjugal approaches are not rare: the term *post-connubial* has been

proposed for this form. *Tabes dorsalis*, acute mania, and general paralysis have been observed as consequences of the sexual excesses consecutive to marriage.

Distinction between Hysteria and Genesic Insanity.—From the defect of exact distinction, there have been attributed to hysteria, says the author, all the acts of lewdness of, and all that which properly pertains, to erotomania or to nymphomania. The cases are very rare of hysterical girls, in which special circumstances, as the reading of romances, immoral pictures or discourse, have awakened or presented unwonted stimuli to the sexual organs. In this event hysterical patients showing erotism have shown in the past some hereditary taint.

Erotomania, as its etymology indicates, is an amorous delirium, of which ancient and modern times have afforded, and yet afford, numerous examples. It is the amorous passion carried to idolatry or to delirium, as it was by Orpheus, Solomon, Tasso, Abelard and Eloisa, etc., etc. Sometimes its object is inanimate. Lucian speaks of a youth who went by night to embrace a Venus by Praxiteles.

In erotomania the imagination exerts an important action, and often excludes every carnal feeling, limiting itself to the expression of amorous emotions.

Erotomaniacs, like monomaniacs, are incessantly persecuted by the same amorous ideas, and in obedience to these they are capable of every sacrifice. This state may be exalted to such a degree as to alter their physical condition, and cause that *erotic fever* which has frequently revealed to physicians the origin of all the suffering of the enamoured. Not a few romantic catastrophes, homicides or suicides, single or double, find their origin in these erotic conditions. Some examples are given in which the erotic delirium in women was based not on the material man, but on the Creator himself. Of these the author cites some very important cases.

Erotomania, in fine, spares neither sex nor age; and, considered from a just point of view, "*those who are affected*

with it, present the absence of a free will." In nymphomania, contrary to what is observed in erotomania, the evil takes its origin from the genital organs, and it is only tardily that the brain feels the *contre-coup*.

Although intellective disturbance is so often observed in the insane, yet cases are not rare, of nymphomania without apparent disturbance of the intellect, or insanity of any sort, and its subjects proceed to the last degree of prostitution and degradation.

The author divides the course of this affection into three periods, commencing with that when the woman, assailed by her desires, resists the impulses, until, according to the expression of Cabanis, "nymphomania transforms the most timid daughter into a furious bacchante." Mauget speaks of a noble damsel who, "previously most chaste, but subsequently invaded by this malady, *homines et canes ipsos ad congressum provocabat.*"

Resting on a series of facts and observations, the author divides nymphomania, according to the age, into four classes: 1st, Children under eight years; 2nd, Adolescents; 3rd, Adults; 4th, Old persons.

In his relations of numerous examples, he makes the judicious remark, that in early age, when, unless in rare cases, the action of the uterus cannot have influence, the explanation of this neurosis should be sought for in *heredity, or in a singular exaltation of the general sensibility.*

Nymphomania may, as erotomania, be complicated with hysteria; and another very frequent complication is melancholia, which from its simple degree may advance to suicidal impulse.

Satyriasis is in men what nymphomania is in women; and it is presented in the former in infinite gradation, from simple super-excitation of the genital organs, up to uncontrolled delirium, with loss of free will. It spares no age, and the observations reported by the author show that boys, adults, and old men, may all be affected with it.

The preceding cases regard only a greater or less *exaltation* of the genesic sense; but beyond this we have

absolute genital perversion. Hence, that irresistible tendency to find sexual enjoyment with beasts, to which the term bestiality has been given; the profanation and violation of cadavers, of which the *Gazettes of the Tribunals* present examples; the combination of the two monomanias, the *erotic* and the *destructive*, still worse than the beast, satiates its savage voluptuousness in the blood of its victim.

These are of the cases in which science, whenever she has had the opportunity, has detected a substratum of profound alterations in the brain, or in other parts of the organism.

The author completes his summary by speaking of rape, the other monstrous offence, of which the court reports of all Europe frequently, and most undesirably, give details and horrifying particulars. He distinguishes three cases: first, that in which it is perpetrated under an instantaneous and irresistible impulse; second, premeditated; third, that effected under the influence of insanity. Numerous examples, in which these detestable acts are seen to figure in every age and social condition, without regard even to the most close and sacred bonds of blood, are given by the author, who appears a little too much inclined, considering the distinction previously made by himself, to see only a *lesion of the mental state*. It is certain that in such occurrences, and above all, in some of those in which the offence has been associated with great atrocity, had etiological inquiries been practised, it would not have been rare to discover a morbid or hereditary substratum; but it does not appear that all the facts have been such, and constantly so, and we hold it to be of much importance to distinguish, whether depravity and perversion of the senses has been associated, or not, with freedom of the will. This is a very delicate question, but it is not impossible to the man well versed in practice and science.

As to the rest, although the author has regarded his subject from only a scientific point of view, he has not

avoided the sensible conclusion, that these miserable beings should be separated from society.

Diagnosis.—The diagnosis of genic insanity is not in general difficult, as respects the form of the delirium; but it is not thus as concerns the determination of the organic lesions or anomalies that serve as the aliment of the delirium. In fact it is not of rare occurrence that this delirium precedes some grave affection, as is sometimes observed in the outset of general paralysis. Under all circumstances, an exact diagnosis is highly important in a medico-legal view, as well as in other related questions.

The author closes this part with a valuable synoptic description of the differential diagnosis between neuro-pathic or hysteric insanity, erotomania, nymphomania and satyriasis. The first two are common to both sexes; the third is peculiar to women, and the last to men.

Diagnosis.—The author, with much sagacity, says that when we have to formulate the prognosis of mental diseases, and in particular that of partial deliriums, in which the appearance of sound reason glances along the most profound aberration, great embarrassment is encountered; but resting our decision on the example of similar cases, and considering the nature of the determining causes and the concomitant lesions, we can sometimes formulate a prognosis, but above all, in those cases in which the axiom, *sublata causa, tollitur-effectus*, becomes of ready application. As a general rule he summarizes in the following corollaries all the considerations relating to the prognosis of genic insanity.

1st.—Genic insanities connected with an organic cause, and of a purely physical origin, have in general a favorable prognosis.

2nd.—Genic insanities of psychical origin have almost always an unfavorable prognosis.

3rd.—Genic insanities connected at once with psychic and physical disturbances, are almost fatally incurable.

Treatment.—Genic insanity, depending on physical, moral and intellectual causes, requires subjection to some

form of curative treatment. It is certain that the course of action of the physician who, in these sufficiently delicate circumstances, has to act the part of a doctor, a philosopher, and a profound cognoscitor of human frailties, cannot be always the same. His course will be inspired by the circumstances of the time, availing himself of all the resources which the state of the patient may require. Each special case will then have its particular curative applications. Generally, however, the use of douches, baths, bromide of potassium, or camphor, acetate of ammonia, has given most usually, in special cases, good results.

The author counsels against recourse to clitoridectomy in women. If some surgeons have numbered a few successes, it is not necessary to draw general rules from a few particular facts. It is certain that not all cases of nymphomania are connected with an explosive hyperæsthesia of the clitoris or the labia minora.

Whilst the physician will direct that treatment which he esteems most suitable, he must take into account all the exigencies peculiar to the age, sex, temperament, profession, etc.; since it is not alone the present of his patient that should be kept in view, but also her future—a future which, considering the emergencies that may not be regarded under the view of an unfortunate infirmity, shall leave a trace of morality worthy of all attention. One eye to the honor and peace of the family, and the other to hygiene and therapeia.

Legal Medicine.—The distinguished author closes his important work with a series of medico-legal considerations on genesic insanity. "We do not," he says, "here treat of those well-defined cases in which the accused shows a manifest state of insanity, but of those others in which reason runs close to insanity, and when, with a certain intellectual integrity, a manifest moral perversion is conspicuous."

In thoroughly examining these unfortunates, it will frequently be found that at one time there are present disorders of the intellect which are but little accentuated;

but on this account should they not induce a grave influence on their actions? at another time, or in another case, there is a partial delirium, taking its departure from an erroneous view, but it becomes logically catenated in its fatal consequences; again it is an irresistible impulse to which the individual abandons himself, without measuring the extent of it, because of his acquired or congenital mental debility; in another case there is an abnormal condition proceeding from disease or anomalies of the genital organs, or from the stimulation by the nervous centers which rule and animate these organs; finally there are modifications devolved on the organism from unlucky inheritance, in conformity with many examples related in the author's pages.

In all these considerations and researches it is necessary scrupulously, whenever justice calls for our opinion, enabling us thus by every means that experience and science suggest, to distinguish those cases in which the offense committed ought, or ought not, to fall under judicial responsibility.

It is, above all, important for the public morality and safety, that these individuals of defective organization, or these mental and moral mongrels (*meticci*) should be eliminated from social consort, by confinement in appropriate asylums. But, adds the author, the law does not concede to any man the right of depriving his fellow of liberty, and tearing him from his family merely for having an eccentric, abnormal character, which draws him into blamable acts, whilst he is in other respects quite correct.

Our distinguished colleague will permit us to make the reflection, that there is nevertheless a law which enjoins society to reduce to peace the extravagances, violences and consequences of these *meticci*,—consequences sometimes sad, sometimes most sad, which may ruin forever the honor and peace of families.

I declare myself a warm defender of these unhappy and by nature, disinherited beings, as I have already shown in all my writings, and chiefly in my "Definition of Insanity

in its Juridical Relations." I intend, however, that the State shall procure for society complete security of property and persons. *Est modus in rebus.*

Taken altogether, the work of the distinguished Dr. Moreau de Tours is of great importance, and it will be much more appreciated if, instead of reading the preceding résumé, recourse be had to the book itself, which we are sure will be judged of by alienists with that favor which works replete with erudition merit, and with new views, which reveal in the author a well-cultivated and elevated genius.

WAS GUTEAU INSANE?

(Concluded)

A REPLY TO DR. ELWELL'S REJOINDER.

By M. J. MADIGAN, M. D., Brooklyn, N. Y.,

Formerly Assistant Physician in the New York City Asylum for the Insane.

SOMETHING should be said here as to the experts for the defense. Dr. Spitzka, through a blunder of Mr. Scoville, was the only expert asked his opinion on the witness stand. The expert who was first called on to examine Guiteau was Dr. Godding, of the Government Hospital for the Insane. This was in September, 1881, when Dr. Gray, and afterward Dr. A. E. Macdonald, in a lengthy interview published in the *New York Herald*, without an examination of the prisoner, then 400 miles distant—without a knowledge of his earlier history or hereditary antecedents, or his writings, pronounced him, in the most positive manner, sane, which opinion was telegraphed through the length and breadth of the land.

In an official report to Attorney Corkhill, Dr. Godding says:

I am satisfied that Guiteau's mental condition is a peculiar one, and it is my impression that a degree of unsoundness exists; that he is, in the medical sense of the word, insane.

It was known, just before the trial, in Washington, that Dr. Godding had examined Guiteau, and that his opinion was not satisfactory to Mr. Corkhill. It is well known that the corruption in the department of which Mr. Corkhill is an employé, was so great that the marshal and several others were dismissed, and it was considered great good luck, on Mr. Corkhill's part, that he escaped. It was openly stated, just before the trial, that Mr. Corkhill had said that if he hung Guiteau his official head, then tottering,

was secure. It is a common vice in District Attorneys to desire "a good hanging record;" and it would appear that other motives played a part in inducing the rejection of the scientific opinion of the man whom the prosecution would naturally rely on for expert services.

Dr. Kiernan, who had fearlessly expressed his views in the expert conferences, and was known to be strongly of the opinion that Guiteau was a primary monomaniac, was for this reason placed in the invidious position of being the first expert examined. He was suffering, to my personal knowledge, from malarial vertigo, at the time he was in Washington, and in the foul air of the court-room it is scarcely surprising that he (not Dr. Spitzka, as misstated by Dr. Elwell) committed the blunder of saying that five out of twenty-five persons were on the road to the asylum.* It should be remembered that a recess was not taken till later than usual in his case. In the case of an expert for the prosecution the prosecution were obliged to ask for a premature adjournment because of the confessed mental confusion of the expert, produced by the foul air of the room. This was a blunder, not a statement made to help the defense, like the testimony cited in favor of the prosecution.

Dr. Spitzka occupied a decidedly peculiar position. Approached by the prosecution, it is a matter of evidence that he refused to appear without investigating further, because of his conscientious opinion that Guiteau was insane. Like all the experts for the defense, he was compelled† to go to Washington, and pay his expenses, receiving only the ordinary witness fees of \$1.25 per diem. Dr. Spitzka resisted longest of any expert, and really testified under attachment. That these two expert witnesses were most dreaded by the government attorneys for the prosecution is evident, from the constant denunciation of them. Dr. Spitzka was assailed by the District Attorney so persistently that, on more than one occasion, the usually

* As regards the jury which tried Guiteau this idea has had, with a queer sort of poetic justice, a semi-confirmation, as one jurymen became insane from remorse, after Guiteau's death.

† The only exception, I believe, being Dr. Hughes, of St. Louis, who declined to obey the summons to Washington, without extra compensation.

easy-going Judge Cox felt bound to interfere and correct the District Attorney's misrepresentations.

The denunciation of Dr. Spitzka by Judge Porter deserves perusal because of its comical weakness. Judge Porter says:

It was in the month of October I landed from Europe, and having *very little acquaintance* with this department of psychological investigation was referred by a valued and eminent personal friend, to his friend Dr. Spitzka, as a young gentleman of professional honor and skill, and a proper person to send to ascertain the *actual* mental condition of this prisoner.* I called on Dr. Spitzka to know if he would undertake the task. Do you think anybody would call him now in any honest case?†

Strange perversity! A physician, from innate depravity refuses a fee from the prosecution, to be given for simply examining a prisoner, examines this prisoner for the defense, and receives only abuse and the privilege of paying his expenses for so doing! Dr. Spitzka testified that the marked feature of Guiteau's insanity was a tendency to delusive or insane opinion, and to the creation of morbid and fantastical projects; that there was a marked element of imbecility of judgment, and while there was no other additional evidence than the expression of his face, he could have no doubt that G. was also a moral imbecile, or rather, a moral monstrosity.

In ridiculing Dr. Spitzka for not coming out boldly and saying what Dr. Elwell said he did‡ Dr. Elwell shows

* It is evident from Dr. Spitzka's uncontradicted evidence and the circumstances of the case that this statement is false. Dr. Spitzka has repeatedly and publicly stated that he would have been employed by the prosecution had he committed himself to the view that Guiteau was sane *before leaving New York*.

† It is sometimes an agreeable task to analyze the fulfillment of a prophecy. Dr. Spitzka still persists in refusing to testify where he is not conscientiously convinced, yet he has been repeatedly called by the District Attorneys of New York and Brooklyn, and has repeatedly testified in the Surrogate's Court and in spinal injury cases, *since* the trial and execution of Guiteau, as witness the daily papers of New York and Brooklyn for 1882 and 1883. At the time he was reviled as a horse-doctor he was being cited in the Smithsonian Reports as *the* American authority on cerebral anatomy.

‡ It is obvious that if Dr. Elwell had really read what he calls the "crazy book," in the original, and not merely in the review of the ALIENIST AND NEUROLOGIST, he would easily have discovered the views of its author, set forth at length. Few things strike the reader of Dr. Elwell's article more comically than the attempt to show up Dr. Spitzka's lack of boldness on one page and his attempt to exhibit an ambition to remodel the universe on another.

that he is not an alienist at all, for an alienist would know that types of insanity exist which are at times psychoses by themselves; at times, only symptoms of other psychoses. In Guiteau's case moral imbecility was merely a symptom of his psychosis. Dr. Spitzka does agree with Drs. Hughes and Workman in believing that moral symptoms may constitute evidences of insanity; but neither he nor these two eminent alienists agree with Dr. J. P. Gray, the most eminent and subtle of the twelve* cited by Dr. Elwell, in believing that an expert is not justified in drawing conclusions as to responsibility from moral manifestations of conduct, that department belonging exclusively to law.

Dr. Elwell seems to have peculiar ideas of right and wrong. It was right for Dr. Spitzka to be attacked by aid of the prosecution's experts, but it was wrong in him to afterwards aid the defense to attack them. Dr. Elwell says Dr. Spitzka "floundered through on the witness stand." It was the prevalent opinion at the time that Messrs. Davidge and Corkhill did the floundering. It appears, moreover, from an interview of the jurors, that Dr. Spitzka's evidence had such influence on one of them, Mr. Brandenburgh,† that he voted three times for acquittal, on the ground of insanity. He did not have the enduring courage of his convictions; for, to use the words of the individual (who has since become insane, from remorse) "When he found, we (the eleven) were determined to have our own way, he caved."‡ This man refused to be interviewed but expressed a high opinion of Dr. Spitzka. In a city

* Dr. A. McL. Hamilton, since the publication of his "Types of Insanity," has to be left out of consideration, as being now an adherent of the moral insanity doctrine. At this point I may as well inform Dr. Elwell (for my other readers do not need the information) that Dr. Achille Foville, of Paris, France, and Drs. Bucknill and Tuke, are neither "Germans" nor what he calls "pagans." The last-mentioned say, concerning Dr. Ordranax, whom Dr. Elwell is proud to echo without knowing exactly what he is to echo. "See an extraordinary proof of this in an article in the *American Journal of Insanity*, January, 1873, by Dr. Ordranax. While a protest may be entered against the abuse of the doctrine, the position taken by the author of this article in regard to moral insanity seems to us, we confess, like 'an attempt to set back the clock of the century and to revert to superstition and supernaturalism in medicine.'"

† *Chicago Times*, January 30, 1882.

‡ It should be remembered that this jury demanded and received (unexampled in jury history), extra compensation, by a special act of Congress.

like Washington, a parasite dependent on government support, independence of a jury is a rarity, so rare that Attorney-General Brewster recently denounced, in vigorous language, the venality of Washington juries. If, under such circumstances, a not very firm man could face the mob spirit of the country so much as to vote for the acquittal of a lunatic, hated by frenzied unthinking people, on the reasoning of Dr. Spitzka * only, speaks strongly for the validity of that reasoning.

†It will be noticeable throughout the testimony of the experts for the prosecution, that special stress is laid by them on the fact that *they* have never met with such a thing. Concerning the general tenor of their testimony, Dr. Goldsmith,‡ of the Danvers Asylum, says:

The experts for the prosecution evaded the question of insanity, and stated in the strongest terms, all the points that would imply sanity.

This is how the expert testimony for the prosecution impressed an impartial observer. Stress was so strongly laid on the experience of the thirteen, by Dr. Elwell, that this question of experience requires a little examination. I have already cited Dr. Ray's opinion of what is meant by experience, and it may be said of authorities in science generally, what is said of the medical witness by Dr. Elwell, in the work to which he refers as an authority on moral insanity:

Experience alone does not make up a valuable scientific opinion. If this is the principal element, it is comparatively worthless. Experience in medicine, though of some value to a witness, yet it is often placed higher than is its proper place. An intelligent medical opinion is but seldom based upon experience alone or principally. * * * * * It is therefore dangerous, for a medical witness, when upon the stand, to depend, in making up his opinion, on his own personal experience, instead of

* A second edition of Dr. Spitzka's book has been called for in less than a year, and it is adopted as a text-book in more than one medical college, by men who are "scientific alienists."

† As Drs. Nichols, Channing, Fisher, Folsom and McBride, experts for the defense, simply answered the hypothetical question and were not cross-examined, I need not cite them here.

‡ Discussion of Dr. Fisher's paper, *Boston Medical and Surgical Journal*, Vol. CVI.

basing them on elementary writers on the subject. With a thorough acquaintance of the standard writers on the science of medicine, he is qualified to give an opinion of his own on the matter at issue. It may be his own, but he has the satisfaction of knowing that he is sustained by authority.

GUILTEAU'S LIFE.

I now propose to take up the life and crime of Guiteau, and discuss the same from an impartial stand-point: Guiteau was born with symptoms of pulmonary disease, which soon disappeared. He appears to have been a restless child; "bright and precocious in activity, but backward in sense.*" He was unable to speak plain up to the age of six, and instead of saying "come," would say "ped," and in lieu of "pail," would say "quail." His father "knew he could speak plain," but after repeated applications of the rod, turned him over to Mr. Sutherland, who said, "He had a difficulty about articulating, or in giving the proper pronunciation of words; and succeeded by training, in improving his orthoepy." His mother dying, the boy boarded around; at one time with one relative; at another with another. He studied at school, in Chicago, for a while; then his father married again and he went home, but ran away at the age of thirteen, and was returned. A year later he went into a music store, in Davenport, Iowa, but left in consequence of some trouble. At this period "he never seemed to have a friend or associate with anybody of either sex," and was offensively "egotistical." His father, in a letter written in 1868, speaks of him having had his own way since the age of eight, and of doing things which "were criminal according to human and divine law." He worked for a while in the office with his father, and appears to have exhibited, even at this time, some of his father's peculiarities, for Mr. North said he was "an exaggerated *fac simile* of the elder Guiteau.†

At the age of seventeen he determines on getting an education; whether from his general sense of unrest or

* Two Hard Cases.

† Testimony of North, p. 420-425, Official Record.

from the usual motives governing young men cannot now be determined. In the spring of 1859 he stated, in a letter, that he "proposed to be educated physically, intellectually and morally." He exhibited at this time no desire to enter the Oneida Community. Later, he made up his mind to enter the University of Michigan, but secured his father's consent with much difficulty.

After he went to the University his father continued to reason with him on the subject of the Oneida Community. Here he showed his usual restlessness; for he changed from the commercial course to the classical. In October, 1859 there was no mention of the Oneida Community in his letters. A letter, written November 6th, to his sister, is full of his devotion to the Oneida Community. Mrs. Scoville, a little later, receives a letter from her uncle Maynard, stating that

She had better come out there and see to Julius; for he was going as crazy on religion as ever his father was.

His sister visited him, and tried to reason him out of his idea of going to the Community, but couldn't influence him a particle. In June, 1860, he entered the Oneida Community.

It was a decidedly queer thing for a young man to so suddenly abandon his education under such circumstances. The elder Guiteau afterward stated that this conversion was due to Guiteau's "unbridled lust for women." But, as Dr. Godding says:*

Young as he was, he was no novice in the ways of the world, and to throw away his education and his prospects in that manner and for that purpose, was unnecessary. If he had such a tiger in him as the elder Guiteau fancied, there were less expensive methods of purchasing experience and repentance.

It may be said that this was an honest religious conversion, like the fervor which led Ignatius Loyola to abandon his renown as a soldier and sacrifice everything to follow Christ, but in the two cases there is no parallel.

* Two Hard Cases, p. 88.

Guiteau did put his entire inheritance into the Oneida Community, but it was not a deliberate, carefully considered choice; it was a sudden impulse and an impulse in contradiction to his previous conduct. Here is a change of character, habits and thoughts, decided enough to satisfy the most rabid "change of character" theorist. Of his life in the Community the history is very meager. Mr. Jocelyn* stated that

Guiteau was so excessively egotistic that it produced a certain mental bias in him which made him more or less eccentric, and different from other men. He, with inferior abilities, seemed to think that he was a superior being. He was at this time earnest, sincere, and had a very strong bias to fanaticism.

Jocelyn was a member of the Community, and fanaticism must have been extreme to have been called so by him. Hubbard,† an employé of the Community, testified that

Guiteau was a very nervous, quick-tempered, quick man. If anything was said to him that would disturb him, it would rile him, and he would gesticulate wildly and talk in a mysterious unintelligible manner. He also noticed that he would sit for hours in a corner saying nothing to anybody, and you could not get an answer from him. At other times he would be cheerful, and would talk to the boys on any subject. He was not always accurate in his business. He was a packer in the trap-factory, and he would often get his traps mixed up. For instance, some of the traps are sent out with chains, and some without, and he would often get them mixed. He has been sent out once or twice by the foreman to help him sort them out, and understood that other boys—other workmen—were sent out for that purpose.

As this reflected on Guiteau's ability,‡ the latter felt bound to explain it away, and on his cross-examination stated:

Every spring the Community people had what they called a business organization, and the entire Community men were detailed to certain work, and they were expected to carry that on during the entire year, or until they were recalled. Sometimes I worked in the trap-shop, sometimes I worked in the kitchen, sometimes I worked on the farm. I did not do much farm work, because it was very oppressive to me. My head

* Official Record, p. 483.

† Official Record, p. 449.

‡ Official Record, p. 555.

troubled me more or less at that time. I remember I used to have great pressure in the head, and felt sick and languid, and all that sort of thing. So, as a matter of fact, my particular work there was confined to packing traps. I was their shipping agent. I used to send thousands of traps all over the country—to hardware merchants in New York and Saint Paul, and all through the country. I attended to all that branch of the business.

In an interview, a member of the Oneida Community,* stated that

Guiteau was a queer fellow. We always thought him crack-brained. But no wonder; a life at the Oneida Community was enough to make a crank of anybody. Guiteau studied and wrote a good deal, and after writing for a long time, would tear up the paper or put it into the stove. My brother practised on the piccolo, and this bothered him. Finally he drew a chalk mark across the floor, and told my brother to do what he pleased on his own side and he'd do the same. Then, while my brother was practising, Guiteau walked back and forward, shouting at the top of his voice, to drown the sound of the piccolo. Afterwards, I worked in the kitchen with him. The women did the mopping, the cooking, the setting and clearing off the table. We carried in the water used for mopping, and wrung out the mops for the women. Guiteau sat with arms folded and refused to wring the mop for anybody, except Harriet Worden, the editor of the *Circular*, published by the Community. His excuse was that she was the only one who had brains. Once afterwards, when sleeping in the garret with a dozen other boys, we were startled at midnight by a fire in the bakery below. Every boy but Guiteau hastened down in his night clothes, to save himself, but Guiteau dressed himself leisurely before he quit the room, not omitting collar and necktie. We boys called him "Gitout." He loved fine clothes and acted foolish in a thousand ways.

Now, while many of these circumstances are perfectly consistent with sanity, and indeed show much intelligence, the general tenor of the interview shows that Guiteau impressed the members of the Community, as he impressed most people with whom he was brought into close contact, with the idea that there was something anomalous in his mental make-up. All the facts stated, and much more, of interest, could have been elicited, had the government adopted, not the petty procedures of third-rate lawyers, but the impartial method adopted by the continental governments. The whole truth would have been elicited, and not the truth in the purely legal sense,

* *New York Herald*, January 13, 1882.

which means such truth as will suit a side. Mrs. Scoville testifies,* that when Guiteau had been three years a member of the Community, she got word

That he was crazy, and had been kept on bread and water for a week. She and her husband went to see him. He could not be seen alone. He seemed to be bewildered. She could only get monosyllable answers out of him, and could not find out whether he wanted to go or stay.

It is obvious from this that Guiteau displayed mental peculiarities, which attracted attention in a place where an insane man might be expected to pass muster. A witness† called by the government, but not placed on the stand, had observed facts, which point to the existence in Guiteau at this time, of ambitious delusions. Guiteau made and secreted in his room a placard, stating that "C. J. Guiteau, premier of England, will deliver a lecture, at St. James Hall." This man took the placard from him.

It is obvious from published letters of Noyes‡ and others, that the leaders of the Community regarded Guiteau as a lunatic.

In certain states (Illinois affords the most recent example) it has been claimed that if the prosecution subpoena a witness and not place him on the stand, the defense have a right to call for cross-examination. Had this procedure been permitted in the Guiteau case, many facts, bearing upon Guiteau's mental condition, could have been elicited from witnesses who, not desiring to appear for the defense, had kept quiet, and in consequence had been subpoenaed, but not called by the prosecution.

Here is a picture of a child born of a diseased mother ; of a mentally abnormal father, whose ancestral history was that of hereditary defect ; restless and troublesome, and with deficient association power in childhood and infancy ; unable to talk properly till the age of seven, and then only after being trained ; who in boyhood is restless and capricious, and manifesting excessive egotism and reserve ; who determines to get an education, and

* Official Record, p. 466.

† Cited in Two Hard Cases.

‡ Unpublished Letters, etc.

suddenly abandons this for a peculiar religious life; enters a Community, where religiosity and sensuality are commingled; during his residence in which his peculiarities are so striking that he is regarded as a fanatic, as being mentally biased by egotism, so as to be different from other men; who manifests evidence of ambitious delusions; who is alternately reserved and loquacious, and displays wild gesticulations; who is regarded by the leaders of the Community as a lunatic. Is there a more perfect picture of a case of chronic hereditary insanity? So far the evidence, defective as it is, points in one direction only.

He remains in the Community five years. It is clear from this that his faith in its doctrines was sincere. In April, 1865, he left the Community to establish a paper, called the "Daily Theocrat." This intention is expressed in a letter to his father, in which he stated:

However presumptuous it may seem, I am compelled to confess the truth about myself. Therefore, I say boldly, that I claim *inspiration*. I claim that I am in the employ of *Jesus Christ & Co.*, the ablest and strongest firm in the universe, and that what I can do is limited only by their power and purpose.

Is the last statement evidence of insanity? Like everything else in psychiatry, this question can best be solved by a reference to the education and circumstances of the patient at the time. By itself the expression might be regarded as of little value, since statements, at first sight seemingly more audacious and irreverent, have been made by persons of indubitable sanity. A case recently resurrected by Ball,* but originally reported by Chatelain,† is as follows:

Some years ago a notary died at Neufchatel, who was supposed to be perfectly sane, but among whose papers was found a regularly drawn up partnership contract between himself and God. Isaac Vigneaux regarded God as his partner in the liquor business. The Almighty was to give His blessing in lieu of capital, and His share of the profits was to be given to the poor. Isaac prospered, at all events; and every year regularly distributed 7323 francs, 35 centimes, to the poor of the city.

* L'Encephale, No. 1, 1883.

† Annales Medico-Psychologiques, July, 1866.

Dr. Ball, guided by the agnostic spirit too prevalent at present, looked upon the man as of doubtful sanity. Dr. Chatelain, who properly viewed the case from the religious stand-point, regarded the man as sane. The truth is, he was a devout individual, who had the highest respect for business forms, and had, therefore, made a covenant with the Deity in this manner. As Dr. Ray,* who has discussed this case in his own lucid style, says:

The procedure, other than its name, was a measure adopted by very religious people of unquestionable sanity. A partnership was the man's idea of the proper method of doing business. He did not *imagine* God was partner with him other than in the sense He was partner with every Christian who covenanted with Him; but this idea of partnership was M. Vigneaux's way of expressing intimate relationship. It was only an eccentricity in the true sense of that term; doing a very proper thing in an unusual manner.

The man, however, was a notary, and it may be asked, Why should he expose his will to the chances of refusal of probate by such a procedure, if he were a sane man? Here, curiously enough, turns up a circumstance creditable to his acumen as a lawyer. In the fourth volume of "Causes Celebrés," published in 1736, by Jean de Nully, is to be found a similar case in which the court decided, that such a contract was no evidence of insanity. Dr. Ray† says:

It can scarcely be doubted that Vigneaux's professional studies included these "Causes Celebrés," which are known to every French lawyer.

Vigneaux did not entirely disinherit his heirs, and on the will being refused probate, they fulfilled all its provisions. Between this man's ideas and those expressed by Guiteau, there is nothing in common. A man to whom business forms are the ideal way of regulating human conduct, draws up a copartnership between himself and the Deity, in the most reverent terms, believing that this was the best way of making, like the Saints, a vow to God. With such ideas sanity can readily co-exist.

* Mental Pathology.

† Mental Pathology.

For a young man starting out from a Community, into which he has been driven by "an irresistible power which he was not at liberty to disobey,"* again driven forth by an inspiration (based on ideas of the leader of the Community) to attempt to establish a daily paper, "The Theocrat;" to claim inspiration, and to claim to be in the employ of Jesus Christ & Co., is conduct not easily explicable on the theory of sanity.

The idea of a "Daily Theocrat" sank into abeyance under ridicule. He evidently never abandoned his belief in it, although he admitted to the leaders of the Community that it was a "devilish delusion." Is this admission inconsistent with a full belief in his inspiration? Dilettante alienists would at once say Yes, believing with Dr. A. E. Macdonald,† that the insane cannot conceal their insanity; but, as has been shown by Dr. Brower,‡ the insane pretend to admit the insanity of their delusions when it suits their purpose. Guiteau still believed the Oneida Community to be the Kingdom of God on earth, and, driven by the sneers of the world, he regarded it as an ark of refuge. To once more enter this ark of refuge he pretends to admit that his cherished idea is a devilish delusion.

Is this the explanation of Guiteau's conduct, or is the theory of the prosecution true? that he enters the Oneida Community for lustful purposes; abandons it for the purpose (inexplicable on the grounds of sanity) of establishing a "Daily Theocrat;" once more re-enters it for lustful purposes, and again leaves it, embittered against its great prophet? or were these statements, as Judge Porter claimed, only evidence of the innate irreverence and blasphemy of the man? Which of these three explanations is most probable? Which explains Guiteau's conduct best?

Although Judge Porter|| flattered Guiteau while cross-examining him, by stating he (Guiteau) had a remarkable

* Official Record, p. 536.

† American Journal of Neurology and Psychiatry, 1882—Grappotte Case, p. 170.

‡ ALIENIST AND NEUROLOGIST, July, 1883.

|| Official Record, p. 671.

brain-power, still this attorney,* in his closing argument, stated that

Guiteau foolishly believed that if he could replace the stalwarts in power they would reward him.

This should be taken into consideration in judging Judge Porter's psychological analysis of this part of the letter as blasphemy. If a lawyer can conceive of a lawyer committing murder, who has "remarkable brain-power," yet who "foolishly" believes that a section of an American political party will reward him, it is not surprising that this same lawyer should conceive it to be nothing but blasphemy for a man who has sacrificed his education and prospects for a religious conviction, to claim to be in the employ of Christ & Co.; but will such an explanation suit the case? There is much in Guiteau's conduct at this time that is inconsistent with sanity; nothing that is inconsistent with insanity.

After leaving the Community, he attempts to maintain himself by soliciting advertisements, but finds it difficult work, and enters Mr. Scoville's law office, proposing to study law. During this time (1867) he visits Freeport, and a debate occurs between his father and some others. One of these last, making a slighting reference to his father and the Oneida Community, Guiteau tells him, that

His life would have been taken from him, had God not advised it otherwise.†

As an illustration of the "able generalship" of the prisoner, his conduct, when this was being elicited on direct examination, is in point.

Prisoner:‡ "Are you referring to me or my father in this attack?"

District Attorney Corkhill: "I think that is a very proper question. Who do you refer to, him or his father?"

Prisoner: "If you refer to me, it is absolutely false. If you refer to

* Official Record, p. 2512.

† Testimony of Amerling, Official Record, p. 54.

‡ Official Record, p. 416.

my father, I don't know anything about it, but should not be surprised if it were true."

Mr. Amerling: "He was the one who mentioned it to me, and afterward I talked to his father, and he said I must not mind what he said."

Prisoner (after this conversation had been shown to have occurred in Chicago): "You pretend this conversation took place in Chicago, do you?"

Mr. Amerling: "Please let me alone."

Mr. Davidge: "Come, Mr. Prisoner, keep quiet."

Prisoner: "There is not a word of truth in it. That's what I say to that statement."

Mr. Davidge: "Now, I want to know where this took place."

Prisoner (to Mr. Davidge): "Find out the facts, Judge."

Mr. Davidge: "I will bring them out."

It would usually be considered peculiar conduct for an "able lawyer," on trial for his life, to assist the prosecution to cross-examine witnesses in his favor.

It was about this period, that he began to make very active war on the Oneida Community. Mr. Noyes* and the leaders, smarting from his attacks, and on their defense, wrote letters, stating they regarded him as a lunatic; and it is stated on good authority, that had his suit against the Community been pushed, the members of the same were prepared to claim and prove that Guiteau was insane from masturbation. Guiteau's scheme in this particular was abandoned, as his mind was attracted to other projects. Guiteau now started on the study of law, in Gen. Reynolds'† office. While there, his attention was directed chiefly to fundamental law. He impressed Gen. Reynolds as "a man who would make a very successful lawyer." General Reynolds has peculiar ideas of what is necessary for a successful lawyer. He said, that Guiteau avoided anything but the ornamental part of law. Rules of procedure did not seem to attract his attention. It is apparent, from more than one statement unwillingly elicited from General Reynolds, that Guiteau, at this time, was erratic, flighty, and had a peculiarly constituted mind.

In August, 1868, Guiteau was admitted to the bar

* Cited by Dr. Godding, "Two Hard Cases."

† The statement of this witness, as he was a paid spy, must be taken with a certain amount of allowance, for, after stating (p. 1136) that Guiteau had a peculiar and erratic mind, and on one occasion, that he had an unsound mind, he said he was a man of good ability (p. 1140.)

after being asked three or four questions, of which he missed one. He was now in good spirits, and wrote to his sister that he would soon have plenty of money. He very suddenly married after a very brief acquaintance with his wife, in the course of the next year. His legal practice, of which he speaks in grandiloquent terms, amounted to very little; on cross-examination he was unable to state a single case which he had carried through to completion. Mr. Reed* gives the only account of his legal practice at this period.

The case was so plain that Mr. Reed, then State's Attorney, considered that there was no necessity for argument, as Guiteau's client was clearly guilty of petty larceny, on the evidence. Guiteau insisted on arguing the case. Reed wanted to have him limited in his time, but the court allowed Guiteau to run on, and he made a speech three-quarters of an hour in length; introducing all sorts of subjects into the case which were foreign to it. He talked about theology, the Divinity, the rights of man. The speech was incoherent, full of vagaries and peculiarities.†

From 1870 to 1875, data of value, regarding Guiteau's mental condition, are wanting. There is much bearing on the question of depravity, but it should be remembered that this testimony is given by very unscrupulous people, who had an animus. One witness who testified very strongly against Guiteau had been indicted for perjury, and escaped conviction by a technicality. One witness, after testifying very strongly as to his sanity, and citing instances of what he called keenness, stated, that Guiteau "did not have a fair degree of sense." In February, 1875, Guiteau returned to Chicago, and in the autumn of that year he conceived his grand scheme of buying the then bankrupt

* Official Record, p. 392.

† Another instance of "able generalship" (Official Record, p. 626) occurred at this point, which I reproduce from Judge Porter's cross-examination of Guiteau rather than from Reed's testimony, for clearly obvious reasons: Q. Your friend and associate counsel, Mr. Reed, swears that you tried a very memorable case with him, when he was District Attorney, in which you made a rambling and incoherent speech occupying three-quarters of an hour. When he said that you made this reply: "That is absolutely false." A. I never tried a case with Mr. Reed in my life, sir. I do not wish to say that Mr. Reed lies, but I say that he was Prosecuting Attorney of Chicago for about twelve years, and tried thousands of cases, and was a very good prosecuting officer. He has got me mixed up with some one else. That is all there is to that. He has got me for somebody else in his mind. That is all there is to it.

Chicago *Inter-Ocean*, telegraphing the New York *Herald*, local news and all, from New York.

At this time he knew nothing of journalism, had no money, nor was he able to command money. He stated the scheme to General Reynolds, who testified on cross-examination that he regarded its success as problematical, even if Guiteau had obtained the support he claimed to have. General Reynolds stated, on direct examination, that the *Inter-Ocean* was developed subsequently in exact accordance with Guiteau's ideas; but this is not true, except very superficially. Guiteau had no conception of the value of local news. He would have telegraphed the New York news to the exclusion of the Chicago news; and such a procedure would soon have killed the paper.* Chas. B. Farwell,† an impartial witness, a man of reputation and honor, testified that

Guiteau called on me in Chicago about 1875, and said that his time was much engaged, and handed me a roll of papers, saying these are editorials for a newspaper which I propose to establish here. I want you to lend \$200,000 for the purpose of starting it, and I will make you president of the United States.

From this time forth Mr. Farwell did not regard Guiteau as a sane man.

To business men Guiteau said little about the business elements of the scheme, but made absurd political offers of the kind just cited. His father wrote at this time about him, that

Charles has been here for several days past. He came out here thinking that through and with my aid he could get Mr. Adams to loan him \$25,000 to help buy up the *Inter-Ocean*, expecting to get the same amount from C. B. Farwell, and the same amount from Potter Palmer. You can judge whether he is sane or insane. He was very much disgusted with me because I would not discount his note at the bank for \$200. To my mind he is a fit subject for a lunatic asylum, and if I had the means to keep him, would send him to one for a time at least.‡

* Dr. A. E. Macdonald (New York *Herald*, February 8, 1878) testified that a patient of his, a young man, was insane simply because he attempted to engage in business without capital.

† Official Record, p 785.

‡ This letter is dated Oct. 15, 1875, nearly a year before Dr. Rice examined Guiteau.

Guiteau left General Reynolds in November, 1875, and nothing is known of his movements from that time till June, 1876, when he visits Mrs. Scoville, at Beaver Lake, utterly destitute, but in a state of great exaltation. He did light work around the house for his board, but his intellectual peculiarities were so well marked that he became a butt of Mr. Scoville's laborer, Olds.* He had at this time fits of moody abstraction; he pulled up garden crops as weeds, and despite plain directions, soaped hickory trees for apple trees. One day, while cutting wood, a mild expostulation was made by his sister, whereupon he suddenly raised an ax at her. She became alarmed as to his mental condition, and called Dr. Rice to examine him. Dr. Rice† testified:

That his attention was called to Guiteau by Mrs. Scoville, some time during the summer of 1876. She asked him to make an examination of Guiteau's mental condition. He had frequently assisted in getting persons in an insane asylum, as admissions were made on certificates of two physicians. He would probably be called to attend a dozen cases in the course of the year. He considered the hereditary influence and the exaltation of Guiteau's emotional nature attended with explosions of emotional feeling from centric causes; at least he could discover no objective cause for them. During this period of exaltation, detected symptoms of morbid egotism, pseudo religionism and incoherency. There was a weakness of the judgment, and to the same extent weakness of the intellect. He said at the same time that there was moral imbecility. After this he told Guiteau's friends that he was dangerously insane, as an imperative conception was liable to occur at any time, which would be obeyed by the prisoner, and that he ought to be put in an asylum. While Dr. Rice was corresponding with another physician on the subject, the defendant heard of it, and left the country. On one occasion Dr. Rice saw Guiteau during an ordinary evening conversation at the house in which he was boarding, suddenly rise and call all present to come to God. He went on in a rambling incoherent way. You could not tell what he was talking about.

Guiteau went back to Chicago, and seems to have subsisted by making collections. During the autumn he attended the meetings of Moody and Sankey. In consequence of a sermon by Dr. Kittredge his vision of the Second Coming seized him; and, after much hard labor,

* Official Record, p. 374.

† Official Record, p. 356.

a paraphrase of one of Noyes' publications is developed, in December, 1876. On January 21, 1877,* this lecture is delivered for the first time, after the following fashion:

C. J. Guiteau, whose advertisements describe him as "the great lawyer and theologian," delivered a lecture on the Second Coming of Christ, to an audience consisting of seven ladies and fifteen gentlemen. The lecturer saw that the representative of the *Tribune* was provided with a table, and, after stating that he would not apologize for the smallness of his audience, said: "This argument for Christ's Second Coming is based on, Mr. Reporter, Matt. xlii., 24, 29-31; and I should like you to make a note of it. And I desire to call your attention, Mr. Reporter, to the pestilence, war and famine which followed his coming. Josephus speaks of Christ as 'one Jesus, a country fellow who went about ——'"

"I desire a special note of this, Mr. Reporter. People say that the gospel must be preached before Christ shall come. I show that the gospel was preached, and I would like you to take this fact down, Mr. Reporter, and he foretold the end would come. This is important, Mr. Reporter, for the end did come. By the way, I wish you would give these references, Mr. Reporter; for these references show he did come." Here Guiteau waited till the reporter sharpened his pencil, and then read the references. Then he went on: "These references show that Christ has been here; but why have Christians not known of it? This is especially important, Mr. Reporter, and I desire you would take it down. All the ministers and bible students ought to have come here to-night, but they did not. For nineteen centuries Christendom has been kept in ignorance of this advent. You will find the apostle's explanation of it also important, Mr. Reporter. I shall defer consideration of it till another lecture. Nineteen centuries have been afraid to face this thing, but after I have been abroad and shaken them up a little they will come and hear me. Moody could only raise three hundred people till he went abroad. Here is an item about Paul, Mr. Reporter, for Paul said Christ would come again. Peter did not know what he was talking about. Please make a note of it, Mr. Reporter. The Christianity of Paul's church has been a mockery, Mr. Reporter, and I wish you would note the fact. That is the reason the ministers are not here to-night. Moody shook 'em up a little bit, and may be I will more, before I get through. Now, Mr. Reporter, I will give the biblical references, because you will not have space for the argument (reads references.) They will only take seven or eight lines, Mr. Reporter; can't you put them in? Then these ministers will look them up to-morrow. I've only two more items, Mr. Reporter, and I'd like you to take them. Please take these references also, Mr. Reporter (reading.) Thus you will see Anti-Christ has come. Now, Mr. Reporter, if you will note 1 John iii., 2; 1 John iii., 19, we will be almost through. We will now examine Revelations. After I have read them to the reporter, I will explain them to the audience. I will give you the references, Mr. Reporter (reads.) The substance of this is that Christ told them he was

* Chicago Tribune, January 22, 1877.

coming quickly. The last words of John were that Christ was coming. Now, I am almost through, Mr. Reporter; can't you take the rest? It is short. I told Mr. Hall if he wanted any money he could have it, for I wanted a good report of this lecture. This is going to turn Christendom upside down. I think this is destined to combine the Christian churches. Take that down, Mr. Reporter. I will give you the latter part of this if you don't want the trouble of writing it down. Hereafter we'll roam up and down history, sacred and profane. I'll have more people here than I have now. Copernicus said the world was round, and everybody believed him mad. There may be some who will believe I am mad."

According to the testimony of Dr. Neil, Mr. Maynard, Rev. Mr. Burton, Mr. Union and the Rev. N. Damon, he conducted himself in the same manner at his other lectures. The next lecture was delivered at Evanston, and was characterized by the same manner of acting. In regard to another lecture, Frank L. Union* testified that:

In September, 1879, he became acquainted with C. J. Guiteau in Boston. He called on him at his office. He wanted to hire a hall for the purpose of giving a lecture—the Paine Memorial Hall. He stated that he preferred to have a hall independent, rather than go to the churches. He said that he wanted to be independent; his lecture was entirely independent of any creed that there was in town, and he would rather hire a hall than go to the churches and ask them to let him have one free. He wanted to hire the hall to give a lecture on the subject "Why Two-thirds of the Race were Going Down to Perdition." He came to Mr. Union and represented himself as a man far-famed. He said that the lecture that he proposed to give was on religion, and that he did not want to go to a church, but preferred to have a hall to himself. After he was shown the hall, and was satisfied with it, he said, "I haven't any money to pay for this hall, but I am positive, from my past experience in lecturing, that I shall certainly get a large audience. I will have it a free lecture and take up a collection, and I am sure there will be more than enough to pay for the hall." He at that time agreed to pay for all printing and advertising that he might have. Mr. Union told him that this was not his way exactly, of doing business, but after some talk with him concluded he would let him have it, inasmuch as he was the first man who had presented himself under that head; that is, as a religious teacher, and as he expressed it, directly from God. He told Mr. Union that he would give him the first \$15 from the receipts of the contribution, which he thought would be some \$40 or \$50. Mr. Union didn't think much of it, but at any rate let him have the hall, and Guiteau went on with his preparations. The next day some programmes were issued, which ran something like this: "Don't fail to hear the Hon. Charles J. Guiteau, the Little Giant from the West, who will show Why Two-thirds of the Race are Going Down to Perdition."

* Official Record, p. 357.

At the first interview with the man Mr. Union did not notice anything very peculiar, but on the next day, when he talked with Guiteau, Mr. Union thought he talked very queer. He said that he had challenged Mr. Ingersoll to a debate several times, but he did not think Mr. Ingersoll had courage enough to meet him. When he came to deliver the lecture on the night that he had selected, there were about fifty persons present. There would have been more, but a Sunday came between the time he first came to see Mr. Union, and the time he gave his lecture, and as many of the people Mr. Union expected would attend the lecture were members of the Society of the Paine Memorial Association, Mr. Union told most of them who asked him about the matter not to go; he did not think there would be a lecture, as the man did not have sense enough to give a lecture. At any rate, about fifty came on the night of the lecture. The lecturer brought in a manuscript, which he placed upon the pulpit, and after apologizing for a cold which he seemed to have, or which he thought he had, he commenced by reading some half a dozen lines, and then turned over perhaps half a dozen pages, and then read some more. Then he read some more; and then he would turn over, and so on, without any connection whatever to the previous part he had been reading. He would leave off in the middle of a sentence, as far as the audience could see. After some half an hour or so, he evidently became disgusted with himself, and took his manuscript and immediately left the platform in a great hurry, seemingly rather angry at something. He grabbed up the manuscript as though it was a sudden thought, and ran very forcibly down toward the door, and was going, when Mr. Seaver, the editor of the *Boston Investigator*, stood up and requested the gentleman to answer a few questions he might propose. He asked him a few questions. After he had talked some little time, Guiteau exclaimed that he would not stay any longer to hear God blasphemed, and was about to leave again, when a Mr. Damon made some remarks. During them Guiteau left the hall. After Guiteau had gone out, the audience unanimously voted that the man was crazy. After this lecture was over Mr. Union saw him again, and Guiteau requested him to let him lecture again, and he told him he did not propose to have any more crazy lectures in Paine Hall. He said he was not crazy, but inspired, and that God was his teacher and his direct counselor, and that he should always act by what he said, and that he did not do anything that he considered wrong. The last time he saw him was somewhere along in April or May the next year, 1880. He said that he belonged to the firm of Jesus Christ & Co. Mr. Union could not remember any of Guiteau's arguments. The moment they began to argue Guiteau would get very much excited, and Mr. Union did not argue very much with him afterward. For this excitement there did not seem to be any cause. Guiteau was always serious about his claims.

Visitors who attended these lectures were impressed with the man's insanity. His lecture tours were absolutely without financial return. Conductors, with whom he traveled, with few exceptions, treated him so well that he

regarded them "as good Christian men." He told them he was traveling for the Lord, and they passed him on. Railroad conductors are a pretty shrewd set of men, and do not let "religious dead-beats" pass with the almost unanimity with which they did Guiteau. If they regarded him as a lunatic their conduct is comprehensible, otherwise not. One conductor, who refused to pass him, alarmed Guiteau so much by telling the brakeman to keep an eye on him, that he concluded not to stay upon the order of his going, but went at once, though the train was running at the rate of thirty miles an hour. The government placed on the stand a Dr. Withrow, who heard Guiteau speak in prayer meetings at this time, but did not hear him lecture. When asked if Guiteau impressed him as being an insane man, he said:

Oh, never; not the least; not the first sign of it. He was an ill-natured man—a very acute man.

One would like to know, to judge of the value of this evidence, what Dr. Withrow's idea of insanity is, and also what was meant by an "ill-natured man." Guiteau displayed "ill-nature" when pushed into a corner, in his lectures, or when the audience did not suit him; but in a prayer meeting, no. The evidence of Dr. Withrow is the same valueless, non-expert evidence, on which too much stress is laid; but as an alienist, one would like to know what the ill-nature was, as an acute man would not display ill-nature when he had an ax to grind, as was the case with Guiteau when speaking with Dr. Withrow. In the fall of 1879, his book, "The Truth," was issued, but fell perfectly flat; he did not sell fifty copies. What impression this "inspired book" may make on others I do not know. For me it suffices for a diagnosis, written though it be on theology, a field, in which great inanity is possible without being evidence of insanity. The theology is that of the Oneida Community; the doctrine, that the devil was uncreated, is one which some early Christian sects borrowed from Zoroaster. The doctrines of the

prisoner and his brother about insanity being due to the fact that the lunatic was one who had failed to choose at one time properly between right and wrong, read like paraphrases of Heinroth's doctrine, that no one who has ever had the image of God in his soul, can become insane. These are not evidences of insanity, but the style of the book and its preface demonstrate more marked psychological peculiarities than can be explained as the usual inanity of the sectarian religious exhorter. Between the publication of this book and the opening of the political campaign of 1880, was a period of comparative calm. The unrest was for the time being in abeyance. Guiteau, on the opening of this campaign, went hotly for Grant, as the nominee of the Republican party; a man whom he had opposed when a candidate in 1872. The description of this campaign, as conducted by Guiteau, has been given by Dr. Godding* so inimitably that it merits quotation:

When the nomination of Grant was foreshadowed, he went up to the State library and there wrote out his campaign speech for the great general; but the Chicago convention named another. It would not do to throw away the brain-work he had put into that eulogy. So, as with the cheap woodcuts that do duty in our illustrated papers a dozen times for military heroes under different names, he retouched it a little, erased Grant and wrote in Garfield, closed his Boston office; and taking passage for New York on the Stonington, on that dark night of shipwreck, June 11, 1880, he entered upon his political career. There was storm and darkness, and the curtain rising for the last act, Guiteau went to New York and offered his services to the Republican National Committee, intending to throw the weight of his speech into the scale, not only as a campaign document, but as one of the oratorical efforts of the time. Very early he took it to Saratoga in manuscript, but the auspices do not appear to have been favorable to its delivery. * * * * In some way that will ever be mysterious to us, he gets his manuscript in type, with the imprint of the National Republican Committee upon it. What was this speech? Just two pages of very commonplace thought upon the situation, entitled "Garfield against Hancock." G. C. Gorham testifies that: * * * * "It was neither remarkable on the one hand nor ridiculous on the other." E. A. Storrs says:

That it appeared to have been printed under the auspices of the National Committee, which, after reading the speech, seemed to him to be curious. That was not the way it was viewed by Guiteau. At that time

* Two Hard Cases.

he spoke to Storrs in strong recommendation of it. The way he handled it, shows something of his estimate of it. It became his letter of recommendation to General Logan, General Arthur, and I know not to how many others. * * * He says he never delivered it but once; that was before a colored audience, on Twenty-Fifth Street, New York. He began the address, but the night was warm and there were plenty of other speakers ready to go on; so he stopped midway, as was his wont, and handed the document to the reporter. But during the entire campaign he remained at his post of duty, hanging around the committee rooms, holding himself in readiness for an engagement. * * * * Of what earthly use, other than ornamental, he can have been to the party by his labors it is difficult to imagine.

Dr. J. P. Gray says of his preliminary examination with Guiteau respecting this period:

Coming down to the Presidential campaign, Guiteau went fully into the subject; spoke in the most familiar way of prominent men, but in giving the detail of what he actually did he could show but one speech delivered once to some colored people; the rest of the service was keeping about the head-quarters of the committee, reading newspapers and talking casually to those he met. Questioned closely, I found he knew the prominent men only by seeing them and exchanging occasionally a few words. He had never been invited to the house or committee rooms of any of them. During this time he did some work in the way of soliciting insurance, and down to the time of coming to Washington, on March 5, 1881.

On the basis of such services, Guiteau, as soon as the election was decided, sent off the following letter to General Garfield, so hurriedly that he forgot to date it:

Dear General—I, Charles Guiteau, hereby make application for the Austrian mission. Being about to marry a wealthy and accomplished heiress, of this city, we think that together we might represent the nation with dignity and grace. On the principle of first come first served, I have faith that you will give the application favorable consideration.

CHARLES GUITEAU.

The "wealthy and accomplished heiress" was a poor relation of a wealthy family, with whom he had never exchanged a word. He abandoned his hopes of the Austrian mission when he found Mr. Blaine was in the cabinet, "because it would be given to a Blaine man;" and then laid claim to the Paris consulship. As to his

persistence in the idea of his claim, the evidence of Mr. Reed* deserves citation :

Mr. Reed saw Guiteau after the inauguration some week or ten days, at the Riggs House, and he said that he had ascertained from Chicago that I was here, and he thought he would call to see me. Says he, "You can help me." I says, "In what way?" He said, "I am a candidate for the position of consul to Paris." Mr. Reed then said to him at that time, "Guiteau, you can't get that place. Washington is full of office-seekers, and ninety-nine out of every hundred will be disappointed, and have either to walk home, or send to their friends to get money to go home. You had better give it up and go away." He pulled out of his pocket a speech called "Garfield against Hancock," and claimed that the delivery of the speech entitled him to some important office. And at that time he said to Reed that he had seen Mr. Blaine, who was on his side, and all he wanted was somebody from Illinois, of repute, who would go to the president and indorse him; and he wanted Mr. Reed to go to the president. He says, "I understand you know the president." Reed said, "Yes, I know him very well." He said, "If you will go up there it will be all right." The talk lasted ten or fifteen minutes, and Mr. Reed did all he could to dissuade Guiteau from any such talk as that. Just before Mr. Reed went away Guiteau looked as if he was friendless and in distress, and Reed said to him, "Guiteau, I am sorry for you; you cannot get any such place as that; but if there is some minor clerkship here where there is no responsibility attached to it, if you find any vacancy and you will take it, I will do what I can for you." When Mr. Reed said a place of "no responsibility" Guiteau became very much excited, and said that he would not take any such place; that he would have the consulship to Paris or nothing. Mr. Reed thought if he could get a place where there was no responsibility particularly, one which he might perhaps fill, that he might help him. At another interview Guiteau wanted to borrow money from Mr. Reed, and pay the same when he got his place. Mr. Reed said, "What place?" He said "Consul to Paris." Mr. Reed remarked, "Guiteau, haven't you given that up yet?" He said, "No, by no means." Mr. Reed said, "Well, I have told you all summer that you had no show for that; that you had better give up trying to get the office." He used the name of the president and Mr. Blaine two or three times in the conversation. He either said the president or Mr. Blaine owed it to him for what he did in the campaign for General Garfield, and he said, "You remember that speech of mine that I gave to you of Garfield against Hancock." Said he, "I was of so much use to them they owe me that place." "Well," said Mr. Reed, "does Mr. Blaine say you can have it?" He says, "Yes, he is on my side." Mr. Reed said, "If he is, then you are all right," and told him then he regarded it as useless for him to make any attempt; he had frequently told him so during the summer, as he had seen him at the Riggs House very often. As he turned to go away he said, throwing up his hands, "You think I won't get that place; but you keep watch of the newspapers, and in a few days you will see my name mentioned as consul to Paris."

* Official Record, p. 395.

From all this it is clearly evident that Guiteau was not an ordinary office-seeker; neither his "claims" on the party nor his idea of the reward for those "claims" could very well be paralleled. He called on Senator Logan* in the wintry March of 1881, clad in a spring suit, without an overcoat, and with rubber sandals without stockings, offered him the famous speech, and then asked the senator's recommendation for the Paris consulship. Guiteau was almost finical about his personal appearance, and there must have been some strong belief that he was so intimate with the senator as to render unnecessary any ordinary attention to costume. At about the same time he was refusing with disdain the offer of a minor clerkship. If he was in desperate circumstances the latter was more attainable, and promised early relief; but it is scarcely possible to imagine a sane man in the financial condition of Guiteau refusing such offers of aid. From this time on Guiteau pestered President Garfield with letters of advice and expostulation and personal visits. His first and only interview was as follows:† He called on General Garfield the first week after his inauguration, and went into the president's room. He was in conversation with several politicians; among others, Levi P. Morton, now minister to France, and General Tyner. Guiteau says he knew both of these gentlemen. They were glad to see him. Mr. Morton especially asked about his health, and how he was getting along. As soon as General Garfield was at leisure Guiteau stepped up to him and gave him his speech. Of course Guiteau says he recognized Guiteau at once. Guiteau marked his name, and Paris consulship, at the end of it, connecting it with his name, gave it to him, and left him reading the speech, and retired. At another time the president told the usher "Tell Mr. Guiteau I cannot see him to-day." Guiteau says:

I understood by the words "to-day" that he was entertaining the proposition of removing Mr. Walker, and as soon as he got Walker out of

* Official Record, p. 411.

† Official Record, p. 587.

the way gracefully, then I would be given the office, and that is the way the matter stood from that day to this. They never told me that I could not have the office.

He had previously interviewed Mr. Blaine, and his account of one of these many interviews throws no little light on his mental condition. Guiteau says:

The last interview with Secretary Blaine on that subject occurred, say about April 25th, and he says to me rather abruptly, one Saturday, says he, "Never speak to me again on the subject of the Paris consulship." He broke out in that kind of way, and hurt my feelings a little. I felt quite disturbed about his treating me so abruptly, in view of his previous manner, previous attention, and previous talk that as soon as the deadlock in the Senate was over, that I would probably receive favorable attention. It hurt my feelings to have him "go back" on me, to use the common expression, so suddenly as that. Says I to him, "I am going to see the president about this, and I think I can get the president to remove Mr. Walker." Mr. Blaine did not think I could. "Well," says I, "I am going to see the president about this anyway, and I think I can get him to remove Mr. Walker, and then I can get the appointment." Mr. Blaine looked up in a sort of compassionate way, and I guess he was a little ashamed of himself, and says he, "Well, if he will." Those were the last words I had with Mr. Blaine on the subject. Says he, "Well, if he will;" as much as to say, "If the president wants to remove Walker, I won't interfere with him."

Who, but a case of logical perversion would so interpret the acts of a politician, who had treated him rather with avoidance than confidence? About the end of May, 1881, Guiteau ceased to visit the president. He says that:

The political situation kept growing bitter, bitter, bitter; and he was getting more and more worried and perplexed about the fact that the president, General Grant, and Senator Conkling were at loggerheads on the Robertson matter, and other matters. He kept reading the papers, and reading the papers, and feeling a great distress about the whole matter. He wrote the president several notes, in which he told him that he ought to do something to pacify the stalwarts; if he did not the Republican party would go to wreck and ruin, and there would be terrible trouble here in this country. Garfield never answered the notes at all; paid no attention to it whatever. Guiteau, after this, kept thinking about the political situation more than anything else; and kept reading the papers, and kept being worried and perplexed, in great anxiety of mind as to the future of this country. After he saw the president and General Grant and Conkling, and that kind of men, were wrestling and at

loggerheads, he saw that this nation was coming to grief. The way the papers spoke about General Garfield at that time, the newspaper extracts that were found on his person at the time of arrest, and what he saw occurring between General Garfield and Mr. Blaine confirmed his opinion. The Wednesday evening after Senators Conkling and Platt resigned there was great excitement in the public mind in reference to their resignation, and Guiteau felt greatly perplexed and worried about it. He retired about eight o'clock that evening, greatly depressed in mind and spirit from the political situation, and about half-past eight an impression came over his mind like a flash, that if the president was out of the way this whole thing would be solved, and everything would go well. That is the first impression he had with reference to removing the president. The next morning the same impression came upon him with renewed force. He kept on reading the papers, with his eye on the possibility of the president's removal, and his impression kept working upon him, grinding him, pressing him, for about two weeks. All this time he was kept horrified; kept throwing it off; did not want to give the matter any attention at all; tried to shake it off; but it kept growing upon him, pressing him, goading him, so, as a matter of fact, at the end of two weeks, his mind was thoroughly fixed as to the necessity for the president's removal, and the divinity of the inspiration. He never had the slightest doubt as to the divinity of the inspiration from the 1st of June. After the idea took full possession of his mind, about the 1st of June, he kept praying about it, and praying about it, and praying about it. The substance of the prayer was, that if it was not the Lord's will that he should remove him, that there would be some way by His providence by which He would intercept the act. That was always the way that Guiteau tested the Deity. When he felt the pressure upon him to do a certain thing, and he had any doubt about it, he kept praying that the Deity may stay it in some way, if he is wrong.

During the time he was thus haunting the White House, he was observed by several people who gave the usual negative evidence, that they did not notice anything peculiar. Mr. Moss,* a very intelligent colored member of the Washington bar, testified that :

He saw Guiteau in March, April, May and June, 1881, in the Executive Mansion; in the month of May, about every other day. Guiteau's conduct and words while there were very peculiar indeed, and the crowd who were standing around in the waiting-room all seemed to think the same thing. Mr. Moss thought Guiteau was a crazy man when he first saw him at the White House. Mr. Moss came to the conclusion because Guiteau looked as crazy people look generally to him. Mr. Moss had occasion to see them very often, as he resided near the asylum. He saw this man sitting about with papers in his hand, and he looked to Mr. Moss like a crazy man, and others said so too.

* Official Record, p: 458.

The preparations for the assassination, and the peculiar vacillations of the prisoner have been already mentioned. Guiteau says that :

He had this inspiration in him, and that is the reason he looked gaunt and haggard. He was not easy in his mind; he was not well. He was haunted, and haunted, and oppressed, and oppressed, and could get no relief until it was actually over.

With regard to the general condition of the prisoner at the time of the homicide I present the following summary* of the testimony for the prosecution. It appears

That Guiteau was calm at the time of the shooting; not excited, saying repeatedly, "It is all right;" seemed to be trying to quiet the excitement of the people, especially of the ladies, several of whom, as well as several gentlemen, were there present [Official Record, pp. 155, 156], and were much excited by the shooting. That he met a policeman [155] coming into the room, who had been attracted by the firing, and who seized him, not knowing at first [187] that any person had been shot or that Guiteau had fired the shots, but having arrested him because he was attempting to get out of the room [186] where firing had been heard. The prisoner, at the street door, had a paper in his hand [147], and speaking of it, said [149, 170, 171], "I want to send this letter to General Sherman, immediately" [176 to 179, 186, 189]. He repeated that request several times, while in the depot, and when being conducted [186] immediately thereafter, by the officers having him under arrest, across the street to the police station. The prisoner also said, speaking of that letter to General Sherman, "It will explain the whole matter" [179], which he repeated several times [178], not directing his remarks to any person in particular [179]. And after one of the officers having him under arrest said to him, "General Sherman shall have the letter," the prisoner kept repeating his request to send it to General Sherman. That a few minutes before the president came [170] the prisoner got his boots blacked [705], and spoke to a hackman to take him to Congressional Cemetery (near the jail); and his appearance at the time [170] was that of one in distress or trouble, to such an extent that the attention of a stranger waiting in the depot, and hearing the conversation, was attracted towards him, and the idea drawn therefrom that the prisoner was going to visit the grave of a dead friend, or something like that. When the shooting occurred [170, 175] there was considerable confusion and excitement amongst the people present, but the prisoner seemed to be more calm than before; his countenance [170] did not look so distressed or troubled after that as it did before. He was rather pale, but was calm, deliberate, and not excited [180]. He had a fierce, sharp look out of his eyes [181, 191]; and his appearance and manner continued the same, after the shooting in the depot and

* From Mr. Scoville's book.

while being taken across the street [181] to the police station, and at the station. After leaving the depot, and while on the way to the station, in charge of two officers, one on each side, the prisoner said, "I did it, and will go to jail for it [187]. Arthur is president, and I am a stalwart," and again he said, "I am a stalwart—Arthur is now president of the United States" [179]. At the police station, when asked by an officer what his name was, he answered, "Charles Guiteau, a theologian and lawyer" [188]. He was then searched, and different articles taken from him without objection, until an officer was about taking certain letters and papers from one of his pockets [138], when he resisted, and as the officer took them (another officer holding his arm), the prisoner said he wanted the letters to go to Byron Andrews, on Fourteenth Street, a journalist. The lieutenant of police then said to him, "Have you anything to say?" Says he, "I have nothing to say, the papers speak for themselves." He then said to the officer who was searching him, "Don't get excited [188], take your time; you have got plenty of time to search me" [207]. He was calm [207]. One of the papers then taken from him was an address, directed "To the White House" [206]. That was in a large envelope [205], with his speech entitled "Garfield against Hancock." There were a great many clippings from newspapers, and about a dozen of his business cards. On the way to the jail he crouched between two officers on the seat in the back [207], and pulled his hat down over his eyes. He did not seem to be frightened, but to screen himself from view. He said he had written to Gen. Sherman about it [206], and that he would be down in the morning to see him, and to take charge. He said that he was a stalwart of stalwarts, and that he had done it to save the Republican party, and the country. After being committed to jail, no person other than those in the employ of the government, with the single exception of Mr. Scoville, on the Fourth of July, was permitted to see or converse with him for several weeks. It will be readily admitted that his appearance and conversation immediately following the 2nd of July, before he had settled down to what was for him the repose and recuperation of jail life, was specially important as indicative of his mental condition at that time. Yet, although frequent and careful interviews were had with him, and although the prosecution had every facility for establishing, beyond question, his state of mind as to sanity or insanity, directly after the day of the act, no attempt was made to do so. At least, no evidence was introduced by them on that point. The names of some witnesses in employ of the government were given by the defense, who had knowledge on that subject, but they were not called. Two of them were subsequently called by the defense at a venture, Bailey and Brooks; and a third was offered, but objected to by the prosecution, and he was not permitted to testify. This was Detective McElfresh, the man who was made a confidant of by Guiteau within an hour after the shooting, who rode to the jail with him, and who visited him repeatedly soon afterwards. This was the man whom Guiteau promised to have promoted, through his influence with the administration.

It is certain that the night after the homicide Guiteau slept soundly. He himself says:

I felt greatly relieved when it was actually done. When it was over you may say I felt happy. I had not been so happy for weeks until that July 2nd, when it was all over, and I was in my cell. Then I said to myself, "Thank God, it is all over!"

According to Dr. Noble Young*

Guiteau spoke of being inspired *within a few days* after his admission to the jail, and said that the president's death was necessary to confirm his inspiration.

Dr. Young admitted he knew very little about insanity, but did not consider Guiteau insane. There is much intrinsic evidence to show that the claim of inspiration was made at the time of Guiteau's admission to the jail, and that the claims that the inspiration was an afterthought are based only on the absence of the evidence suppressed by Mr. Corkhill. The evidence of Dr. Noble Young† settles this question, and the newspapers of July 4, 5 and 6, 1881, contain evidence in the same direction.

There is too little evidence as to Guiteau's jail life, and the fact that so little was obtainable speaks for the insanity theory, since the uniform custom of the District Attorney was to suppress evidence he supposed to be in favor of the defense.‡ The nature of Guiteau's interruptions of the trial can be gleaned from the instances cited, few though they be.

Judge Cox's charge contains much matter that deserves collation, with the legal citations given, and his ideas about insane delusions deserve comparison with the citation from Dr. Tyler. Judge Cox says:

But the *insane delusion*, according to all testimony, seems to be an unreasoning and incorrigible belief in the existence of facts which are either impossible absolutely, or, at least, impossible under the circumstances of the individual. A man, with no reason for it, believes that another is attempting his life, or that he himself is the owner of untold

* Official Record, p. 126

† He recently sent a relative to study under Dr. Spitzka.

‡ Mr. W. H. Cook (a Washington lawyer) who testified before the Springer Congressional Committee of Investigation, of the Department of Justice, said: "Guiteau was treated in a different manner from any other criminal. He was isolated from all visitors, and was not permitted, for a long time, to see counsel or friends."

wealth, or that he has invented something which will revolutionize the world, or that he is President of the United States, or that he is God or Christ, or that he is dead, or that he is immortal, or that he has a glass arm, or that he is pursued by enemies, or that he is inspired by God to do something. In most cases, as I understand it, the fact believed is something affecting the senses. It may also concern the relations of the party with others. But generally the delusion centers around himself, his cares, sufferings, rights and wrongs. It comes and goes independently of the exercise of will and reason, like the phantasms of dreams. It is, in fact, the waking dream of the insane, in which facts present themselves to the mind as real, just as objects do to the distempered vision in delirium tremens. The important thing is that an insane delusion is never the result of reasoning and reflection. It is not generated by them, and it cannot be dispelled by them. A man may reason himself, and he may be reasoned by others, into absurd opinions, and may be persuaded into impracticable schemes and vicious resolutions, but he cannot be reasoned or persuaded into insanity or insane delusions. Whenever convictions are founded on evidence, on comparison, or acts and opinions and arguments they are not insane delusions.*

The answer of the English judges has not been deemed entirely satisfactory, and the courts have settled down upon the question of knowledge of right and wrong as to the particular act, or rather the capacity to know it, as the test of responsibility. And the question of insane delusion is only important, as it throws light upon the question of knowledge of, or capacity to know, the right and wrong. If a man is under an insane delusion that another is attempting his life, and kills him in self-defense, he does not know that he is committing an unnecessary homicide. If a man insanely believes that he has a command from the Almighty to kill, it is difficult to understand how such a man *can* know that it is wrong for him to do it. A man may have some other insane delusion which would be quite consistent with a knowledge that such an act is wrong; such as, that he had received an injury; and he might kill in revenge for it, knowing that it would be wrong. And I have dwelt upon the question of insane delusion, simply because evidence relating to that, is evidence touching the defendant's power, or want of power, from mental disease, to distinguish between right and wrong, as to the act done by him, which is the broad question for you to determine, and because that is the kind of evidence on this question which is relied on by the defense. It has been argued with great force, on the part of the defendant, that there are a great many things in his conduct which could never be expected of a sane man, and which are only explainable on the theory of insanity. The very extravagance of his expectations in connection with this deed—that he would be protected by the men he was to benefit—would be applauded by the whole country when his motives were made known, has been dwelt upon as the strongest evidence of unsoundness. Whether this and other strange things in his career are really indicative of partial insanity or can be accounted for by ignorance of men, exaggerated egotism, or perverted moral sense, might be a question of difficulty. And difficulties

* Official Record, p. 3,010.

of this kind you might find very perplexing if you were compelled to determine the question of insanity generally, without any rule for your guidance. But the only safe rule for you is to direct your reflections to the one question which is the test of criminal responsibility, and which has been so often repeated to you, viz., whether, whatever may have been the prisoner's singularities and eccentricities, he possessed the mental capacity, at the time the act was committed, to know that it was wrong, or was deprived of that capacity by mental disease.

Under such a charge conviction of any lunatic not a dement or idiot must have followed. Mr. Scoville* stated at the outset of the trial he considered the burden of proof to be upon the State. The Supreme Court of Indiana† has recently so decided. Judge Sedgwick‡ has recently said that the jury should be *thoroughly* certain the prosecution has made out its case. Judge Cox, in the citation made, admits that there were difficulties in the theory of Guiteau's sanity. Difficulty implies doubt. Where doubt exists the prosecution cannot be said to have thoroughly made out its case.

I pass now to Guiteau's life after sentence. It appears that he grew fat, and seemed to enjoy life; but it may be said, prisoners (when there is *no* hope) become resigned, and gain flesh. Guiteau hoped still, and it is clear there was no suspense in the matter; for, as seems obvious from the following communication, issued by him soon after the trial, he confidently expected a new trial and acquittal.

On February 3, 1882, Guiteau gave to the press the following document, which he headed "Errors Corrected." He had expected to read it to the court when sentenced, but being stopped, concluded (as he remarked) to "test the efficacy of the press:"

A tramp says I stole his shirts. All statements of this kind are false. I never had anything to do with tramps or disreputable characters. I am high-toned—too high-toned for newspaper devils to notice, and I want them to let me alone. This is hard, but is true, I never saw such a diabol-

* Official Record, p. 361.

† ALIENIST AND NEUROLOGIST, October, 1883.

‡ American Law Review, February, 1882.

ical spirit as some newspapers have towards me, especially those that were cursing Garfield last spring. Since he was shot they have deified him, and cursed me for doing the very thing they said ought to be done, namely, remove him. When God found a man that had the brains and nerve to do it, these newspaper devils deify Garfield and curse God's man. But the Deity will get even with these fellows. If I were dead these devils would not be satisfied. If I had been president and wrecked the Republican party as Garfield did, I say I ought to have been shot, and posterity will say so, whatever this perverse and crooked generation may say. "Ye generation of vipers, how can ye escape the damnation of hell?" It is hard to tell how some newspaper men will escape that place if they continue to slander God's man.

Business now!—My mail comes to the jail now. Any friend wishing to see me in person, or to write to me, can do so. Any one having sent me an important letter and received no answer, can write again, and I will see it is answered. No notice given to anonymous or "crank" letters, except to put them in the waste-basket. All checks should be certified—then I shall know they are good. Autographs, 25 cents. Photographs, cabinet size, and my autograph on it, \$1, mailed to any address. This photograph is from a new sitting. I own the negative and copyright. No photograph is genuine without my autograph is on it. They will be supplied to the trade only by me for \$9 per 100. This is the only way of getting money to pay my counsel to argue my case in banc. If I give my autograph away and make an appeal I get nothing. This negative will be a great improvement every way on the sitting of July, taken by Bell. My hair is parted and my beard off, and I look ten years younger. It is an historical picture, and any one can get it by sending me the price, and in no other way. Under no circumstances will I allow my relatives or any one else to have anything to do with my body. If necessary, I shall will it to some large cemetery. I shall probably need it myself for some time yet. Scoville's proposition is simply infamous and barbarous, and not to be tolerated for a moment. I am sorry Scoville is poor; and if I had plenty of money I would give my sister \$5,000. I shall do so, anyway, if I get out of here.

CHARLES GUITEAU.

United States Jail, Washington, Feb. 2, 1882.

THE EXECUTION.

To the well-written description of the last days of Guiteau's life, by Dr. Godding,* it is doing but slight justice to pay the poor compliment of quoting it:

June 24, 1882, Rev. Dr. W. W. Hicks, informed Guiteau that all efforts for a respite had failed; that President Arthur had declined to interfere with the execution of the sentence on the 30th of June; that his decision was final, and that nothing remained but to make ready for the event. It was thought best for the criminal to disabuse his mind of false hopes and

* ALIENIST AND NEUROLOGIST, October, 1882.

thus end the pretense, the bravado which had kept him up so long, and, by so doing, give him time to make serious preparations for eternity. But still sleep came to him as it comes to a child, his digestion was undisturbed, and to all outward appearance, the sunrise, as it came through the window of his cell on the morning of his execution, was to him the same welcome light that it was when he went to enjoy it in Lafayette Park on the morning of July 2nd, 1881. If, as he maintained to the last, "he had done God's service, and had nothing to repent of," he could well be calm. One year before, he had written, "Life is a fleeting dream, and it matters little when one goes. A human life is of small value," and now he was confronted by his own statement. But he really meant this when he wrote it, and he accepted it for himself now. It is too late for me to doubt the sincerity of this man's belief; in his egotism he posed before the world, but he was not playing at a farce with the Almighty. In his religious faith he was as terribly in earnest as John Brown, of Osawatomie, but without the intensity of that old man's devotion. Winning Guiteau's confidence, Dr. Hicks had great control over him, and I know was thereby able to prevent some steps he was disposed to take which were at least unwise. For example, Guiteau had conceived a strange fancy to go in robes of white, and determined that he would be hung in his shirt and drawers alone, and could not be dissuaded from this by his friends. Dr. Hicks told him that the doctors would be sure to point to that absurd costume as conclusive evidence of insanity, and Guiteau was so averse to giving any countenance to the idea that he was really insane that he abandoned his project. He said to Dr. Hicks, "If you say I am insane I will believe it, but I believe I am sane. I believe I am God's man. I believe I was commissioned to do this work, and I am no more insane than you are." This was the rock on which he rested, and whatever Dr. Hicks thought, we may be sure he kindly left the word insane unspoken. But while Guiteau was ready to leave a world that had grown weary of him, he had still something to say as to the manner of his going. This most egotistic of men was not likely to omit his valedictory, or make it less a gala day because he was the chief actor; the drop scene was merely an unavoidable incident that would only heighten the effect. Nor did he propose to conduct the exercises on an empty stomach—he knew the value of a square meal, though he seldom paid for one. So, after a substantial breakfast, having taken a bath and his usual exercise, both hygienic measures, he sat down to write "Simplicity," a poem! Within the last few weeks of his life, Guiteau had taken to writing poetry (?). I here insert two verses from a mystery (*Washington Star*, June 17th, 1882), which sufficiently illustrate his style. It is entitled "God's Ways."

"Thou Jehovah!
 All things created
 Save the evil one!
 He being uncreated
 Like Thyself.
 (See my book.)

• • • • •

“ The retribution came,
 Quick and sharp,
 In fire and blood,
 In shot and shell,
 In endless pain!
 Like a jumping tooth,
 Lasting forever and ever!
 (A jumping tooth
 Gives an idea of hell,
 And that is what
 Those Jews got!) ”

The parenthesis in each case lets us down from too dizzy a flight, but I think the world was no more ready for his poetry than for his evangel, “ The Truth.” There was much to be done that morning that everything should move off right. Time, for him rapidly merging into eternity, made moments precious, but how could the last half-hour be more profitably spent than in enjoying a hearty dinner, which he had ordered earlier than usual, having requested Warden Crocker to have the procession move at 12 o'clock M. sharp, he knowing how important it was to be punctual and not keep the invited guests waiting. But this wonderful criminal forgot nothing; at the eleventh hour he sent out his shoes to be blacked! It will be remembered that the same office was performed for him at the railroad station on the morning of July 2nd, 1881. This was to be another of his field days, and he went to the platform as to a dress parade. At the first step of the gallows he tripped, and said with a smile to Dr. Hicks, who caught his arm: “ I stubbed my toe going to the gallows.” And this was the man they expected would “ weaken!” How little they knew him. On the scaffold he stood erect, master of the ceremonies, prepared to conduct his last prayer meeting, assisted by Rev. Dr. Hicks. For twenty years this anomalous being had taken a real pleasure in prayer meetings: it was his privilege to be present at one more. He stood there and looked down into cold, unsympathetic faces, many of them present at a prayer meeting for the first time. But he knew that he was speaking to an audience beyond those dull ears, and that the echoes of his voice would be heard outside the limits of those stone walls which formed his horizon, and past that day's shadows. Dr. Hicks commenced the services with a brief but fitting supplication “ Out of the depths;” he then held the Bible for the pinioned man to read, and Guiteau, “ cool as an iceberg” (as the New York *Herald* correspondent remarked), said, so distinctly that his voice filled the corridor and everyone heard him, “ I will read a selection from the tenth chapter of Matthew,” naming the verses. Then he opened on that motley audience with a Scripture lesson that they well might heed, commencing, “ And fear not them that kill the body, but are not able to kill the soul,” continuing thence for fourteen verses. The New York *Times* correspondent says, “ As he read the verses, sometimes looking on the book and sometimes upon the people before him, he seemed to lose sight of the gallows, and declaimed the words with great earnestness and much dramatic effect.” At the verse which seemed a most precious promise that he applied to himself, “ He that loseth his life for my sake shall find it,” he was eloquent. Then

followed that remarkable prayer which he had written out and had patterned after the seventeenth chapter of St. John. It was delivered in the same firm and, at times, impassioned voice. Then, after a moment's pause, another paper was unfolded before his eyes, and this cool, self-possessed man, said, "Except ye become as a little child ye cannot enter into the kingdom of heaven." I am now going to read some verses which are intended to indicate my feelings at the moment of leaving this world. If set to music they may be rendered very effective. The idea is that of a child babbling to his mamma and his papa. I wrote it this morning about ten o'clock." He had come to the most trying part of the whole ordeal; the childish treble was to be assumed, and he was to babble to his Father in heaven some of his fearful verses. He humbled himself, this sane man! and thus became as a little child that so he might enter into the kingdom of heaven. This was his new birth; this was that childhood to which he doubtless thought these verses, when set to music, would hereafter afford an effective entrance for other souls, verses written by Guiteau the martyr, like those old hymns which have come down to us from the early church, hallowed with the blood of the saints, and whose triumphant strains have wafted heavenward many a parting spirit. Here is the hymn he entitled

"SIMPLICITY."

- "I am going to the Lordy, I am so glad,
I am going to the Lordy, I am so glad.
I am going to the Lordy,
Glory hallelujah! Glory hallelujah!
I am going to the Lordy!
- "I love the Lordy with all my soul,
Glory hallelujah!
And that is the reason I am going to the Lord.
Glory hallelujah! Glory hallelujah!
I am going to the Lord.
- "I saved my party and my land,
Glory hallelujah!
But they have murdered me for it,
And that is the reason I am going to the Lordy.
Glory hallelujah! Glory hallelujah!
I am going to the Lordy!
- "I wonder what I will do when I get to the Lordy.
I guess that I will weep no more
When I get to the Lordy!
Glory hallelujah!
- "I wonder what I will see when I get to the Lordy.
I expect to see most splendid things,
Beyond all earthly conception,
When I am with the Lordy!
Glory hallelujah! Glory hallelujah!
I am with the Lord."

At last he "weakened." He broke down in his recital, not from fear, but from genuine emotion. So real to him were his childish pleadings that the tears came welling up. For a moment all vindictive feeling was

gone, the pride of "God's man" was bowed down, even the egotism disappeared, and he was sobbing like a child as he prattled of the time when he "would weep no more," and the heaven where he should "see most splendid things." Then proudly he remembered he was master of ceremonies still, and his sobs were hushed and his voice rose, as he closed exultantly with "Glory hallelujah! Glory hallelujah! I am with the Lord." And so the end came. Dr. Hicks pronounced the benediction. Guiteau stood proudly erect while the functionary of the law performed his final offices, and as the quickly drawn cap shut from his eyes the last gleam of our sunlight, those orbs turned to watch for the first dawn of the coming brightness, needing no sun to light it; and, master of ceremonies still, he let fall the paper on which his prayer was written, as the signal agreed upon with the warden, and saying firmly, "Glory, ready, go," he went away. Realizing how intense must have been the gratification to his mind from all this pageant, even though a momentary pang followed, and, knowing how little the insane man considers bodily pain when controlled by his delusions, I was prepared to admit that this had been euthanasia to him.

Dr. Gray* says that Guiteau had so thoroughly identified himself with his part that he believed in it at last. How this explanation settles Guiteau's mental condition may be left to the reader's judgment.

THE AUTOPSY.

The editor of the *Medical Record*, who is a surgeon, says:

The facts seem to be that while there was some *chronic* disease in and about the blood-vessels there was nothing indicative of any form of insanity: while on the other hand, much more serious changes are not infrequently found in the brains of persons who had been perfectly sane. Account must be made also of the fact that Guiteau had been suffering from malarial poisoning, and that he suffered death from strangulation. Guiteau's insanity, if it existed, was confessedly *chronic*; therefore all *acute* changes found would have no weight in estimating their ætiological bearings on the alleged mental disease. The severest form of vascular disease was apparently the *corpora striata*,† a place where the physical (psychical?) troubles would not be excited, while it is well known that the disease did not disturb any function known to pertain to those ganglia. The view that the changes found were all significant or characteristic of commencing general paresis, is unfounded, and quite unworthy of serious discussion. The same remark must be made regarding Dr. Godding's

* American Journal of Insanity, October, 1882.

† It is not at all settled what the function of the corpora striata is. The glibness with which the *Medical Record* asserts that they cannot be the site of psychical functions appears startling in view of the fact that the most recent researches, those of Wernicke, from an anatomical point, support the view that they are "associated centers with the cortex, and cannot be considered disconnected from it."

surprising statement, that the arachnoid opacity was indicative of mental disease. There have been some rather labored attempts to prove the brain atypical. The convolitional development, however, as we are told, though deficient in some parts, was compensated for by fuller adjacent gyri.* So far as the eye and some rough measurement could tell, the two hemispheres showed *no asymmetry*. The fundamental fact in the present case for the determination of atyp, viz., the comparative weight of the two hemispheres being absent, it would not be allowable, nor in accordance with scientific honesty, to make positive statements regarding the matter. The futile and decidedly *ex-parte* attempt to show pathological cranial asymmetry hardly needs comment. In fact, Guiteau's mental condition must be decided by a study of his words and actions when alive. If these did not prove him a lunatic and irresponsible, the post-mortem findings will not help the case.

First and foremost as to asymmetry, the official report, condensed, is as follows :

LEFT HEMISPHERE.

1. Post-central convolution normal. (L.†)

Post-central normal throughout, large and well-developed. (M. and D., H. and S.)

2. Island of Reil, seven fissures and eight gyri. (L., M. and D., H. and S.)

3. Calloso-marginal fissure runs the usual course, and is broken up by a gyrus at the end. (M. and D., H. and S.)

4. Parietal region shows nothing unusual as a whole. (L.)

5. Para-central lobule large and well-developed. (M. and D., H. and S.)

RIGHT HEMISPHERE.

1. Same more narrowed at upper part. (L.)

Upper one-fourth narrowed and shrunken. (M. and D., H. and S.)

2. Island of Reil, five fissures and six gyri. (L., M. and D., H. and S.)

3. Calloso-marginal runs thro' præcuneus (!) to parieto-occipital fissure. (M. and D., H. and S.)

4. Parietal region slightly flattened. (L.)

5. Para-central lobule quite small. M. and D., H. and S.

The asymmetry claimed to exist in Guiteau's case was teratological, not pathological. The contradiction in stating in the opening clauses that *chronic* disease *was* found, and then stating that the *acute* changes found had no bearing, is so obvious that it must be evident this paragraph was intended to mislead. Careful study of this citation will show the same design to misstate which characterized the *Record's* earlier declaration, that no one regarded Guiteau as insane :

* No cerebral anatomico-physiologist would write thus.

† The letters M. and D. indicate the report of Drs. Morton and Dana, H. and S., that of Drs. Hartigan and Sowers, and L., that of Dr. Lamb.

The editor of the *Medical Record* is strangely silent as to the responsibility for this blundering omission, to which attention was directed by competent authorities before he discovered it. As Dr. C. L. Dana, a member of the *Medical Record's* staff, was the one to whom Dr. Lamb entrusted this branch of the examination, the reason for Dr. Shradý's silence is obvious. Whenever Dr. Shradý strays from his province as a surgeon, it has calamitous results on the *Record's* reputation, as witness the instance where it discovered "sulphate of oxygen," and said it was administered to the dying Czar as a restorative.

This self-convicting assertion is the outcome of the bitter feeling shown toward the leading expert witness for the defense, who had shown up the valueless nature of several medical books published by Wood & Co., the *Medical Record's* publishers. By a singular coincidence it is Dr. Dana who again places the *Medical Record*, January 7, 1882, in a predicament. Examining Guiteau (whether as a sight-seer or medical counsel is not stated), Dr. Dana discovered gross facial asymmetry. Dr. Dana says :

"Mr. Scoville referred to Dr. Hamilton's testimony as being unnecessarily positive in character. He showed us the measurement of Guiteau's cranium, made by that witness. They were taken in the usual way, but it so happened that the configuration of the median line, of the auriculo-bregmatic line, and of the circumference just above the external angular process, do not show the irregularities as they really exist, but only a slight bulging on the right side. The fact is that there is a decided bulging near the left parietal eminence (the posterior vertical line described by Topinard would pass through it), and a depression almost corresponding on the right side. I examined the cast of the head carefully. It does not show the irregularities so well as the head itself, but one can see an obliquely directed ridge of bone passing from about the left parietal eminence backward, downward, and toward the right till it reaches the vicinity of the right ear. This ridge is two or three inches wide. Most of it is on the left side, and it makes the skull noticeably asymmetrical. I took a strip of lead and adapted it to a line on the skull, passing from the left ear over the occiput to the right ear. In this way I got a trustworthy tracing proving in quite a striking manner the degree of asymmetry of the skull. I also saw a tracing made by the latter. But this configuration is too low down to indicate anything. A tracing made at about the same height by Dr. Hamilton shows only a slight bulging on the right side. Another circumferential measurement made parallel to the alveolo-condyloid plane, about one inch lower than the bregma, just above the frontal prominences, shows better than any other the apparent fact that there is less brain on the right than the left side. This, combined with the deficient innervation of the left side of the face, and the turning of the tongue to the left, may or may not indicate something.

The tongue, when protruded, turns very noticeably to the left—not only the tip, but the whole organ. The experts have stated that this is not rare or unusual. It so happens that in my experience I have never seen a tongue so deviated in a healthy person; hence I was struck by it. There is a vertical furrow on the right side of the forehead, but none on the left. Of the two furrows on each side of the mouth, that on the left is deeper. The left eye, that is, its palpebral fissure, seems smaller. By watching very closely one can notice a slightly less active movement of the muscles of the left side of the face. This is very slight indeed. In smiling the lips appeared to be drawn out symmetrically.

I went to Washington thinking that society ought to consider Guiteau a sane man. It is difficult not to feel now that the theory that he is insane, best harmonizes and makes clear his actions."

Whether there was not asymmetry my readers can decide, who will also remember that this is not the first time that Dr. Elwell has cited the perversion of facts given by the *Medical Record*. The *American Journal of Neurology and Psychiatry* says:

All the decided deviations from the normal are towards a generally defective development of the right hemisphere; the atrophy of the right post-central convolution was so marked as to be characterized by the adjective "shrunken;" *there can be no doubt that if peripheral wasting or paralysis had been present localizationalists would have utilized this finding.* Such a great difference between the insulae of Reil has been found only in the most atypical and asymmetrical brains. There is some doubt as to the interpretation of the description of the right calloso-marginal fissure; as that fissure ordinarily constitutes the anterior boundary of the præcuneus, it is difficult to conceive of it running across the field it bounds. It seems probable that the right præcuneus must have been smaller than its fellow, just as the para-central lobule, the island of Reil and the post-central convolution were less voluminous and less developed on the same side; the course of the calloso-marginal fissure on the right side was exceedingly atypical, and is of the greater significance because it took the course only on one side. Asymmetry of this character* is congenital, and differs from the atrophy of one hemisphere resulting from various acquired disease processes. In the latter case, as long as any convolutional type can be distinguished in the smaller hemisphere it deviates no more from that of the opposite side than one hemisphere usually differs from the other in normal subjects. And where a destructive lesion is associated with the atrophy, the former manifests its past existence by unmistakable signs. Lack of development of one hemisphere manifesting itself in a reduction of important gyri and lobes, combined with an atypical course of a fundamental fissure, must have its origin in an aberrant development instituted at an early period of fetal life. It is this fact which lends such atypical developments their peculiar significance. Destructive lesions may occur

* Editorial, *American Journal of Neurology and Psychiatry*, August, 1882.

after birth, a whole hemisphere may be destroyed without necessarily producing insanity; in fact the further advanced toward maturity the individual, the better able the cerebral mechanism to endure extensive injuries without pronounced psychical derangement. The nearer the time of the injury approaches the natal period, and especially if it anticipates that period, the less likely is it to leave the mental mechanism intact. Aberrant development is in this respect analogous to an early injury, but with this difference, that while the injury is limited in its effects to the functions of the special region destroyed, irritated or hampered, it is impossible to say how deeply the error in development, manifesting itself in a surface anomaly of the hemisphere, may involve that subtle architecture of the transmitting and associating tracts which, according to the new and rational psychology is the basis of the logical mechanism. It is in harmony with this explanation that aberration in development of the kind discovered in Guiteau's brain has not yet been found in others than the idiotic, imbecile or insane. Unsoundness, associated with such and analogous errors of brain development, covers an extensive range, including "original" or congenital and hereditary imbecility, and chronic insanity with systematized delusions, morbid projects and moral perversion. The most reliable, thorough investigators, Stark, Sander, Muhr and Jensen, have noted the presence of convolational anomalies and asymmetry in such subjects; and Schüle, the author of the article on insanity in Ziemmsen's Cyclopædia, expresses his belief that the only finding in the brains of primary monomaniacs (Primär-Verrückte) which promises to establish a relation between the insanity and the state of the brain, consists in such architectural anomalies. It was only an intensification of the teratological influence in the Guiteau family, which produced non-viable, cyanotic and club-footed children, and the one born with one side larger than the other, causing congenital shortening of the leg. Where hemispheric asymmetry is marked, innervation of the two halves of the body is apt to be unequal, and the inequality to be most accentuated in the facial muscles, the side opposite the defective hemisphere being defectively innervated. It is evident from Guiteau's photographs that there was a notable defect in left facial innervation. Photographs taken from different sides appear like photographs of different individuals. The right side is animated, and appears to be on the *qui vive*; the left is dull and vacant. The association of facial asymmetry and crossed cranial asymmetry, with certain forms of hereditary and congenital insanity, gives them medico-legal importance. There is no more significant somatic anomaly in the insane than gross cranial deformity, for no other, aside from peripheral mal-development and the insane expression, points so directly to the organ which is the seat of mental action.

With regard to the histological findings, Dr. Shakespeare, the leading histologist, who made the microscopical examination, openly expressed to more than one reporter connected with the daily journals, his opinion, based on his findings, that Guiteau was a lunatic. The Philadelphia

Medical News, after maintaining in the stoutest manner the hypothesis that Guiteau was a criminal only, turned round on hearing this report of Dr. Shakespeare, and acknowledged Guiteau to be a lunatic, but still said he was justly executed. The most dignified position was that taken by the *New York Medical Journal*. It, while pronouncing Guiteau as sane up to the time of the report of Dr. Shakespeare, to which allusion has been made, thereupon acknowledged,* without any prevarication, that Guiteau was a lunatic. The statements of Dr. Savage are beside the question, and only one more illustration of Dr. Elwell's ability in using what in logic is called the fallacy of references. Dr. Savage does not say from whom he received his specimens. Specimens were sent to Utica and other "interested" localities. Had Dr. Savage obtained his specimens from Dr. Lamb, leaving no chance for dead-house *hocus pocus*, we might grant—just so far as we can grant anything in the case of an imperfect and partial examination by the editor of a journal already biased—that Dr. Savage had examined a piece of Guiteau's brain, and that that piece did not contain the lesions decided to be present, diffusively and intensely, in other parts, by very competent and unquestioned authority. Such statements are not to be taken in evidence against the positive testimony. As a lawyer, Dr. Elwell should know this. His citation of the decidedly non-committal statement of Dr. Savage is on a par with the "inventive stupidity" of the Irishman who, being confronted with two men who saw him commit a crime, proposed to dispose of this by the evidence of half-a-dozen who did not see him. In this connection it may not be out of place to contrast Dr. Savage's statements with those of the report:

DR. SAVAGE.

There are no marked general changes in the nerve cells.

REPORT.

Chronic disease in numerous minute diffused areas, accompanied by alterations of the cellular elements * * * very diffusely pervaded all portions of the brain which the sections represented.

The citation of Dr. Ray is another misconception on the part of Dr. Elwell, as to what constitutes evidence. Dr. Ray is reasoning against the misuse of pathological investigation, as recently and specially illustrated in the manufacture of artificial precipitates photographed as evidences of insanity by two of the witnesses for the prosecution. I submit to the readers, for their judgment, the statements made by Mr. Deecke,* the pathologist of the Utica Hospital for the Insane, as to insanity and the findings in Guiteau's case:

MR. DEECKE.

The first anatomical changes observed in insanity, therefore, are palpable lesions in the vascular system of the organ.† * * * This is not a theory based upon suppositions and conclusions, but a truth founded upon facts accessible to observation. These conditions, although commonly of a transitory nature, may assume, under certain circumstances, a chronic and permanent character. In the one case the anatomical change consists in a contraction and induration of the endothelial lining of the vessels, associated with a slow infiltration with substances from the normal waste of the tissues, by which the interchange of matter between the tissues and the blood becomes impaired. In farther advanced stages this material may be deposited in the perivascular spaces and accumulate in the surroundings of the vessels forming the groundwork of neoplasms and cell proliferations.

GUILTEAU'S BRAIN.‡

In areas, very numerous but limited to the gray or ganglionic substances, the capillary blood-vessels presented their walls in a state of granular degeneration (this refers to the *corpus striatum*; the following, to the frontal lobes' cortex); * * * "the blood-vessels presented, in a marked degree, degenerations similar to those remarked in the *corpus striatum*." Sometimes these granules were limited within the endothelial cells, constituting the wall of the capillary, but often they were found for a considerable distance encircling the vessel. * * * In a general way it may be stated that the cellular hyperplasia, or cell multiplication, was more marked than in No. 7. * * * In some instances, these white cells were clustered closely around and adherent to the wall of the vessel upon its exterior, and often most abundantly aggregated in the immediate vicinity of a bifurcation. In others, the cells were closely packed together upon the external wall of the perivascular lymph space, and slightly infiltrated the adjacent neuroglia. * * * This cellular hyperplasia was much more marked in the fourth and fifth layers than elsewhere.

CONCLUSIONS.

I have inflicted thus much of the evidence upon my readers, to enable them to judge for themselves, and it

* American Journal of Insanity, April, 1881.

† Journal of Insanity, April, 1881.

‡ ALIENIST AND NEUROLOGIST, January, 1882.

now becomes imperative for me to state my own conclusions. Taking into account the morbid heredity, the teratological defects revealed on the autopsy, as well as the pathological changes also present and evidently secondary to acute attacks of insanity, together with the history of the case, I, in common with Hughes, Bannister, Dewey, Parsons, Godding, Wallace, Spitzka, Goldsmith, Chase, Sayre, Jewell, Nichols, Fisher, Channing, Denny, Clevenger, Grissom, T. A. McBride, L. C. Gray, O. A. King, Mann, J. H. McBride, Reynolds and others, in the United States; Howard, of Canada; W. A. F. Browne, of England; Lutaud and others, in France; Pelman, Kelp and Karrer and others, in Germany; Tamassia, Lombroso and others, in Italy, regard Guiteau as insane. In my opinion Guiteau was a case of paranoia (primary monomania). His delusion of inspiration originated in a delusive conception, which became ultimately a systematized delusion, in consequence of circumstances favoring its growth. That he did not fully understand the nature of his act seems to me clearly proven by the evidence. The doctrine that Guiteau was insane explains everything in his career; on the theory of sanity there are, as Judge Cox said, *difficulties*.

Psycho-Sensory Insanity—Moral (Affective) Insanity.

(Continued from Last Number.)

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

Late Superintendent and Physician Missouri State Lunatic Asylum; Lecturer on Nervous Diseases, St. Louis Medical College.

EVEN the great Esquirol, whose unequalled portraiture of mental disease have alone made his work and name immortal, could not wholly resist the bias of his previous opinions, for while he recognized the clinical pictures of Pinel and Prichard as true to nature, he assumed the co-existence of *délire partielle*, while he employed the term *raisonnante* as applicable to the state of mental disorder we are considering. He thought there existed a partial delirium in these cases, though the mind was otherwise sound. It matters not what we may conjecture about the implication of the reasoning faculties. The real question is, What do we discern?

Esquirol was too good a psychiatric observer not to see in the corridors of Salpêtrière and Charenton, that the form of affective mental aberration now under consideration, without appreciable intellectual disease, was a clinical fact, so, like the faithful clinician that he was, he accepted the fact, and compromised with his prejudices by conjecturing the co-existence of *folie partielle*.

It matters not what mental reservation we may hold respecting the assumed unappreciable co-derangement of the intellect in moral insanity, so that we permit no cunning sophistry to obscure the real clinical picture of mental aberration. Let us accept the fact, as America's greatest alienist, now immortal, has penned it, and say with him that insanity of the affective faculties without *appreciable* intellectual disease is a *fact* of observation. It is the clinical feature of the disease that is of moment.

If our preconceptions of the unity of mind necessitate the *assumption* that if sound in one direction it must be sound in all, and compel us to associate with it an unseen intellectual aberration, it is of little consequence, unless we are thereby led to deny the existence as a clinical fact, of the form of insanity under consideration.

Mayo, like many others before him and since, accepted the dictum of Lord Brougham, that "If the mind is chronically unsound on one subject, it cannot be sound on any other subject," and on such an absurd assertion (as if we could know mind so intimately as to justify us in making of it a logical premise) he pronounced the doctrine of partial mental perversion a solecism. Whereas the illustrations among sane people of incomplete intellectual distortions, obliquities and strabismi, due to the vagaries of custom, the follies of fashion, or errors of education, overwhelmingly refute this assumed basis axiomatic truth, with which it has been proposed, and is still proposed, to abolish the doctrine of moral insanity.

To remove or get around this stumblingblock in the way of psychiatry, as some appear to see it, the term unsoundness of mind has been brought into requisition, but unsoundness of mind is a form of insanity, and it must be so conceded, when it is extended to include such cases as have been described as moral insanity.

It would extend this paper to a wearisome length to cite, ever so briefly, the many cases of real moral insanity which have been described as cases of mental unsoundness, moral imbecility, etc. We pick out, therefore, but one or two from Prichard's critic, whom we have been discussing. We need only read the clinical record which Mayo makes to discern the *possibility*, if not the *proof*, which he himself unconsciously presents, of the actual existence of the very form of insanity he is trying to reason out of existence. To concede these kinds and degrees of unsoundness of mind is to beg the question, for they are so near akin to the acknowledged and described forms of moral aberration that the possibility, if

not the actuality of moral insanity is established by them. They are indeed instances of insanity in its psycho-sensory as contradistinguished from its psycho-reflective or perverted intellect forms. If the moral sense, as Mayo concedes, can be lost through cerebral deficiency, it can be perverted by disease, for the congenital defect of one generation is often the sequel to cerebral disease in the generation that preceded it. It is the offspring of disease begun either in immediate or remote generations, and it is therefore of little force to use unsoundness and moral imbecility to explain away a disordered mental condition to which they are so closely allied, and which so often depends upon them. Conditions of moral insanity and imbecility, or unsoundness of mind, are often interchangeable states in the neuropathic heredity of families. Their morbid kinship is thus proven.

The following are some cases from Mayo, who thinks they represent "persons of whom neither insane delusion, nor incoherency, nor idiocy can be predicated," yet according to this author they "require precautions in reference to the management of property or person." This is a concession of the very fact of affective aberration against which he contended.

Let us examine them, and see how near they lead us to a recognition of moral insanity, and also to see how unconsciously inconsistent one may be who will not concede the existence of insanity without delusion, while he admits the existence of unsoundness without delusion or incoherency, sufficient to justify restraint in regard to person or property.

CASE I.—In the case of Mrs. Cummins, in 1852, one of the contending parties seemed to permit the question, whether the patient required coercion, or at least surveillance, to turn upon the question, whether she was or was not insane, either *eo nomine*, or under some synonym, ignoring the consideration, that without being insane, she might still conform to one of the descriptions affirmed in the medical certificate as implying such mental disease as the law intends to be inconsistent with free agency. Now, a candid perusal of the

testimony given in this case, with the fullest admission of its probable truthfulness from the respectability of the witnesses, may suggest the reasonableness of this compromise. On the one hand, there was neither false perception, nor incoherency, nor inconsecutiveness of thought, alleged of Mrs. Cummins. She saw no unreal objects; she heard no unreal voices; she indulged in no misconceptions, as to her property or position, which could be construed into an insane notional delusion. * * * *

On the other hand, it was in evidence, that she had, out of a moderate property, bequeathed £2,000 to her then solicitor, who showed his unfitness for that trust by, at another time, forcibly obstructing physicians appointed by the Lord Chancellor to examine into the actual state of her mind; that she had, by her screams, attracted policemen to a house in which she was residing of her own free will, but separated from her family, as if violence had been used, no such violence having been proved; that she was in a state of constant removal from place to place, so as to prevent her family from knowing where she was; and that her solicitors were constantly being changed by her. There was excessive and unexplained, or unsatisfactorily explained, hatred of her daughters, leading to an unreasonable accusation against one of them of an attempt to strangle her. With respect to these daughters, she avowed that they had that day been drinking at the bar of the Horns Tavern, of which no proof was adduced; that one of them, Mrs. Ince, was a prostitute, and that her husband had murdered three children. Equally extreme and unreasonable, as well as unfounded, opinions were entertained by Mrs. Cummins respecting the conduct of her aged husband.

CASE II.—This person, aged twenty-one, was the son of a very respectable farmer, well grown, and in good general health. When I saw him, he exhibited in his general appearance nothing noticeable, except a coarse and sullen expression of countenance. I learnt, from his relations and a family friend, whose testimony bore strong internal evidence of truth, that he had been a singular child, with obstinate fancies—such, for instance, as refusing to be dressed in the morning without some absurd condition being granted. By five years old, he was a confirmed liar, as well as a believer in his own marvelous assertions. By fourteen, he had run away from school, and was domesticated at

home, under careful, but ineffectual, surveillance. He would, I was told, at that time obtain, if he could, any article that struck his fancy, upon credit; then promptly throw it away, or give it without judgment. As an instance of defective intelligence, the following detail was quaintly given me: "He paid a visit to his grandfather, and during it, behaved remarkably well. But, then starting home on his pony, he went several miles in an opposite direction, and visited his old schoolmaster, to whom he told a false, but plausible tale, without any apparent purpose; thence to another town, equally without an object; there he did nothing but sit in an inn; then turning toward home, he was found in a lane crying, and brought back to his father's house, where he appears to have always been treated with great kindness, and no want of discretion. Of all the above freaks he gave no explanation. His conduct darkened as he became older; after turning into money other people's property as well as his own, he proceeded to forge cheques of his father, absconding with the cash. These matters having been arranged, he was sent on a voyage to Calcutta; and after having behaved well at first, dropped into a series of scrapes similar to the former. Subsequently he enlisted as a common soldier; then became a cabman, always rejoicing in the lowest company, but without indulging to excess in drink; habitually defrauding, when he could, his near relatives, and in his other conduct towards them equally remote from affectionateness when kindly treated, and from malignity when thwarted. No advice had, at any time, the slightest effect on him. The leading moral elements of this young man were a love of acquisition, and a love of change. His intellect was limited; and though his powers of acquiring knowledge were not obviously below par, it could by no means modify, direct, or restrain the above tendencies, in which task, it must be observed, his intellect was neither aided nor antagonized by any passion or affection.

CASE III.—Mrs. H., aged fifty, has for many years been subject to the condition which I will describe: Having a husband and daughter, both of them amiable, kind, and intelligent, she quarrels with both of them irritatingly, and with entire opposition to every scheme of life proposed for herself and them. But more than this. After she has been for some time resident in the same house with them—and apparently on that very account a cloud comes over her—she takes to her bed; her appetite and digestive

powers sink; and she becomes almost continually silent, and indifferent to everything. While this state lasts, every duty of life is neglected by her; she is utterly incapable of managing person or property, and yet never incoherent or inconsecutive in any remark that may be elicited from her, nor under the apparent influence of any morbid delusion. Out of this state she will emerge gradually, and in the course of weeks, into a more lively one. During this second stage, she will converse with much readiness, often very cleverly, sometimes with much ill-temper, and occasionally with the introduction of abusive terms and even indecent expressions, *her normal character being pure and correct, her intellect vigorous but paradoxical.* Out of this stage she gradually improves into her healthy state, provided her recovery is not anticipated by a reunion with her husband and daughter.

CASE IV.—On the 2nd of December, 1843, Thomas Rowe, a wine-cooper, aged seventy-six, was discharged from the service of Mr. Thomas Waller, a wine merchant, on the ground that his faculties had given way, and that he did not know what he was about. On the 2nd of October, Mr. Waller received from him a letter, requesting Mr. Waller to give the applicant some other work, or to help him to employment. On the 6th, Rowe called upon Mr. Waller. Being admitted, he ineffectually sought for employment, and again urged Mr. Waller to take him into his service, either in town or in the country. Mr. Waller declines this, and asserts, that Rowe must have actually saved enough to live upon. On another request for employment, reiterated by Rowe and negatived by Waller, Rowe draws a pistol from his pocket, fires it at him and wounds him, at a distance of two or three feet. He then draws another pistol, and observes to another person, who prevents him from using it, that "such a fellow as Mr. Waller is not fit to live"—an idea which he afterwards expressed again with equal force. Evidence was given on Rowe's trial, that latterly his faculties had much given way; that he frequently, in the last six months, "had seemed not to know what he was about, and had a giddiness in his head." The usual averments, that the defendant did not know right from wrong, were made by the medical witnesses. The jury immediately acquitted the prisoner, as a lunatic. This elderly person, therefore, gained his

object, and was comfortably provided for the rest of his life.

It is difficult to see how some of the features of the preceding cases differ essentially from the following abstract of a case which Mayo takes from Esquirol's "Maladies Mentales" to elucidate that author's views:

Madame N., aged 23, a lady of the nervous temperament, having been subjected to some slight contrarieties, becomes excited. Being previously an attached wife and mother, she now neglects both her husband and child; neglects also the regulation of her house, in which she was previously exact; becomes impudent in her remarks, and even throws out charges against her husband in the presence of strangers. "A demon of mischief," says M. Esquirol, "seems to possess her; yet she is prompt and subtle in finding excuses, and can conduct herself so well in society as to baffle suspicions of unsoundness."

Yet he thinks the burden of proof rested with Esquirol, to show that this lady was not under delirium involving incoherency of thought, or false perception, or both.

This case is a fit case to go with Mayo's three cases just cited, or Mayo's three cases might be suitably classed with it. If delusion or delirium exists in this one, it exists in the three. It has to be assumed, to be placed in any of them, and the burden of proof falls on the party making the assumption. Morbid perversion of the affective life—a disorder of the feelings, impulses and passions, and changes of character, are apparent in these cases, and without the unreasonable bias which dominated Mayo, he would have seen in them the only point we are now insisting upon, viz., that insanity of mind may exist without appreciable intellectual aberration.

It must be apparent to the most casual reader that this writer has labored desperately to make a distinction without a material difference. And this is why he sought to category insanity of character under the head of unsoundness of mind; to get rid of the obnoxious term moral insanity.

Let us now reproduce for comparison a few of Prichard's illustrations, to see what the author of the term really meant by moral insanity.

We quote one case at length from Prichard in this connection. Later on we will give some in brief from Blandford's analysis:

Mrs. —, aged thirty, the wife of a cloth-worker, is employed, when equal to her work, in a department of the same business. She appears to be in good general health, and is reported to have always enjoyed it. She is the mother of eight children, is in comfortable circumstances, was always industrious and careful, took much pleasure in her domestic duties, and was fond of her husband and children. Her friends report her to have had naturally a bad temper, over which she never exerted any control; and they add that its too frequent indulgence, to the great annoyance of her husband's peace, has on some occasions suggested remedies not the most mild. She appears to have given way to the most violent paroxysms of passion, followed by a morose and unyielding sullenness. About twelve months ago a change was observed in her habits; she took less interest in her domestic concerns, neglected her children, abused her husband, and evinced the greatest hatred of him. Shortly after this change appeared, she quitted her husband's house and went to lodge with a neighbor. Here her habits were so disagreeable, and her disposition so dissatisfied, that she soon received a dismissal. She then resided with her sister, who parted with her on like terms; and many others received her and removed her from them for similar reasons. She at length obtained admission to the parish workhouse, where she found herself treated as people usually are treated in that hospital of idleness, and she made return for such attention and accommodation as she had received by breaking the windows and the crockery of the poor inmates. She escaped the punishment threatened her for this by seeking refuge in her husband's house, when she returned the kindness he had shown in receiving and protecting her by destroying all of his that was frangible. She had previously discovered a small sum of money, his occasional savings, which she spared him the trouble of expending, by giving away a part and throwing away the remainder. Her husband then consigned her to the lunatic asylum, and I have her under my care.

Her leading desire is to lie in bed, where, if I would allow her to remain, she would stay the whole week. She frequently refuses her food. When up, if no notice is taken of her, and no inquiries made of her as to her health and feelings, she will conduct herself with propriety for some days. Sometimes, however, she will roll on the ground and indulge in the most violent screams and exclamations without apparent cause or object, and then return to whatever occupation she had been previously engaged in. If requested to do any kind of work, she declares her incapability, from weakness, pain, or some other cause, and in a few minutes sets about some other employment requiring greater exertion. When addressed by me in my usual visits to the wards, she throws herself into a violent rage, and without replying to my inquiries, falls suddenly to the ground as though she had fainted, or she rolls herself as before mentioned, and screams, or she seats herself and cries and sighs as if in the greatest distress; but if I enter into conversation with another patient on any subject with which she is familiar, as the localities of her neighborhood, the clothing business, or such matters, and take an opportunity to address a question for reply, she joins in the conversation with the full command of her intellect. As a disagreeable and unmanageable patient, without actual violence, she exceeds most with whom I have met. Her mind appears totally unaffected as to its understanding portion, but in the moral part completely perverted.

We quote now from Dr. Hitch's cases, as quoted by Prichard, with Blandford's synopsis and opinion of them, *vide* pp. 316, 317 and 318:

CASE I.—“Dr. Hitch's third is an excellent illustration of intermittent dipsomania. At times the gentleman is in habits most abstemious; he never drinks anything stronger than beer, and frequently tastes water only for weeks together. Then comes on a thirst for ardent spirits, and a fondness for low society. He drinks in a pot-house till he can drink no more, or get no more to drink, falls asleep for from twenty to thirty hours, awakes to the horrors of his situation, and is the humblest of the meek for several weeks. In about three months the same thing occurs. This form, deserves the name of moral insanity, or rather, of impulsive insanity, more than any of the foregoing, and must be studied in connection with the propensity to drink.”

CASE II.—“This patient serves as a good example of what may be called moral insanity, if the term is to be used at all. He had been the inmate of several asylums, but his early history is not given. No delusions were ascertainable; but he enjoyed in a high degree the art of lying and the pleasure of boasting. The former was applied to the production of mischief and disturbance. He was an adept at stealing, and hoarded and secreted in his clothes and bedding, articles of all kinds; yet he possessed many good qualities, would be kind and useful in the gallery, and corrected obscene or impious language in others.

“His judgment was quick and correct; he had quick perception, strong memory, and great discretion in matters of business. His madness appeared to me to consist in part *in a morbid love of being noticed*. He is now at large, and has been in the management of his affairs for three years, in which time he has sold an estate advantageously, and conducted his business with profit.”

CASE III.—“The next patient,” he says, “also deserves to be called morally insane. Always of a bad temper, she gradually gave way to paroxysms of passion, followed by a morose and unyielding sullenness. A change came over her; she neglected her children, and abused her husband; she smashed all the windows in her own house and the workhouse, and then was sent to an asylum, where she would constantly remain in bed if allowed, or suddenly roll on the ground and scream if questioned, or cry and sigh as if in the greatest distress. ‘As a disagreeable and unmanageable patient, without actual violence, she exceeds most with whom I have met. Her mind appears totally unaffected as to its understanding portion, but in the moral part completely perverted.’ This case is a very good instance of insanity without delusions, shown, as in the last patient, by outrageous conduct wholly irreconcilable with reason.”

CASE IV.—“The same,” he thinks, “may be said of No. 6, a man who by many might be called bad rather than mad. I found him one of the most mischievous of beings; his constant delight was in creating disorder to effect what he called ‘fun;’ but he had no *motive*, no *impression* on his mind, which induced him to this conduct; he was merely impelled by his immediate feelings. In his state of health I found nothing wrong, except that he did not sleep.”

These persons possessed the power of reasoning, though they did not use it to restrain the display of their erratic impulses, or to suppress their morbid feelings.

But if the fact that the reason is not used to govern actions and feelings, as it might or ought to be used in all well regulated human beings, who are supposed to cultivate and regard the moral and social proprieties, is to be considered the essential evidence of insanity, how many lunatics and how few sane people must there be in the world? Such reasoning would make all unreasonable beings madmen. Of such a proposition it might with reason be said—there is no reason in it.

If all human conduct, not reconcilable with the proper use of reason, be set down as insanity, and the reason therefore regarded as diseased, and we need no longer go into the insane asylums in search of the most of the world's insane people.

In pronouncing these cases irreconcilable with reason (though the reason, if tested by itself, dis severed from conduct, cannot be found in them to be defective), Blandford pays tribute to the clinical fact for which we are contending, viz., that moral insanity is prominently, primarily and chiefly insanity of feeling and conduct, in which the reasoning powers are secondarily influenced, without essentially, and often without perceptibly, disordering the logical powers, any more than the reason is marred or biased in states of perfect sanity, when passion or prejudice, fashion or folly, influence it.

Blandford, like the true clinician he is, while he cannot, like many others, divest himself of his theory in viewing this question, recognizes the clinical picture as painted by the masters before him, as true to nature. He only thinks he discerns more than the original artist saw, in the painting. He sees in the back-ground a lesion of intelligence, which, to be consistent, he separates from the reason. He recognizes forms of moral aberration in the aged, under the term senile insanity.

Sheppard, too, finds cases of moral insanity (so called)

under the form of impulsive insanity and masked epilepsy.

When "the central neurine battery is thus at fault," as he would say, he finds no difficulty in recognizing the form of insanity we are discussing, only the *name* is different, and this we find as we run through the writings of those who object to recognizing moral insanity, whether among the English, or German or French writers, to be the chief bugbear to its recognition.

Clouston and Dixon, likewise, find true pictures of the form of mental alienation we are considering, in its strictly immoral forms, and discuss it, so far as they go, clearly enough, under the idea that it is only the insanity of immorality. Savage takes a somewhat broader view. While Spitzka narrows it to congenital conditions.

But all who recognize insanity in its impulsive forms, must, to be logical, become converts to the doctrine of psychosensory or moral insanity, because "the feelings," as Maudsley observes, "mirror the real nature of the individual; it is from their depths that the impulses to action spring."

When the affective life is perverted by disease of the brain, the manner of the individual's response to external impressions is changed and unnatural, "the springs of his action are disordered and the intellect ('in grave cases') is unable to control the morbid manifestations; just as, when there is disease of the spinal cord, there may be convulsive movement, of which there is consciousness, but which the will cannot restrain."

"Fixing their attention too much upon the impulsive act of violence to the neglect of the fundamental perversion of the feelings, which really exists, many writers appear to have increased the confusion and uncertainty which unfortunately prevail in regard to these obscure varieties of mental disorder."

Here is a painter whose picture of pathological states represents the mind morbid as he saw it, rather than as he might have permitted himself to think it ought to be. It is not strange that his delineations of the various shades of mental aberration should be so truthful.

Now, if we pass from the study of mind deranged by disease, to the study of mind rational, and by introspection scan it, we do but confirm the truth of the picture in the revelations of self-conscious observation. It is *feeling* that is touched first, in most, if not in all minds, and to the aroused feelings the reason is more or less subservient in all, and in some minds it is an abject slave.

The more we look at this subject, divested of the bias of preconception as to the imaginary nature of mind and ideal definitions of insanity, the more we become convinced of the truth of the affirmation of Bucknill, ratified by Tuke, that Dr. Prichard's classification was "thoroughly psychological in principle," and because of this fact it will stand the test of time against every assault. Instead of being a pernicious doctrine, it has been a salutary one, in that it has set mankind to thinking less speculatively upon the real nature of mind, revealing its nature more accurately to those who will be led by pathological truth, instead of seeking to shape it by preformed ideal boundaries.

The lens of experience widens our view, as we extend our researches in mental pathology, while more and more of the domain of the once *terra incognita*, becomes plainly recognizable.

Once *delusion* or incoherence was the boundary which separated the *mens sana* from the *mens non sana*; later it was the *reason*; now, with some, it is the *intelligence*; but the true psychiatric clinician, whose views widen with the growth of knowledge in mental pathology, discerns mental disease as well in morbid feelings influencing the character as in those wrong perceptions of the special senses which are called hallucinations and delusions, and which may pervert or delude the reason.

The scope of insanity widens as he grows more and more familiar with its multiform phases and as he recognizes delusive feelings, which change the character, as well as delusive sense perceptions accomplishing the same morbid results, he defines insanity to be a

departure from the normal habits of *feeling* or *action* as well as thought, and thus justly includes the affective, or psycho-sensory aberrations, in his comprehensive definition.

A careful survey of the field reveals the fact that while man has sought out many inventions in the form of word coinages, to designate different varieties of moral or psycho-sensory as contradistinguished from psycho-reflective insanity, and endeavored to supplant the disease by supplementing new names, the clinical fact, with all the peculiar symptomatic expressions recognized by the older masters in psychiatry, still remains. Names have been multiplied and distinctive phases of affective aberration have been differentiated, but the differentiations are only confirmations of the grand fact that insanity may exist without the reasoning power being appreciably deranged.

Every writer on mental diseases, for instance, admits the existence of homicidal mania without appreciable delusion. But when an insane impulse to destroy, based on feeling instead of a morbid conception, overpowers the will, it is readily enough recognized as mental disease, unless we should be so unfortunate as to suggest the term moral insanity for it. Yet Prichard so classed it. "The principal consideration," he said, "in which the subject of moral insanity is important in criminal jurisprudence is that of insane propension to such acts of violence;" and, in his general observations on homicidal madness, after referring to delusional homicidal insanity, he cites Marc's historical cases, in which is included the case of the servant in the family of Baron Humboldt, remarking of them, "the facts display, as the author (Marc) observes, a contest in the mind of the individual between the *instinctive desire which constitutes the whole manifestation of disease* and the judgment of the understanding still unaffected and struggling against it."

Other cases are detailed in illustration of the connection of homicidal impulse with bodily disease; and another section of his work is devoted to "some remarkable cases exemplifying homicidal madness and the character of moral insanity."

We have quoted thus much from Prichard because, notwithstanding he was an English writer, his views appear to have been obscured or misunderstood by many subsequent writers, who have contradicted his doctrine; and it is well to review at this time, when foundations in pathology are being so carefully examined, the basis pathological condition on which the superstructure of moral or affective insanity is erected. These illustrations from the founder of the doctrine show moral insanity to be deeply laid in perversions of feeling and conduct consequent thereon, rather than in perversion of the reasoning power, and the morbid derangement of feeling may more or less influence the reason, just as feeling in the rational mind may and does sway the reasoning powers; just as feeling unconsciously sways the reason of those who seek to reason moral insanity out of existence. They feel that their minds act as a unit—their reason and feelings go together; therefore all minds, whether diseased or not, must so act harmoniously, or they feel that for some consideration of policy or public safety such a form of insanity ought not to be recognized; therefore it cannot be, as a fact, in mental philosophy.

Cases of psycho-sensory aberration, or moral insanity, have come under our own personal observation, and were sufficiently long and closely observed to enable us to determine whether intellectual derangement preceded or co-existed with the disordered state of the feelings and impulses. They will be recorded later. We have chosen the term psycho-sensory insanity because moral insanity is essentially, primarily and chiefly, an insanity of feeling; and if the term psycho-sensory insanity shall serve to obtain for the clinical fact a recognition in the minds of some who may still be biased against the term moral insanity, we shall be happy if the coining of a new name shall serve to keep the light of truth on an old fact in clinical psychiatry.

Old names, like many good but old garments, get out of style, and in casting the garment aside because it is no longer in the fashion, we are apt to forget, under the wearing

of the new-styled apparel, how really good and useful the old garment was. The old coat may have fitted us even better than the new, and when, in the world of fashion, the whirligig of time brings us round to the old-time style again, we sometimes exclaim of the cast-off garment, "How comfortable! how appropriate! how much better than the new!" So it is, and so it will be, in regard to the insanity of the affective mental life, termed moral insanity. The vesture fits the facts and special pathological form it was made to cover, and the form of disease itself exists. We may cover it with new garments of many names, varied to suit the changing caprice of fashion in psychiatric nomenclature, and we may thus slightly change its appearance, but we can never so transform the figure that the true expert will fail to recognize it.

The lucid insanity of Trelat, the moral disorganizations of Grohman, the *manie sans délire* of Pinel, Georget and Esquirol, and the ganglionic implications of Broussais, Nasse and Bucke, are all nosological vestures that cover the same or a similar phrenopathic form, as instinctive, affective, psycho-sensory or moral insanity. The cases of Workman too, though the latter writes potently against the policy and doubts the propriety of the term, are clear illustrations of *psycho-sensory* insanity, in which the disordered or hallucinated feeling dominates the character and morbidly masters the reason and conduct.

The reason may be led astray in moral insanity by the morbid impulses of the individual, just as the feelings of the sane lead to errors of reason or to its wrong use, but this does not destroy the distinctive feature of the mental disease; hence the philosopher Locke's correct observation that the insane do not so much err from wrong reason as from mistaken premises. He had in view those forms of delusional aberration which only were generally recognized in his day as cases of insanity, when hallucinations and illusions associated with the special senses, and delusions associated with or proceeding from them, gave to madness its then accepted distinguishing charac-

teristics. His critical and observant mind did not fail to see that the logical powers of men are not so much wrong in insanity as the perceptions, which are diseased, and mislead the reason.

He was not wholly correct, of course, but he was far from being wholly wrong in his observation, for in most forms of insanity, if we except general mania and total dementia, a considerable degree of correct reasoning power remains to the average insane person. It is the premise that is wrong—the false premise of wrong, and morbidly-engendered special or general perception or feeling, that misleads the judgment and distorts the reason.

In ordinary forms of delusional mania the lunatic reasons from and to his delusions. In moral insanity the false premise is in the changed feeling, as it is in the earlier stages of melancholia; antipathies and wrong impulses arise, sometimes with, and sometimes without, the sanction or concurrence of the reason, and the afflicted individual, accustomed, as most people are, to act according to his feelings or to use his reason chiefly to serve his feelings, changes in character without necessary lesion of the reasoning powers. He may reason wrongly and justify his conduct, but the wrong use of reason is not insanity of the intellect.

Bonfigli, of Ferrara, in 1878 ("Pazzia Morale," *Revista Freniatria e di Medicina Legale*), controverting the statement of his Italian *Confrère*, the distinguished *Tomassia*, "that from the time of Pinel down to the present, the idea of the admission as a distinct phrenopathic form of insanity without delirium, or moral insanity, had made steady progress, and that to-day (1878) only himself (*Bonfigli*) and *Palmerieri* are to be found its opponents, attempted a refutation both of the assertion and the doctrine, in which attempt is revealed the misconceptions entertained by many of the writers cited by him, as well as *Bonfigli's* own misunderstanding of what is claimed for moral insanity, for its advocates do not so much assert for it a distinctive *phrenopathic*, as a distinguishing and characteristic symptomatic

form, while its frequent final transition into other and well recognized symptomatic forms proves its phrenopathic kinship with, rather than pathological estrangement from, other forms of mental derangement. It is sometimes likewise the prodromal display of a later developed derangement, which Bonfigli would not even deny, and which Leidsdorf and Knop, whom Bonfigli quotes as denying the existence of moral insanity, concede to be a clinical fact. If moral insanity may be the first period of mania or simple lypemania, as Leidsdorf concedes, this is a sufficient concession of the clinical fact. It is the aspect under which asylum physicians are most likely to see true psycho-sensory insanity, for the reason that only in its most aggravated forms of extremely perverted moral activity, with gravely associated intellectual aberration, is it usually seen in asylums, because of the difficulties attending the admission into asylums, and retention there of persons affected with this mental disease in its obscure and less decided forms.

These are the cases which asylum officials sedulously seek to avoid, and when once having them in charge, are eager to let them go, because of the infinite amount of trouble they make, both in and out of their proper life homes—the asylums for the insane.

The distinguished professor of Pavia was nearer correct, in our view, on this vexed question, than the critical physician of Ferrara. The latter's figures may subsequently engage our attention, if our paper should prove not too wearisome, for he is certainly at fault in his estimate of the attitude of the majority of alienists respecting the Prichardean doctrine, particularly in regard to the views of English authorities. An examination of his figures and inferences would give us an opportunity to acquaint ourselves with much of the bibliography of our subject, though it was our intention at the inception of this paper to discuss the subject rather upon its intrinsic merits than to balance the weight of authority.

(To be Continued.)

A Study of the Disturbances of Coördination in Children.

A CLINICAL CONTRIBUTION.

By ALBRECHT ERLLENMEYER, M. D., of Bendorf.*

THE knowledge of disturbances of coördination in children does not seem to be so elaborated that the narration of a case should appear superfluous. If the recorded cases are examined, the first thing remarked is the great difference in etiology; as well in a hereditary point of view as in another, how disturbances in regard to coördination may be due to heredity; follow acute zymotic diseases; come on after certain brain affections, and even occur without any reasonable cause. A study of published cases further reveals, that with the same etiology, the clinical features are not always discovered. That pathological anatomy as yet cannot disclose anything satisfactory—excepting the “hereditary ataxy” of Friedreich, perhaps—is well known.

The following small contribution is purely clinical, as the patient, who is described, still lives :

William Krämer was born June 23rd, 1869. He is the only child of related parents (his grandmothers being sisters). His father died of a valvular disease of the heart; his mother still lives. Neither was ever troubled by a nervous disease. This is told by the mother, and affirmed in regard to the whole family.

From birth the boy was a strong, lusty, symmetrical and well-developed child. He learned to walk and speak at the proper times. The eruption of the teeth was normal; he had no cramps at dentition or at any other time. His temperament was violent, his demeanor wild. When

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in his third year he had slight stuttering, which lasted only a few weeks. Never had headache, nor rheumatism, and up to his fifth year was healthy.

He then fell ill (beginning of March, 1874), of a febrile disease, which the family physician pronounced to be a "gastric fever." This was accompanied with strong brain disturbance. The fever lasted three weeks, with evening exacerbations; there came on in the evening convulsions, with rigidity of the neck, crying and starting. These very clear details were observed by the mother, and further, that during the illness the abdomen of the little patient seemed to be drawn in. The illness lasted altogether three weeks, after which the boy recovered rapidly. Nothing abnormal made its appearance up to the end of August, in the same year. The mother distinctly states that during the five months following this so-called gastric fever, the child was healthy, and developed very well physically and mentally.

In August, 1874, the first traces of nervous trouble showed themselves. These developed rapidly to their full force in a few weeks. At first there was strabismus. Then came on an *unsteadiness of gait*, which caused the otherwise lively boy to fall often. As a third symptom, there came on *restlessness* in the arms, which were not quiet during his waking hours. In the spring of 1875 he broke his right arm through the unsteadiness of his limbs, and after the fracture was cured the movements in the right arm were stronger than those of the left. A further symptom, which only lasted a few weeks, and which disappeared after taking eight doses of bromide of potassium, of eight grams each, was a bilateral trembling of the eyeballs. Salivation was also present for a short time, but afterwards it was difficult to establish at what time it was, and if he had been medicated for it. The uncertainty of the gait, and the restlessness of the arms developed rapidly up to a certain intensity, and then remained stationary, in spite of different medicines. The patient never had eccentric pains, girdling sensations, nor paræsthesia.

Friedreich expressed himself in consultation as dealing with a trouble of the spinal cord. Erb explained it as chorea minor.

Present state, Sept. 22, 1877. On this day the boy was placed in my institution for diseases of the nerves and spinal cord.

The patient presented a marked development of the

body for his age. He is well nourished, has a strong musculature, appears fresh and blooming. The lungs and heart are normal; no valvular lesion can be observed. Pulse 90 to 94.

The head shows nothing abnormal (unfortunately I lost the notes on the measurements of his head). No headaches. The spinal column is slightly curved scolio-kyphotic (the kyphosis being in the upper chest portion). Pressure upon the cervical sympathetic is not painful. Internal strabismus in the right eye. The right pupil is larger than the left; both act well when stimulated. No nystagmus exists. The right lower eyelid is in constant motion.

The tongue is protruded straight, but does not remain quiet.

Here and there spasm of the facial muscles, chiefly on the right side.

The speech is indefinite, difficult; it shows irregularities in the mechanism of word formations (ataxic aphasia).

Both legs show ataxia to a high degree. The gait of the boy is similar to that of a well-marked tabetic; he swings his legs so much that he must be led, in order not to fall. He goes with his legs separated; sometimes he remains standing, as if he could not go forward. If the boy is asked to make certain movements with his legs whilst sitting or lying down, this is found to be impossible, as he throws out his legs wildly, and cannot in the least control them. Without any motor impulse he will hold the legs quiet in the same position, spontaneous movements not being observed.

Both upper extremities are in constant motion and cannot be held quiet; they are motions in the joints, which follow each other irregularly. The patient reaches beyond articles presented to him; he can never bring the two forefingers in rapid apposition; they will fly from each other.

Standing is very difficult for the child. Continuous swinging of the trunk and of the head in connection with the movements of the arm bring him continually out of balance. Placing the feet together renders standing still more difficult.

Upon closing the eyes he immediately falls.

The patellar tendon-reflex is absent on both sides; foot and muscle phenomena are not apparent.

Sensibility is intact in all parts of the arms and legs. The above observations were repeated and observed with the greatest care, and nothing abnormal ever found.

The functions of the bladder and colon are in order.

The secretion of saliva is somewhat increased.

In an intellectual point of view the boy is intact ; he has a good mind. His spirits are buoyant.

From this description of the case I may be permitted to make the following observations :

In the first place, the fact that the boy is the offspring of consanguineous parents cannot be overlooked. The highest form of relationship is that which exists between cousins of the first degree. The marriage of blood relations is, in the opinion of most investigators, who merely repeat each other with one accord, one of the hereditary burdens of the highest moment. Had the father lived longer more children with cerebro-spinal affections would have been born ; and I hold this would not be impossible, and a similar unfortunate state of affairs would have developed itself as in one of Friedreich's cases. There is also a certain degree of accuracy to consider the above case as one of hereditary disturbance of coördination.

Should this not be taken as a cause, but rather the febrile disease, the interval of about five months of absolute freedom between the end of that trouble and the beginning of the nervous trouble, becomes a difficulty not easily overcome, as the direct relations of the two diseases, during this interval, are placed into question. Generally disturbances of coördination from febrile affections begin during the febrile period, or at least towards their end ; and when these disturbances sometimes come late or after diseases, which as a rule follow anæmia, they are of a functional character, but always of a short duration, never lasting a year, as in the above case.

According to my view the situation is this : That in the boy there existed, from being the offspring of consanguineous parentage, a latent predisposition to disease of the nervous system, which was called into activity by the febrile disease, and manifested itself in the development of disturbed coördination. The first affection was instru-

mental in inducing the second, but there exists, as a connecting link, the hereditary predisposition. This is of some importance, as without this connecting link the disturbance of coördination, in all probability, would only have been a functional one of short duration, whereas it is plainly an organic one, and has remained stationary for a year. The acute febrile disease has in this case the same pathological import as, for example, in the cases of arrival at puberty, of Friedreich, Seeligmüller and others.

Under such circumstances it is useless to attempt to make any sort of a diagnosis of the febrile disease, as it does not appear as a local cause for the development of the disturbance of coördination, as in the pathological condition of the boy could the manifestation of the same have been awakened by any zymotic disease. At all events it is certain that this doubtful disease was not a case of simple "gastric fever," as everything points against it. There can be no supposition that it was typhus or typhoid; the absence of diarrhœa and its short duration, the rapid recovery, the long presence of cerebral symptoms, such as convulsions, rigidity of the neck, drawn-in abdomen—a series of symptoms that point with some distinctness to a cerebrospinal leptomeningitis. Whether there was the least effusion in the ventricles is impossible to determine, and it is of little importance; more so is the fact that, at some time, the central organs were attacked, as they were in the stage of development and growth, and when they are easily wounded. On this account the supposition would be made that arrest of development, atrophy of certain centers and tracks, and destruction of others, took place.

When the single symptoms are looked at more closely the disturbance of motion of the arms attracts a large share of attention.

At first sight it looks like a case of minor chorea, for the spontaneous movements of the arm are very similar to clonic movements. If all the concurring similarities are compared such a view cannot be held.

The boy never had rheumatism, and has no heart trouble. The course of the disease is directly opposed to chorea. A chorea minor charges strongly its intensity, seldom lasts long, seldom longer than a year, according to Hennoch's latest book on children's diseases. In our case, even to-day, after more than six years, this apparent chorea is stationary and unchanged. This can be no disease of a functional character, as we generally regard chorea minor; such stability can only exist in connection with lasting structural changes. Now, taking everything into consideration, the inference that this acute febrile disease attacked principally the motor cortical portions, both central convolutions and the paracentral lobes, and produced a permanent injury in the centers for the movement of the upper extremities—perhaps also in those for the facial muscles—which declared itself in the periphery in the chronic movements which were questioned, does not appear improbable. But the improbability, in my opinion, lies in the combination of the symptoms, in the whole appearance of the disease, in which there appears no place for a chorea. Nothing of the kind in literature is known to me. And this similarity of symptoms, which should bring with it a probable natural and simple conception, is a further objection, which militates against chorea.

In regard to these disturbances of motion the question is whether the cause is what Friedreich has called "static ataxia" (*statische Ataxie*). It oversteps locomotor ataxia by quiet fixation of the organs, and declares itself through spontaneous, jerky, rapid movements. This is observed at times in the highest stages of ataxia, and only occurs in very severe cases. In our case the movements of the trunk, which make standing impossible, must be referred back.

The writing of the boy permits the two forms of ataxia to be clearly recognized. The wild, disjointed and irregular strokes are clear representatives of locomotor-ataxic writing. The small side movements to be observed on the single strokes, I hold to be signs of "static" ataxia.

The twitching of single facial muscles is of the greatest rarity as an ataxic symptom.

To conclude, some remarks must be made on the absence of the patellar tendon-reflex. In the cases first given by Freidreich, it was present; in those of other authors it was not observable. Its absence must be referred to the absence of the *bandelettes externes* of the posterior columns. I was the first to define from studies,* founded upon clinical histories and accurate autopsies, which were published by other authors (among them Charcot), this localization for the destruction of the patellar tendon-reflex. Westphal, two years later, was enabled, by chance, to substantiate the correctness of my views. He published a case "in which the first and only symptom of tabes, the knee phenomena, disappeared in the right side seven weeks, and in the left five days before death;" and the autopsy revealed only a disease of the outer portion of the posterior columns in various places.

Now it is not difficult to make a diagnosis; it must, unquestionably, be called "hereditary ataxia." A disposition resulting from the marriage of blood relations; development of symptoms at the age of five years; locomotor ataxia of the upper and lower extremities; static ataxia of the trunk and arms; ataxic disturbance of speech; ataxia nystagmus, of short duration; absence of the patellar tendon-reflex; normal sensibility—all this is covered by the full description of hereditary ataxia of children given by Friedreich.

Disseminated cerebro-spinal sclerosis must be set aside, no matter how alluring its description may seem. The development of a year's stationary condition, the absence of voluntary tremor, of paresis, of spasm, of rhythmic language, of disturbed intellect, etc., are opposed to it. In the same manner must the descriptions of other diseases be set aside.

As to the treatment and course of the case, I have the following to observe:

* *Tabes Dorsalis Incipiens* (Schweiz), *Aerztl. Corr.—Blatt.*, 1879, Nos. 1 and 2.

The boy has been under my treatment three months. Internally he was at first given syr. ferri iodat., to act upon certain intracranial exudations, and in addition, bromide of potassium was given on account of its beneficial effect on the nystagmus. Later on, we employed liq. arsenical (Fowleri), argent. nitrat., and subcutaneous injections of curare. Besides this, a cold rubbing down, and the constant current, were applied daily; the latter in two different manners: (a) along the spine and sympathetic, as in tabes; (b) the labile cathode on the right temple, the anode at the occiput, in order to act upon the strabismus. This last proved quite beneficial. The state of the boy, taken Dec. 4, 1879, the day of his discharge, gave, in reference to the ataxia, disturbance of speech, of sensibility, of the patellar reflex, exactly the same relations as when admitted. On the other hand, the paralysis of the rectus internus had completely disappeared, the pupils were of the same size. Pulse 90, weight 58 lbs. (+4).

That the paralysis of the ocular muscles did not have a cause in common with the remaining symptoms, must be inferred from its disappearance; probably it depended upon some pressure due to exudation. The nystagmus is excluded from an exact explanation, from the fact that I did not observe it myself.

In the summer of 1881, the boy went through a three weeks' course of baths at Wildbad.

In June, 1882, the family physician of the boy, reported to me that the chorea of the upper, and the ataxia of the lower extremities still existed; that the patellar tendon-reflexes were still wanting; that speech had improved to this extent; that the patient spoke more rapidly and with less forethought; that his memory was good; that he made good progress at school, with the exception of writing—attained fifty per cent. in mental arithmetic; that the pupils were of the same size; size of body; 139 c. m., weight, 64 lbs.

The report sent to me in August, 1883, contained in substance the same.

The Borderland of Insanity.

By IRA RUSSELL, M. D., Winchendon, Massachusetts.

Vice-President of the Massachusetts Medical Society; member of the American Association of Superintendents of Insane Asylums; N. E. Psychological Society; Mass. Medico-Legal Society; Sup't Family Home for Treatment of Mental and Nervous Diseases, Winchendon, Mass.

MANY attempts have been made to define insanity, to give a definition that would cover all its phenomena. All such attempts have been defective, either including or excluding too much.

There is no standard of health and disease; so gradually do they shade into each other, that the line between them is an imaginary one. It is impossible to tell when daylight ends and darkness begins. Equally undefinable is the line which separates oddities, eccentricities, the passions of love and hatred, religious fanaticism, and many other mental manifestations from insanity.

That which in one person may be normal, in another becomes an indication of disease. The borderland of insanity is occupied by many persons who pass their whole lives near that line; sometimes on one side, sometimes on the other. Many cases have come under my care or observation that have been very difficult to classify.

A lady, aged sixty, a widow, belonging to one of the most distinguished New England families, refined, highly educated, energetic and very sagacious in the management of all her affairs, came under my care, with the following history:

She was left a widow with four small children, three sons and one daughter. By great prudence and energy, she managed to give them all a superior education. The daughter possessed a high order of talents. In short, the children were model children, and noted for their devotion to their mother. The daughter married a very worthy man and made a home for her mother, who had expended

her means in the care and education of her children. At first the mother was delighted with her new home, and for a while everything went on smoothly.

By degrees the mother became petulant; small things annoyed her. This state of mind grew worse and worse, and developed into hatred of both the daughter and her husband. At the same time she was very amiable and lady-like when in company with those outside her own family, and appeared like a model mother-in-law. She commences writing complaining letters to one of her sons, who is married. The letters have such an air of candor, truthfulness and honesty, that the son believes there must be some foundation for the complaints, blames the sister, sympathizes with the mother, and finally proposes to take her to his own home. He does so; she is delighted with the change; the son's wife is more to her than her own daughter. Very soon, however, there is a change in her feelings; she distrusts her son's affection for her; his wife is at fault in many things. She becomes unhappy and discontented; commences writing complaining letters to her daughter, setting forth her grievances and imploring her to take her back, and threatens suicide unless she does it. The daughter takes her back, with the same result as before.

One of her sons commits a homicide—kills the paramour of his wife. He is brought to trial; the plea of insanity is urged. The mother is indignant that such a plea should be offered. It would be a disgrace to the family, and above all, insists that none of her mental peculiarities shall be used to substantiate a hereditary tendency to insanity in the family. Neither was she willing that the facts about her father, who was subject to strange spells, and a brother, who died in an insane asylum, should be used. The son, after an exciting trial, was acquitted as insane, the mother expressing no satisfaction at the result. This lady when away from her children seemed to have all of a mother's natural affection for them.

While she had no positive delusions she had a wonderful faculty to pervert and discolor facts.

For years she was devotedly attached to her children, and made their home life exceedingly happy. Why the change? Was it because her children no longer needed her support, and that she no longer could look upon them as children? Was it because that part of the brain which presided over the love of offspring had no more work to do, that she hated those who shared the love that was once bestowed upon her?

Another lady, a widow, fifty-three years old, came under my observation, with the following history:

Left a widow with four children, two sons and a daughter. She was remarkable for her happy, genial disposition and business capacity. She met with a severe accident, and bore great suffering with uncommon fortitude. She had a strong affection for her children and devoted herself to their welfare. Her daughter marries to her satisfaction and provides for her mother a home. At first she enjoys her new home; everything goes on pleasantly for a year or two. Finally the mother takes a dislike to the son-in-law and then to the daughter. Everything they do for her is wrong. The more they try to please her and surround her with every comfort, the more disagreeable and fault-finding she becomes. As her son-in-law aptly said: "she makes his home a hell."

After a most thorough examination, I could detect no delusion. She expressed great respect for her son-in-law, and affection for her daughter.

Take another case:—A young lady, twenty-four years old, unmarried, well educated and intelligent. She has great repugnance and hatred of a younger sister. She says she can give no reason for this repugnance except that her mother had the same feeling toward her when a child, that lasted for several years, and then completely subsided.

In the last number of *THE ALIENIST AND NEUROLOGIST*, Dr. Hughes, the editor, refers to a lad of fourteen, in an article entitled "The Borderland of Psychiatric Records."

The doctor gives an account of the origin and symptoms as shown when he came under his care. Dr. Hughes advised his friends to consign him to my care after treating him for two months without any marked improvement.

I copy what he says of the case:

In January, 1882, S. A., a slender, but somewhat delicate youth of fourteen years, came under observation, suffering with facial choreaic movements, and slight left ptosis. He had been tenderly and indulgently, and probably, luxuriously reared. His father and mother were nervous, and mentally somewhat peculiar, from a psychologist's stand-point, though not sufficiently singular to attract general attention or comment. The mental capacity of both parents was good; the business capacity and financial success of the father being above the average of his neighbor, his business now being that of a financier; but, after a severe business stress, he had himself been temporarily deranged, according to the statement of his son.

The habits of this youth were very studious, he being apt and advanced at school; above his companions at the time this affliction befell him, and his moral sensitiveness was excessive for his years. He became interested in religious matters, and began to question the unsinfulness of some of his actions, which are not regarded as violative of the decalogue, or usually considered improper. In short, his mind at this time had become overwrought from over study, too little sleep possibly, together with neglect of physical recreation.

At the season of the year when the potato vines were infested with the potato bug, the youth accompanied some of the hands into the field, and saw them put Paris green on the vines to kill the bugs. At this time also, a toy pistol was fired off close to his ear by a companion, producing a profound shock, and some cerebral disturbance. A short time after this incident, when potatoes were brought on the table, he took a morbid aversion to them, fearing they were poisoned, and would not eat them. This aversion soon extended to those who had handled them, and to the clothing of those who had handled either the potatoes from the field or the Paris green. He importuned his parents not to eat them, and avoided contact with them. Straightway he began the self-ablution

process, so peculiar to these patients, which he performed every time shortly after rising from the table, and after touching a member of the family. From a fear of potatoes, this delusive, morbid aversion, passed to a fear of everything that was green. The green wall-paper, table covers, book covers and carpets, were all regarded as poisonous, and his time was spent in avoiding these colors, and in washing away imaginary contamination. He would wash his hands after handling anything that any of his family had touched, even letters and papers received through the mail. Paris green, or arsenic, were pigments in all green colors, he thought, and it could not be reasoned out of him. It was volatile too, for he had read the reports of the Massachusetts State Health Board on that subject, and they proved it in regard to green wall-paper, because they showed that people were poisoned by sleeping in rooms which were papered with green wall-paper.

This boy was not melancholic. He enjoyed himself at play, and with the sights of the city, whenever nothing occurred to excite his morbid dread of green. Under the dominion of this delusive, morbid aversion, this young man was in constant misery, wherever there was anything green, except the green fields or plants. Our efforts at treating him were unsuccessful, because unfortunately the wall-paper, carpets, and some of the table covers of our house had green shades in them. On other subjects, this boy's reasoning was rational enough, and he was bright and observant, but his conviction became intensified, his suits of clothing from home having to be cast aside, and his trunks sold. He found something to keep alive the morbid feeling in the colors encountered by him, whenever we placed him in the city. Under such circumstances, we continued our efforts to treat him but a short time. At the end of two months of fruitless endeavor, we advised that he should be consigned to the care of Dr. Ira Russell, of Winchendon, Mass., hoping that at such a distance from home, and knowledge of our profitless experience, would enable the doctor to do him more good than we had done.

He first came to me in company with an aunt. When he saw me, he recognized me, having seen me at Dr. Hughes' house in St. Louis. He refused to stay in either of my houses; his aunt took him to a hotel, and the next

day left for Providence, R. I. A few weeks later his father came with him, and he agreed to stay provided his father would leave St. Louis, which he promised to do.

The following letter to his father shows his feeling in regard to St. Louis:

WINCHENDON, Nov. 2, '82.

DEAR FATHER: Received your letter this morning. Was glad to hear from you. Away off from home as many miles as I am, and a cloudy day, is enough to make anybody feel bad, especially when unwell.

O dear, I wish I was dead and buried long ago. I am making trouble for you and myself, and what good am I on earth, anyway? I wish you would not say anything about this to doctor. I will get a disease that will kill me off yet. Now what am I going to do? Kill me, and be done with it. If I was only dead, then you could do anything with my things. I would be dead and gone to *hell*—not make any difference to me.

Why can't I die and be done with it? About money: I asked ma' to send me some before I received that \$2.00 from her, because with \$2.00 you sent, I got a necktie for 38cts.; a paper of pins, .05; a ring of tape to mend my drawers, .05; some ink, .05. The rest in postal cards and stamps, and have a dollar left. The reason that I asked for more was that I wanted to get a hat or cap of some kind, and then I wanted to have a little money about me. Now, where have I spent anything foolishly?—not one single cent. I don't care whether a disease takes me or not. Please don't write anything I said to any of them, will you?

A patient here, a young man that is about well, said to me, "I have been well ever since I have been here, haven't I?" I said, "Yes."

I have not done a foolish thing in Winchendon. I am going down to take music lessons, but I guess I won't succeed much now after this. Since receiving your letter I don't feel as if I deserved to live at all, and won't, probably, much longer. I received the \$2.00 ma' sent the other day.

Good bye. Write soon.

ALBERT.

Also one to his mother, which shows his feeling about dirt.

WINCHENDON, MASS., Oct, 24, '82.

DEAR MOTHER: I received a letter from pa' yesterday. I have some bundles in my trunk that I am worrying over. I must not worry no more you know, because it makes my headache, and unless I get them away from me, I will worry over them. Now this is the only way to get rid of them. O Mamma, if I only had them out of the way I would be all right. I had them wrapped up when I came here. There is wrapped up my old blue suit of clothes, that is not fit to wear any longer, and a pair of old shoes and a lot of boxes and old papers of mine, all wrapped up together in a large bundle, and some old hats not fit to wear any more. Now, I can never get well if they are here all the time. They watch so close around here that I can hardly do anything with them, although they are not fit for anything. The only way I see to do, is for you to write to me a note to show to one of the young men here, that you said I might send those things to you. I can send them by freight, which wont cost much.

We do not want pa' to know anything about it though, and I guess pa' will be coming to Stratton soon. So you can pack them in your trunk when you get them, and go to Dixon on a visit right away, and drop them down their water closet, as grandma' wants it filled up anyway; that will be killing two birds with one stone, and it is a poor stone at that.

Now, Mamma, I must get rid of them before another week, if possible; then I will have nothing else to worry me. Then I can get well, and come home and be happy again. If we can't do that I will have to come home myself and do it, 'cause I can never get well if they are here. I am sick now worrying over them. I feel like going home, and I will, if they don't get away from here immediately. Now, Mamma, don't worry that I am getting worse, because I aint you know. I had them wrapped up when I came here, so I cannot be getting worse. Now, Mamma, don't write back something else, because I can't stand this worrying any longer. O dear, I feel like taking them down to the depot myself, and now I am worrying so about them. I will surely come home if they don't get away from me. Don't let anybody know that I sent them, will you? and don't let the folks at Dixon know, will you? If they are too large (the bundles), mash them, and get a stick and push them down. Don't you open them by any

means, please. I am telling you the truth what is in these. Don't drop any down at Streator (?) If they fill up your trunk take out all your things only what you need at Dixon, and leave them at Grandma' Moon's, as you will be coming back soon anyway. I will worry myself if you don't do that. I might die. As this is the last, please do it, as I have thrown off so many of my other notions. O, you will have to send me five dollars: course it won't take it all, but I will want some now and then.

Good-bye. Write soon.

ALBERT.

P.S.—Be sure and write the very minute you get this, and send money. I can be so happy. Don't forget to send a note to me, to one of the young men, if they should ask for one.

I placed him in charge of an intelligent tutor, and set him to studying. He was favorably impressed with the plan, and recited regularly in history, grammar and arithmetic, and occasionally took lessons in music. He played billiards and other games, and took great pains to conceal his fears of dirt and poison. His tutor kept a careful record of his doings and symptoms.

November 3. During the day appeared happy. In the evening complained of a frontal headache, or as he called it, not a regular headache, but a kind of corner headache.

November 4. No recitation, restless, uneasy and discontented. Refuses to play games; seems absorbed in thought. His eyes have a vacant, listless expression. After tea became interested in games; his countenance brightened up; he became cheerful and happy.

November 6. Enjoyed his recitations; played games; seemed quite happy.

November 7. Recitations very good. He talks about insane asylums; said the reason so many persons became insane was owing to too close study while young, and that his nervousness was due to the same cause.

From this time onward he continued to recite to his tutor, spending one or two hours a day in study and recitation. The remainder of the time was spent in riding, games and walking. He exhibited less and less fear of dirt and poison. After staying with me four months he left very much improved. He returned again in June,

and remained with me through the summer, no one suspecting there was anything the matter with him.

He sometimes admitted to me that his old thoughts came into his mind.

He was treated mainly with tonics, such as iron, strychnine, phosphorus and plenty of outdoor exercise.

Another case somewhat resembling the preceding, was that of a man aged forty-five. A large well developed man, of sanguine temperament—a skilled mechanic. For fourteen years, he had been foreman in a furniture manufacturing shop, employing a large number of men. He was very methodical and accurate in all his work, selecting and buying material with sound judgment and skill. His shop hands first noticed a hesitancy in touching anything. When he wished to take hold of anything, he would raise his hand, advance toward it slowly, and with great effort grasp the object in view.

Engage him in conversation and in the midst of it, carelessly ask him to hand you a paper, or any object, and he would do it without hesitation. But if you asked him to look at the paper, or to read something in it, he would make several efforts before he would succeed in doing it. At the table it was with great difficulty that he could summon sufficient will-power to take food when offered to him.

He would write a letter and express himself clearly, and hesitate a long time before putting it in an envelope; and if he did not utterly fail to do it, he would remove it a dozen times perhaps, before sealing it, to see if he had not placed something besides a letter in it. After mailing it, he would be in agony for fear he had written something he ought not, or placed something besides the letter in the envelope.

At times he could hardly persuade himself to dress, through his fear of touching his clothing.

While he was naturally a most methodical man, he was utterly incapable of doing anything in a systematic manner.

He perfectly understood the absurdity of his notions, and could reason correctly upon his own case. He would say, "This dread of touching things is perfectly ridiculous, and I know it, but I cannot control the spell that holds me." After a most distressing effort to take a newspaper from the table, he would shed tears, because, as he said, he was so foolish. After passing from one room to another, he would return several times, to see if he had not dropped something.

Before coming to me, he had been in this condition eight or nine months. I gave him, bromide potass., cannabis indica and ergot. I was building a barn at the time. I soon got him interested in the work, and he began to assist the carpenters. He soon found that when the work was marked out for him he could bore a hole and make a mortise without trouble. He steadily improved, and, after three months' treatment, went home well.

This last case is one that Hammond designates *aboulomania*, or paralysis of the will; and Prof. Tambourini, of Italy, insanity of doubting, with fear of contact.

There is another class of persons subject to attacks of disagreeableness, due to what I may be allowed to call, mental epilepsy, in which, as Maudsley says, there is a convulsion of ideas, not of muscles—cases in which there is no loss of consciousness.

A distinguished clergyman came under my care. After great mental effort, preaching extemporaneously on Sunday, he would appear tired and exhausted. After resting a while he would become excited, and would abuse his wife and family with the most insulting and opprobrious language. After a few hours this state of excitement would pass away, and he would become himself again. These attacks increased in frequency, until he came under treatment. I gave him bromide potass., hyoscyamus, cannabis indica, chloral hydrate, variously combined; electricity and tonics, iron, strychnine, phosphorus and nitro-glycerine. After several months' treatment these attacks subsided.

Miss A., a lady of marked intellectual ability, of a nervous temperament; her father epileptic; mother died insane. Although lady-like, refined in manners, lovely and affectionate in disposition, and a great favorite in society from childhood, she was subject to what her intimate friends and family called mad fits.

Without any apparent reason, she would be very bitter toward her mother, or some other member of her family, using the severest terms of censure. These turns never occurred except in the presence of her own family, or most intimate friends. She married quite young; her husband was a clergyman, a man of marked ability. She was proud of him, and had the greatest love for him. Still, at uncertain, unexpected intervals of a few weeks, sometimes months, an unusual paleness of the countenance would appear, and without any loss of consciousness, she would go into a paroxysm of scolding, fault-finding and vituperation, lasting for a few hours, when she would resume her wonted good nature and cheerfulness. She has often expressed the fear that she would sometime become insane.

A distinguished divine, a D. D., married to a cousin, and late in life became insane.

One son was an imbecile, another a clergyman of uncommon ability. The latter had periods in which he had an overpowering sense of his sinfulness, and would for days be plunged into the very depths of despair, followed by periods of ecstatic delight, when he felt that he was basking in the sunlight of God's favor.

A daughter of the last mentioned, a bright, nervous child, at the age of twelve, joined the church, and was looked upon as a model Christian. At eighteen, she began to distrust her religious hope, and finally abandoned it, and felt that she was forever lost. After six months of gloom and despair, she was reconverted, with periods of exalted religious enjoyment like her father. She wrote many religious books noted for their high spiritualistic type; "Stepping Heavenward," and others of a similar character.

Recently I have had under my care a clergyman, aged thirty-seven, a large portly man, of a bilious, nervous temperament, a popular preacher, possessing fine oratorical power. He came from the British Provinces, where he had been a successful preacher, but unfortunately had become involved in financial difficulties, and was obliged to give up his parish. He came to the States, and was soon employed by one of our churches as a pastor. His creditors from the Provinces followed him, vilified him, trusted his salary, and in various ways annoyed him. These annoyances made him moody, melancholic, and absent-minded. He goes to a book store, purchases a book, and takes another. He is watched, followed, and arrested for stealing. He is seen and examined by several medical experts, and in view of their opinion, the District Attorney declined to prosecute the complaint.

The mental symptoms that I have noticed, besides his moodiness, were occasional attacks of an epileptiform character, with only partial loss of consciousness, followed by lapse of memory and a disposition to disagree with, and contradict whatever was said by those about him. After a period of dullness, he would return to his former self. He continued to improve, and has resumed his pulpit and pastoral labors.

Several years ago I received a telegram requesting me to take charge of a "quiet lad" of fourteen years, recommended to my care by the late lamented Dr. John E. Tyler. Without waiting for a reply, the parents of the boy brought him to me.

I very soon discovered this "quiet lad" in a very dangerous position on the top of the barn. He readily came down, and soon after was found in the garden, pulling up the vegetables for the benefit of the pigs. Directly afterwards he was found in the pig-pen in pursuit (he said) of a bristle to make a waxed end. At this point his parents left.

Very soon the boy disappeared, but after a while returned thoroughly drenched, having fallen into the water

while attempting to launch a boat. He was now placed in the care of an attendant, with instruction, to keep him under constant observation.

In the evening he joined the family circle, was very pleasant and happy, showing his familiarity with certain games and puzzles, and singing his Sunday school songs, being accompanied by one of the ladies of the family on the piano.

At bed-time he was shown by the housekeeper to his sleeping room.

There he knelt and made a prayer, in which he remembered his parents and sister and the different members of my family. The housekeeper returned with tears in her eyes, saying she had never heard such a beautiful prayer as that little harum-scarum had made. I subsequently learned the following facts, in regard to his history, and certain hereditary tendencies:

His father was a quiet, substantial business man, his mother a lady of great refinement and nervous temperament.

His maternal grandmother was a woman of marked ability, a devoted member of the methodist church, eccentric, erratic, domineering, always bent upon having her own way, making others conform to her wishes, and a terror to her minister.

A maternal uncle was a dipsomaniac, another was noted for his crooked ways of obtaining money.

Several months before coming to me, this boy witnessed the death of his maternal grandfather, to whom he was very much attached, and with whom he was a great favorite. The event made a deep impression upon his mind. Death, religion, and a future life, were his constant theme of conversation. After a while he began to have intervals of depression, followed by periods of unusual cheerfulness and vivacity, which finally developed into obstinacy and unwillingness to be controlled. These periods of obstinacy would last for a few days, when he would relapse into a depressed and quiet stage.

When he came to me, as already remarked, I placed him in charge of an attendant. After a few days he became very quiet and gentlemanly in his conduct. This condition lasted for three weeks, when he began to be talkative; then indulged in exhilarated boasting of what he could do, reminding one of the exaltation observed in general paresis; then obstinate, profane and belligerent. This state of mind lasted for three days, when he took a religious turn for three days, and then became quiet again. These periods occurred regularly every month for six months, when they began to be less marked, and finally disappeared entirely.

He remained well until nineteen years old, when, during the last presidential campaign, he joined a drum corps. He was frequently out late at night. This was followed by an attack of mild melancholia, lasting three or four months, from which he has recovered and remained well.

Miss A., aged twenty-three, brought to my Highland Family Home on a litter, with the following history:

Her mother, a widow, belonged to one of the old distinguished quaker families in New York. The daughter had been an invalid for two years. She had been treated in some water-cure establishment for womb trouble and special complaints, without benefit, but rather grew worse.

She left the water-cure and was taken to Newport, R. I., where she consulted Dr. H. R. Stover, who discovered no womb trouble that needed treatment, and advised that she be placed under my care.

I found her well nourished, all her bodily functions well performed, pulse and temperature normal. She complained of a great variety of symptoms; pain in her back, in her head and in her limbs. She was unable to sit up, hardly able to move in bed. I soon found that when complaining of pain, if by any means her attention could be diverted to something outside herself, she would forget all about it. I placed her in charge of a judicious attendant, and every effort was made to arouse her ambi-

tion, and to commend her whenever she made any attempt to exert herself. Such attempts were gradually successful. At first she thought she could bear no light or noise in her room. I prescribed sun baths. Before she was taken sick she was fond of playing on the piano. Her attendant was a good pianist; so I put a piano in her room. Her attendant performed such pieces of music as she had been accustomed to admire. She began to sit up a little, then to walk a few steps at a time, none of which she had done for two years. Then, with considerable urging, she played for two or three minutes at a time on the piano. The next step was to have her go to the table, and take her meals with the family, and finally take long drives, all of which she found she could do without inconvenience. The great difficulty in her case, has been to divert her of the idea that she was an invalid, and of the fascination of being pitied and waited upon. She was not altogether a fraud. She had been made to believe by injudicious friends and medical advisers, that her complaints were real. In her case, as in many similar ones, there has been a vein of moral perversity, a disposition to exaggerate and give a false coloring to everything done for her.

While she appears amiable and lovely, and expresses the highest regard for her attendants, she would write to her mother that she was neglected and abused, inventing some ridiculous incident to show it. Becoming inspired with the prospect of marriage, her progress to complete recovery has been rapid. This lady is a type of many similar cases that have come under my observation, some of whom have been regarded as martyrs of great suffering by sympathizing friends.

Critical Review of the Pathogenesis of Chorea.*

By DR. GIUSEPPE SANTINI.

“Everything in this malady is extraordinary; its name is ridiculous, its symptoms are singular, its character is equivocal, its cause unknown, and its treatment problematic.”

THUS did Boutielle express himself, who wrote the first complete work on Chorea in 1810, making known the state of knowledge of this disease that then obtained.

The numerous monographs, which were afterward accumulated, have thrown some light on this morbid form. Science is, however, yet far from being able to say its last word, and especially on its pathogeny.

The difficulties encountered in the study of the genesis of chorea have been shown by the number and the diversity of the hypotheses advanced. One writer (Jacks), for example, regards it as of peripheral origin—that is, dependent on a special alteration of the peripheral ramifications of the nervous system. Cantani makes it consist in a neuropathia of the conducting intraspinal and intracranial organs, a neuropathia which, according to Ritter, should depend on defect of isolation of the motor nervous fibers. Others have maintained the central origin of chorea, and as its center, the spinal cord, the cerebellum, the optostriate ganglia, and the cerebral cortex have been indicated. As the basis of these different hypotheses they seem to have made use of pathological anatomy, which, as we shall see, could not serve as an absolute guide in the solution of this intricate problem. In fact, were we to read all the necroscopic reports made on de-

*Translated by Joseph Workman, M. D., Toronto, Canada, from the *Rivista Sperimentale*, Anno IX., Fascicolo 4, 1883.

ceased choreics, from the more remote times down to our own, we should find alterations the most varied, both in their nature and their seat in the central nervous system, and quite sufficient to meet the requirements of any hypothesis whatever.

According to "antient observations," by Cruveilhier, Romberg, and others, they found foci of softening in different parts of the encephalon. Rokitansky found connective of a new formation in the spinal marrow; and Brown-Sequard and Gendron found softening in it. Broadbent, Tuckwel, Ogle, Russel and Jackson, found capillary embolisms in the optostriate body. Meynert found an œdematous softening, sclerosis and molecular defacement in the cortical substance of the cerebrum, and other alterations in the rest of the encephalo-rachidian system. Golgi, in a case of chorea, complicated however with dementia, found thickening of the meninges, atrophy of the convolutions, chiefly the frontal and parietal; decomposition of the gangliar cells of the corpora striata and the cells of Purkinje.

Finally, passing unmentioned many other observations, Seé, in eighty-four cases of chorea, explicitly states that he found a complete integrity of the nervous system.

The lesions are therefore not identical, nor do they occupy the same seats. At one time they are complicated with common morbid processes; at another, these are totally absent. Now, frequent alterations are to be observed; again they are completely wanting. Most frequently no alteration whatever is to be found. In this last instance, even though we would desire to attach much value to the objections of Golgi, still we cannot abandon our conclusion, because as yet the most partial and minute researches made with the microscope, have not discovered a constant seat, a unique lesion, always imminent, which might give the reason of the movements so exactly characteristic of chorea.

The same has been verified with regard to chorea, as to hysteria and epilepsy. How can we reconcile the

inconstancy of necroscopic findings with the constancy in the development of the phenomena constituting chorea? It merely remains to us to attach a different value to these findings. In fact, I hold it as very probable that in most of the cases of chorea the anatomical alteration has exclusively an etiological, and not at all a genetic value; and our meeting with an alteration in a part of the nervous system does not give us the right to hold this as the point of departure—the genesis of the nervous disturbance. When we observe that a simple cicatrix on the surface of the body is capable of inducing, in one instance epilepsy, in another chorea, I think it ought not to be difficult to conceive that some other alteration, in any part whatever of the central nervous system, may act analogously, that is, as one from which an irritation may set out, which may be transmitted to a distant part, and that this part may remain disturbed in its molecular arrangement, in consequence of which its equilibrium is broken, and it becomes suited to the development of anomalous actions. It is true this is a gratuitous hypothesis; but it is such as to offer a reason for the inconstancy of the seat and nature of the malady, and also for the complete absence of necroscopic alterations, for it is conceivable that this disturbance of equilibrium in the molecular arrangement, which may be induced by psychical influences, and remain after the removal of the cause, evades even the most subtle microscopic examination.

But if pathological anatomy is insufficient to solve the problem of the pathogenesis, of what other means ought we to avail ourselves, to discover the part of the nervous system that is the seat—the point of departure—of choreic disturbance? I believe that only accurate clinical observation, aided by psychology, can give us light sufficient, if not to solve the problem completely, at least to render our researches clear. Briefly speaking, we can do no more than make the physio-pathological examination of the symptoms constituting the disease in question.

The phenomena that should attract our special attention in this study are those referable to the psychic life. These

very frequently precede the motor disturbance, and they predominate in the symptomatology of chorea. In slight cases, of short duration, everything on the part of the intellectual faculties is reduced to deficient aptitude for reflection, for producing and regulating the ideas, and for recalling them. In severe cases there may be a real *jactatio mentis*, comparable to that of the limbs, and this may terminate in insanity. On the moral side there are irascibility, timidity, and abundant shedding of tears, with or without trivial causes.

This constant association of psychical alteration was long ago appreciated. Wunderlich, as far back as 1854, expressed himself thus: "Excitability of character is in no case wanting, not seldom indeed, it is the first symptoms of malady; and it attains a truly insupportable degree * * * but it happens that in the majority of cases, after cessation of the chorea, this alteration in the character, the obtuseness of the intelligence, and also the enfeeblement of memory, by little and little pass away." Marcé in his valuable work on the mental state in chorea, has instanced the frequency of hallucinations. He says: "The patients see fantastic animals, they believe they hear known voices, and the intellectual disturbances may run on into mania." Dr. Aitken says the history of the majority of cases shows that chorea has a more intimate relation with mental maladies than with any other morbid state.

Finally, in late years, rendering still more conspicuous the physio-pathological relation existing between the choreic motor disturbances and the psychical, we have a concourse of accumulated observations, by Arndt, Wilks, Roussel, Hutington, Jones and Mayer, which amply demonstrate this relation. But it has been objected by many, that the psychical disorder is the effect of the motor disorder, and succeeds to it. The choreics, these say, being unable to command their movements, are annoyed by them, they become irritated, and so incessantly enraged as to pass into insanity. But clinical

observance clearly shows that the ordinary psychical disorder precedes the motor, and is not its effects. "I do not think," says Cantani, "that diminution of the mental faculties, and the diverse other perturbations in the psychical sphere, which arise during chorea, are consecutive on true chorea * * * * but I am persuaded that, on a par with the chorea, they depend on a primary affection of the encephalon, a symptom of which is also the chorea." This mode of viewing the question was supported in a particular manner by the observance of a case seen by me in a cook, in the clinique of Tomassi, in Pavia, in which the choreic convulsions were followed by a furi-bund mania. In this case there was found after death a considerable thickening of the meninges, with a notable quantity of serum in the arachnoidal sac.

A nexus so intimate between two disturbances, which, according to Arndt, would be found of the same lineage, and might be mutually substituted, is inexplicable in any other way than by admitting them to be manifestations of one and the same affected organ, which is endowed with a psychical and a motor functionality; and this organ is exactly the cerebral cortex, as the experiments of Fritsch, Hitzig, Ferrier, Luciani, Tamburini, etc., have proved.

From the examination of the motor disturbance also, the cerebral cortex has been indicated as the seat of the choreic disturbance.

When chorea proceeds slowly, as is ordinarily the case, the first motor disturbances appear in the muscles of the face; its lineaments are improvisedly drawn in one direction or another, as if the child were mocking; the movements afterwards extend to the muscles of the shoulder, the arm, the hands, and finally they are generalized over the lower half of the body, being usually more accentuated on the left side; and sometimes a true left hemichorea, as Seé observed; in 154 cases reported, 97 presented hemichorea on the left side. This mode of diffusion, conjoined with the facts of the greater accent-

uation in one-half of the body, leads one to think of the mode of diffusion of excitations on the cerebral cortex, which induce movements that at first are limited and partial, but afterwards become general, similarly to what is also observed in the beginning of an epileptic access. The choreic movements may also be presented more circumscribed, that is, limited to a single member, single groups of muscles, or single muscles; *e. g.*, they may be restricted to only a few muscles of the face. This also is of some importance in support of a cortical hypothesis, for alike from physiological and clinical data, we should more frequently refer a circumscribed motor alteration to a cortical affection, because the existence and the distinctness of particular directive centers for particular muscles, or groups of muscles, have at length been confirmed. We should very defectively understand the fact did we refer it to the ganglia of the base, in which the motor centers, or better to say, the paths of centrifugal conduction, are found not so distinct and separate for determinate muscular groups.

Not less worthy of note is the relation that obtains between the volitive acts and other cerebral functions, and the motor disturbance. The choreic movements are not voluntary movements; they are involuntary. "The will," says Trousseau, "though sufficiently potent to bring the muscular acts into play, is no longer able to direct them, or to moderate them by means of the antagonist muscles. Once the impulse is given, it would then seem that every muscle, instead of obeying a single will, contracts as it pleases, or obeys different wills."

But the will, that potent moderator of reflex movements (?) exaggerates the choreic movements; and even the mere thought of executing intended movement suffices to render it more energetic. So intimate is the relation between these movements and the process of ideation, that from the very moment of consciousness, even that existing in the lowest degree, as in dreaming, the choreic movements are not suspended.

Any influence that modifies the state of ideation, as a pleasing or painful emotion, is sufficient to render these movements more accentuated. The mere fact of the patient thinking that he is observed, is sufficient to exaggerate them. The fact is also worthy of note, that the other muscular systems, those which in their mechanism obey the automatic movements, and are not in direct dependence on the will, do not usually undergo any change; hence, respiration, circulation, discharge of urine and fæces, are usually well executed. How can we understand a dependence so close, without admitting the existence of an anatomical and a physiological relation between ideation, will and movement? And where seek for a relation so intimate, if not in the cortex of the cerebral convolutions?

The nature of certain predisposing and occasional causes also points to the cortex as the seat of chorea.

Those states of our organism in which the mental faculties are weak and do not become strong enough to resist psychological impressions, such as youthful age, the female sex, heredity, a nervous constitution, greatly predispose to the contraction of chorea.

We alluded at the outset to the great number of doctrines advanced on the pathogenesis of chorea. We deem it now useful briefly to examine these more closely, as thus we may render more apparent the value of the cortical theory which we have proposed to sustain.

That chorea is of central and not of peripheral origin, is sufficiently proved by what I have stated so far. But, in order to upset still more completely the peripheral hypothesis, I shall add, 1st—That chorea, being in its last analysis constituted of inordinate motor actions, can be only the symptomatological expression of central alterations, as co-ordination of movements is the function of special centers. 2nd—Sleep and anæsthesia, which act on the nervous centers and not on the system of conduction, cause cessation of the choreic movements. Tomassi, in this relation, thus expresses himself: "I cannot understand

how it happens that moral causes should operate on the fibers and the peripheral ganglia." And, treating afterwards of a case observed by him, he says: "This, it appears to me, contradicts the doctrine that chorea is uniquely a peripheral neurosis. Here, in fact, we cannot question the centrality of the process: it is proved by the eclampsia, vomiting, fever, cephalæa, and the sensiferous excitation of the cervical medulla."

From what has been said we have seen how very improbable is a spinal doctrine. How, in fact, by a spinal doctrine, which we are desired to admit, shall we interpret that most frequent form of chorea, which is limited to a lateral half of the body? How can we understand the cessation of the choreic movements during sleep and the narcosis from chloroform? and how understand the constant concomitance of alterations of the intellect? how give a satisfactory explanation of the psychical influences and that of the will?

Much importance has been ascribed to the alterations of sensibility. But these are inconstant; indeed ordinarily sensibility remains unchanged, and sometimes in hemichorea no appreciable differences are noticed in the dolorific, tactile and electric sensibility, between the sound side and the affected one. Further, bearing in mind that the cerebral cortex contains also sensory centers, it is easy to understand that a morbid state, as it disturbs motion and the psychical functions, may also disturb sensibility. Again, as to the dorsal pain of Stiebel and the chronic points of Rousse, no importance should be attached to them in regard to spinal localization, for they are inconstant, and these many very expert clinical observers have never found them. On the other hand, a pain along the vertebral column, and more especially in the dorsal region, is met with almost constantly in hypochondriac and hysterical persons, in whom a neuropathic constitution is present. This stands related to the great richness of the nerves proper to the vertebræ. The same may be said of the dilatation and immobility of the pupils, which some

would hold as constant in confirmed chorea, and as an effect of the excitation of the cilio-spinal centre of Budge, for dilatation of the pupil may depend also on hydraulic conditions, on anæmia of the iris, and on influences proceeding from the cortical centres, as observation has shown us. Finally, of great value against the spinal doctrine, is the fact that the reflex and automatic movements are preserved normal. "It is remarkable," says Hasse, "that the reflex movements will continue unaltered. If patients are punched, pricked, etc., they escape with the proper associate movements, just as the sound do." This indicates very evidently that the co-ordinating apparatus of the spinal cord is not at all compromised in the choreic alterations of movements.

Other arguments to sustain the same doctrine have in part been drawn from pathological anatomy, which, as we have already seen, is very inconstant; and in part from experimental facts, among which are principally those of Chauveau, Onimus and Legros. Chauveau would seem to have observed that after section of the cervical medulla in choreic dogs, the choreic movements continued in the limbs unchanged. He speaks of twin dogs, which, after a morbid affection, were taken with paralysis in the right foreleg, and convulsions followed, and he remarks, "all regular and all perfectly rythmical." He characterizes these as choreic movements. Having established artificial respiration, he cut the medulla spinalis in the occipito-atlantoid space. "No change," he says, "in the convulsions of the member attacked by the chorea. The abolition of the will permitted us to observe these convulsions with even greater facility."

How are we to accept as choreic convulsions these which were regular and rythmical, and rendered more evident by abolition of the will, whilst the character of choreic movements is that of being, on the contrary, disordinate and irregular, and reawakened and rendered more accentuated after the impulse of the will?

Onimus and Legros, in experimenting on dogs, by me-

chanical excitement of the posterior cords, would seem to have obtained enormous exaggeration of the choreic movements, and to have been able to diminish them by a partial resection of the cords and the posterior cornua, and to cause them to disappear entirely by cutting deeper. Hence the genesis of chorea was concluded to consist in a state of great exaltation of the nervous cells of the posterior cornua, which would, in a reflex manner, excite the motor cells of the anterior cornua to incessant discharges.

Any such conclusion is incompatible with our present physiological knowledge of the medulla spinalis, which requires us to admit that, of necessity, a very great hyperæsthesia, both tactile and dolorific, is associated with a state of exaltation of the posterior apparatus of the medulla. But clinical observation, which ought to give value to physiological experiment, on the contrary, demonstrates in the ordinary way, that sensibility remains unchanged in chorea; and further, as we have before seen, it puts under our eyes phenomena, whose interpretation is impossible by the spinal doctrine.

Bouillaud, Lombroso, Maggiorani and others, having regarded chorea as a neurosis of co-ordination, and making allusion to the experiments of Fleurens and Magendie, have indicated the cerebellum as the seat of choreic nervous disturbance. But our knowledge of the physiology of the cerebellum is as yet too limited, and it is insufficient for the basing of a cerebellar theory. But what is held by all as demonstrated is, that the cerebellum does not show any nexus with the psychical functions, whilst the symptomatology of chorea is, for the most part, found to be constituted of alterations of these functions. Nothnagel makes the observation, that the limitation of the disorder of co-ordination to one side of the body is incompatible with lesions of the cerebellum.

In 1863, Kirkes expressed the idea that chorea was of cerebral origin, and the effect of fibrinous embolisms, detached from the endocardium affected with the rheumatic diathesis.

The observations of Russell, Jackson, Ogle, Tuckwell, Fox and Gray followed in the same direction; they were confirmed in Germany, and after a fatal case of chorea, some old and some recent lesions were observed on the cardiac valves, also some foci of cerebral softening, especially in the optostriate parts. From these observations sprang up, and held the field, the English theory, which teaches that the seat of chorea is the optostriate ganglia, and that capillary embolisms constitute the nature of the lesion.

We may not deny the occasional embolic nature of the lesion and its causal relation to chorea, considering the great frequency of rheumatism associated with alterations of the endocardium, but we cannot admit it as a constancy, alike because of the numerous observations of cases in which neither these embolisms nor consequent softenings of the optostriate ganglia have been found, and because of the absolute absence of cardiac affections or any other cause of embolism, and finally because any sort of alteration whatever of the nervous system, may be utterly wanting. The same may be said of the constantly admitted seat in the optostriate ganglia. In support of the same cause Dowse found alterations in the gray substance of the post-parietal and occipital convolutions. But even admitting that the necroscopic finding pointed constantly to the optostriate ganglia, for the above mentioned reasons we cannot admit that chorea constantly has its point of departure in these ganglia when no physio-pathological examination has been made to confirm its seat.

It seems to me, however, that we cannot exclude the optostriate ganglia from a pathogenetic hypothesis of chorea, as we have done with respect to the medulla spinalis, because, whilst the dominant symptom in this nervous form, that is, the psychological alteration, remains specially unexplained by the spinal doctrine, it would not be so by a primitive localization of the choreic disturbance in the optostriate ganglia, since, from recent studies, we must

regard these as centres auxiliary to those of the cortex of the convolutions, and as such perhaps not only in the motor and sensory functions, but also in the psychical; and it is not improbable that in determinate circumstances, as from an alteration or a considerable destruction of the cortical stratum, they may completely substitute it in functionality. Certain observations recently made by Charcot, Raymond, Nothnagel and others, would seem to indicate such a genesis.

There has been observed by Charcot, for the first time, a form of hemichorea, sometimes followed, but more frequently preceded by hemiplegia, and sometimes associated with hemianæsthesia, which has been distinguished by him under the names *prehemiplegic* and *post-hemiplegic hemichorea*. The necroscopic finding would appear to have brought to light alterations specially compromising the paths of centripetal and centrifugal conduction of the corona radiata. In other cases of typical form of hemichorea, there were found more frequently alterations in the thalamus opticus, the internal capsule and the corpus striatum. But these alterations are very far from being constant in their seat, as they have been found in other parts of the nervous system, not excluding the cortex of the convolutions. In the clinique of Florence, directed by Prof. Buresi, there has been observed in the present year a circumscribed partial chorea followed by paralysis, in which the alteration was found in the convolution that immediately underlies the interparietal sulcus of the right hemisphere. Hence, as respects the hemichorea, pre- and post-hemiplegic of Charcot, we must conclude as we have done with regard to the necroscopic finding for chorea in general, that is, that we cannot attribute to it a genetic, but only an etiological value. But I now repeat, that in so far as regards a pathogenetic localization in the ganglia of the base, rather than in the cerebellum or the medulla, we ought to consider the first the most probable, because we cannot deny to the optostriate ganglia functions that approach to those

of the cortex, and that may explain to us in part the culminant symptoms of chorea.

In favor of a cortical hypothesis we may also note the fact that chorea presents certain symptomatological relations, and it is frequently associated with other nervous affections, the seat of which has been more or less ascertained.

Golgi, for example, observes that dementia with progressive (English *general*) paralysis, presents many clinical points of contact with chorea. In the case mentioned, of Tomassi, there were real alternations of the symptoms of progressive paralytic insanity and of chorea. It is only necessary to study the course of progressive paralysis in order to observe that the motor disorders sometimes assume choreic resemblances. (?) Golgi would seem to have found a notable analogy between the alternations met with in his choreic and those of progressive general paralysis. It should not, therefore, be illogical to think that between these two affections there exists a relation of seat, that chorea may be a symptom of the other, or both of them manifestations of a different nature, of the same affected organ, which, in dementia with progressive paralysis, must be held to be the cerebral cortex, which in at least the great majority of cases, and its primitive modes, is found compromised.

[NOTE BY TRANSLATOR.—The association of chorea with general paralysis of the insane is surely of too rare occurrence to be regarded otherwise than as purely accidental. Alienists, who have had large opportunities of observing general paralytics, will probably be inclined to think that the author would have shown more sagacity by leaving out this passage. A lame argument affords but perilous support to a disputed theory.]

Choreic movements are frequently associated with the phenomena of the acute encephalitis that is observed in children, and the *athetosis*, which is regarded by many as a form of circumscribed chorea, is a constant phenomenon of this disease, which has its most constant seat in the cortical strata of the cerebrum.

I shall not fall back to note the relation which chorea presents to the psychoses in general. I have already alluded to these. This relation is easily comprehended when we think of the psychical alterations that are constantly associated with chorea, or rather indeed constitute its principal symptom. The importance of this fact, in the cortical genesis of St. Vitus' dance, must be manifest.

I now feel constrained to bring into view the points of contact presented by chorea with hysteria and epilepsy. These nervous forms may sometimes be found combined. Clinical medicine records many cases of this sort. I have myself observed, in the clinique of Buressi, a case in a young woman of twenty years, in which there were presented the phenomena of hysteria, convulsions, hysterio-epileptic and choreic movements.

The affinities existing between chorea and epilepsy have been well appreciated by Hughlings Jackson, who has expressed the idea of a common cortical genesis. In fact, limiting myself to the memorizing of the most evident points of contact, many causes, both predisposing and occasional, provoke at one time chorea, at another epilepsy, acting with equal intensity and frequency. Fear, as it is the most potent and most frequent cause of epilepsy, so is it also of chorea. With the same readiness and frequency with which epilepsy is produced by irritation, is chorea also produced by it. Debilitating causes produce, now the one and again the other. Both may be provoked by irritations falling on the peripheral extremities of the nervous system, that is, by reflex influence. A cutaneous cicatrix, intestinal worms, uterine disturbance, etc., may produce, now the one, and then the other. Both may be essential, that is not conjoined with any apparent alteration of the nervous system. Anatomical alterations, when they exist, are as well in the one as in the other, variable in their seats and their nature. Both diseases may be general or partial, and sometimes confined to a single muscular group. The alterations of the psychic faculties command the field in the symptomatology of the

one as in the other; and according to Arndt, as there may be a psychic equivalent in epilepsy, so also may there be in chorea. Visual hallucinations are not wanting in either. There is indeed an epileptic insanity, and there is also a choreic insanity. Epilepsy may precede, or it may follow a state of paralysis, and post-hemiplegic epileptic convulsions have been observed with special prevalence in cortical affections (Nothnagel). Both diseases are associated with hysteria under the forms of hysterio-chorea and hysterio-epilepsia. In a word, that which is called the *nervous state*, is almost identical in both.

The difference existing between chorea and epilepsy relates solely to the convulsive form, because the former is continuous and the latter accessional, consequently not sufficient to exclude the idea that both may be different manifestations of the same affected organ (Jackson).

If, therefore, from the symptomatological and etiological relation we should infer a relation of genesis (as we have a right to do), then the cortical doctrine of epilepsy, formulated by Luciani, based on experiments made by him, also on the clinical observations of Hughlings Jackson, Wilks and Callender and on the experiments of Hitzig, recently confirmed in Italy by the experiments of Rovighi and Santini, and in Germany by Rubnoff and Heidenhain, it should, I think, be extended to chorea, and so much the more do I hold by this decision because the two distinguished scientists, Golgi and Hughlings Jackson, show themselves much inclined to this opinion. Golgi especially giving great value to the necroscopic finding in the cerebral cortex, admits the cortical origin of chorea, as that hypothesis seems to him very probable "which would make choreic disorders depend on want of synchronism, or a disproportion in the activities of the different cellular groups of the cerebral zones."

But Hughlings Jackson declares himself more explicitly, and holds that both the epileptic and the choreic convulsions depend essentially on *lesions of discharge* in

the cortical centres; and he explains the differences which exist in the convulsive form by differences of degree in the state of excitation, irritation or tension, which in epilepsy would give place to discharges of periodic and rapid excitations, and in chorea to discharges at short intervals, and almost continuous.

I do not then feel indisposed to hold, at least in the present state of our scientific knowledge :

(*a*) That in whatever way the choreic excitement may be developed, whether directly or reflexly, and whatever may be the producing cause, it has always as its central organ, which constitutes the essential elements of its pathogenesis, the system of the nervous centres which are disseminated in the cerebral cortex.

(*b*) The immediate morbid condition of chorea should be held to consist in an abnormal excitement of the cerebral cortex, adapted to disordinate, in a special continuous form, the function of the cortical psychomotor centres.

(*c*) As the effect of this augmented excitability of the centres, an excitation reaching them could not remain in them limited to a given intentional movement, but being diffused into the others proximate, these, in beginning to function, would disturb the first movement.

(*d*) The producing cause of this abnormal excitement would act, either directly, and sometimes momentarily, like strong psychical impressions, on the cortical co-ordinating apparatus, and all the more the less resistant this is, whether from hereditary or congenital nervous constitution, weakness from tender age, or from exhausting causes. Or further, this cause might act indirectly, through the mechanism of the reflex motions, as a cutaneous cicatrix, a morbid focus, a sclerotic patch in any part of the central nervous system, departing from which the irritation would be carried by the centripetal paths to the cerebral cortex.

(*e*) The other motor centres also, distributed along the cerebro-spinal axis (Jaccoud), probably take part in the production of the choreic disorder, but only in a

secondary way, and in a complementary manner, so that being in strict dependence on the cortical motor centers, they must feel the anomalous state of these; and being unable, from their nature, to neutralize the effect, whilst also they are, from the same causal influences, placed in identical conditions of excitability, they may have influence in maintaining, and also in generalizing, the choreic motor disorders.

A Short Case Record in Psychiatry— With a Moral.

A MORBIDLY SENSITIVE MORAL SENSE.

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

MRS. M. E. W., of Ill., aged twenty-six; married; one child. One evening in May, 1877, she worked late at night to finish a carpet, retiring after twelve o'clock. Soon after she got in bed it appeared to her that she had broken the sabbath, and must therefore destroy the carpet. She spent a considerable time in devotional exercises. She thought it was her duty to pray for each member of the family separately, and all the relatives and friends the same way. Since then her husband has known her to often be as late as two o'clock at night, before she would get to bed, in consequence of these devotions.

In January, 1879, while some relatives were here visiting, from Indiana, one of the boys showed a collection of coins and other things, among them a piece of a coffin that he had picked up while crossing the Isthmus of Panama. She was soon impressed that she had done wrong in looking at it; that he had taken something that was not his, and that she ought not to have touched it. For some time after that she did not want to wear her sacque on that account, and would keep working her fingers as though she was rubbing something off them.

"In 1879, while her mother was helping to wash the dishes, there was a plate setting in the cupboard that had had some beefsteak on it, and when it was taken off, some blood was on the plate. Mother washed this plate in the pan with the rest of the things. Then an idea came to her that it was wrong to use blood, and that she had used it. She thought afterward she should

have told mother to rinse the plate off before putting it in the dishwater. She thought this blood got on some of the milk vessels and set into them (as she said), and would only come out of them when used." She still holds this last delusion.

To her husband she seems too precise in distinguishing between right and wrong—morbidly sensitive in regard to wrong; theorizes too much about the right and wrong, and does not look at it practically. He says (which was a good conclusion), as all the doctors he consulted advised him to move away a while or altogether, he went from his farm to a neighboring town, and engaged, in two establishments, in the lumber business, conducting one place himself, forming a silent partnership with another, and he and his wife mutually arranged a scale of prices. This she regarded as practising deception on the public, and it gave her great mental distress.

The sum of her mental condition is one of morbid activity of the moral and religious feelings. She finds no way of extenuating any of her fancied sins.

She has had several miscarriages. Her child is a suckling babe; her appetite is poor; her skin sallow, liver torpid, and general appearance anæmic and neurasthenic.

Her husband was advised to see that the babe was weaned; that she be put upon reconstructive and tranquilizing nerve tonics, beef peptones and other similar nutrients, including cod-liver oil and iron; that she be separated, so soon as practicable, from babe and husband and all present surroundings, and placed among remote and congenial relatives in an invigorating climate, with injunction to friends not to introduce the subject upon which she is morbid, or take her to church, or allow her to read the Bible.

A private home for the insane and nervous would be preferable to the plan advised, but the latter accorded more with her wishes and her husband's desires, and was advised, as a temporary expedient, with the injunction to secure a distant hospital home for her in case mental

recovery did not reappear with the return of her physical vigor. The moral effect of a residence in a hospital would benefit her any way.

This is one of the kind of cases a crowded public State hospital would not receive, because of its chronicity and apparent harmlessness. She ought to have been placed in a hospital for the insane several years ago, while the disease was recent. There is a possibility, but not a strong probability, of her recovery; but she should bear no more children.

She needs also to be watched, lest a suicidal inclination should develop, and lest the disposition already manifested to destroy the carpet because it was the cause of her offending, might become transformed into an impulse to self-mutilation or destruction.

Prolonged absence from her husband and babe may give her over-taxed procreative and maternal functions the rest they need, and thus benefit her, while entire change of surroundings might, by new impressions, excite dormant ideational centers into agreeable action, and give the painfully and morbidly over-active portions the needed quiescence.

The moral of this case is that she might have been saved if sent to the asylum for the insane, or to a private home for such persons, in the beginning of her malady, in 1877, or otherwise skillfully managed by a practical alienist. These are the cases in which delay in the beginning is most common and most dangerous.

The Public Care of the Insane and the Management of Asylums.*

EVILS OF THE SPOILS SYSTEM. MEDICAL SUPERINTENDENTS SHOULD BE TRAINED FOR THEIR WORK.

By JOSEPH WORKMAN, M. D., Toronto, Canada.

REMEMBERING the indulgence awarded to me by the association in past years, with whatever freedom I may have expressed myself on every subject under discussion, and feeling perfectly confident that the highest recommendation to your polite attention is your reliance on the sincerity of the speaker, I dismiss from my mind every apprehension of severe criticism, and addressing you as reflecting and liberal men, who thoroughly comprehend the truthfulness of the proverb, "Faithful are the wounds of a friend, but deceitful are the kisses of an enemy," I shall endeavor to tell you, with becoming frankness, what I think of some of the harmful exuberances, and a few of the defects, of your general asylum administration; and I wish it to be kept in mind that I

* This paper should have appeared at the time it was read before the Association of Superintendents of American Hospitals for the Insane, which convened in Toronto, June 14th, 1881; but it was crowded out at the time, and having been afterwards misplaced, it was overlooked and forgotten. But, like its accomplished and experienced author, it wears well, and we give it place without solicitation from any source, and solely because of the hope we cherish of the good it may yet do to American asylums. May the day of civil service reform soon dawn upon our American hospitals for the insane in every State, when political spoils seekers may fly the flag of truce over all medical State charities.—ED.

desire not to be understood as restricting my disapproval of existing errors or faults to institutions south of the great boundary line, but as falling on those of my own land, wherever they may chance to present.

Much Government an Evil.—I start with the general proposition that much government is, in all departments of life, a fundamental evil, and too much government is, in all human affairs and relations, a blunder that invariably and inevitably defeats the true purpose of all government; and when government is not only redundant in quantity, but also hurtful in quality, I can conceive no shorter or surer road to anarchy and corporate ruin. It is my belief that no small proportion of American asylums are too much governed, and that some of them have been sadly misgoverned. I am not blind to the fact that in any country which has achieved free popular institutions, and in which all public affairs must be conducted in conformity to the dominant suffrage of the electoral body, there must be great difficulty in convincing the multitude that there are some affairs in which they may be lacking in that cautious discrimination and stability of purpose which are essential to final success; and I freely admit that the conservation of the grand central blessing of national liberty must have paramount consideration. It rarely, however, happens that consciousness of the possession of power does not prompt to its exercise, and too often power is exercised merely for the sake of demonstrating its possession. In all such instances there will be much government, and very certainly not a little misgovernment. One of the greatest evils connected with the administration of your asylums is that of the uncertain tenure of office of superintendents. It is impossible to glance over the lists of a series of years without being struck with the appearance of the many new names, and the disappearance of old ones, presented. It is, however, very gratifying to me to find the names of so many old friends still lingering in the Eastern and Middle States. I rejoice to see that New England and her old neighbors appear to cherish so much

of the conservatism of the Mother land. I feel well assured that the asylums of Maine, New Hampshire, Massachusetts, New Jersey, Pennsylvania and New York, by their so long retaining their well-trying men, have consulted the best interests of the insane, and of their entire communities, and I may safely include in this category some others—as those of Boston, Rhode Island and Hartford, whose superintendents retired after long periods of service, carrying with them the strong regrets of their governors, and of the public at large. I accept it as an indisputable fact that the incumbents who have thus so long held their positions, have well merited the permanence of their tenure of office; but if this be so, why should not the rule be universal? Surely the Eastern and Middle States enjoy not any monopoly of good men. That the rule is not universal, some who now hear me, and far too many of those who once heard me, could but too amply and painfully testify.

In Canada, fortunately for public officers, and as I believe, for the public service, every Government appointment, and the majority of important corporate appointments, are understood and expected to be as durable as the good behavior of the incumbents, which virtually is equivalent to life-long. I have even heard it said that it requires very strong pressure to effect the dismissal of an inefficient officer. It is also a well understood maxim in our departments that it is the moral duty of the chiefs to defend all their servants, and to see that they shall not suffer from unjust accusations. This system works well, and our men generally work well under it. The man who enters the public service under expectation of this tenure has the very strongest inducement to acquit himself of all its duties, zealously, fearlessly and honorably; but he who knows not the day he may be turned adrift, and cast, perhaps, poor and broken-hearted on the world, has only meager encouragement to be either active or honest. Nor can I think that the mitigation of this evil, under the system obtaining in some States, of

periodic renewals of lease of office, by repetition of election every five or other number of years, is any very substantial improvement, for it is with you an unfortunate contingency that not only is it expected that every man shall exercise his electoral suffrage, but whoever fails to do so is sure to be regarded as a Philistine, and he must suffer decapitation accordingly. If, however, it be true, as I have heard often reported by your own people, that asylum superintendents, in common with other public officers, owe their appointments most largely to political influence and party energy, we need not be surprised when we see them floated out of office on the same wave on which they swam into it.

It would be presumptuous in me to commend for your adoption anything having no higher prestige than mere British or Canadian usance or merit; yet I do believe you would be large gainers by a quiet retracement of your steps in the matter of important appointments to office, the good and satisfactory working of which depends in so large a measure on matured experience; nor would I have you stop here, but I would go yet further, and recommend the expediency, as well as the justice, of awarding to superintendents and other faithful officers a competent retiring annual allowance, graduated on their length of service. This is the rule in British and other transatlantic asylums. It has become the rule, though in a more limited degree, in this province, so that every officer or employee is granted a retiring allowance, in a lump sum, which is determined by the length of his or her service. The obvious object and tendency of this system is to induce every one engaged in the service, from the chief down to the scullion, to continue long, and behave well, in their respective spheres. I regard it as equally just and politic. I must not forget here to add, that although public servants in Canada are not prohibited from exercising their electoral franchise, yet it is recommended to them by their superiors to abstain from so doing, and I have always regarded this exemption

from party exposure as a valuable civil boon. I would close my observations on this part of my subject with the following quotations from a recent number of an able popular American journal, and allow me to say that I would not myself presume to speak of the Civil Service of the United States in similar severe terms:

"There is no doubt whatever," says this writer, "that the work of the country has been, and still is, incompetently done, and no doubt whatever the 'spoils doctrine,' as it is called in party politics, is the source of incalculable corruption and incalculable degradation."

Again, this writer says of the unhappy exigencies of a public officer, "He is always to feel that he cannot keep his place by any excellence of work, or any superlative fitness for it, but only by intriguing and showing himself ready to do the dirty work of the party on whose good will he depends."

The severity of these strictures forbids comment by an outsider.

Official Interference.—The next evil to which I would allude, as calling for serious consideration, is that of the interference of governors or trustees of asylums with the appointments of assistants of any class or grade; and the same remark applies, with even greater force, to all higher authorities. I assume it as a certainty that every superintendent is capable of best judging of the fitness and competency of all his assistants, and it consorts with common sense that he will endeavor to procure, and to retain, the best he can find; if not, he is unfit for his position, and the sooner he is released from it the better. It is, however, a fact which calls for no illustration that any employee, of whatever grade, who owes his position to the influence of any person above the superintendent or independent of him, can never prove to be a reliable or obedient officer or servant; for he believes, and too often knows, that his continuance in the service depends more upon the influence that first secured it, than on his own good behavior. There no doubt are worthy exceptions to this rule,

but they are not so numerous as to disprove it. During my own rather long tenure of office, I had the high satisfaction of total non-interference on the part of my superiors in this relation, and I would fondly hope my successor has had the like experience. I could not desire for him a greater curse than its opposite.

An evil of unspeakable virulence in connection with the administration of American asylums, but for which it is just to say the governors are not accountable, is the frequency with which groundless charges of misconduct or mismanagement are brought against the medical staff and their assistants. I need not particularize instances of this grievance, for you are all better acquainted with them than I can be. So far as I can remember nearly all these accusations have been the concoctions of discharged bad servants, or of imperfectly recovered patients, whose lingering insanity has underlain their moral obliquity. It is, however, truly lamentable to observe the extent of popular credence awarded to these calumniators, and it is badly calculated to elevate our conception of the primal purity of human nature to find that so many people are anxious to believe evil of their fellow-men, and to rejoice more in the hope of verifying iniquity than of discovering innocence. It is true that in every instance that has come to my knowledge the accused have come out triumphantly vindicated; yet who but themselves could tell—if indeed human language could depict—the mental agony, the wear and tear of brain and nerve, the writhing of conscious innocence, “the spurns that patient merit of the unworthy takes”—all too often endured under an augmenting bodily debilitation which invites the shaft of death, or renders imperative the relinquishment of office? Of how many this has been the fate, their bereaved and sorrowing families best can tell! Is there no remedy for this evil? Must its recurrence become a perpetuity in your country? To tell me that it will recede before the march of a higher popular culture and intelligence would be but to ignore the fact that yours is the best—or at least the most largely—educated nation in

Christendom, and to ignore the yet more pertinent fact that the pernicious accusations here complained of rarely, if ever, have their origin among the uneducated portion of the population. They are trumped up by persons possessing more intelligence than moral honesty, and they are cherished into pestilent vigor by those who have had but too much education.

Inspectors.—It occurs to me that your institutions for the insane stand in need of some protecting breakwater, that might withstand the force, or avert the fury, of the wave of popular delusion. That your local boards of trustees have not, in many instances, proved adequate to this service will be readily admitted by all who have suffered from the defect. It is my belief that a central governmental supervision by one or more well qualified, discreet officers, whose function should be that of vigilant and thorough—not merely perfunctory—inspection of the condition and treatment of the patients, and of everything relating to their well-being, and whose duty it would be to report at stated periods to the Governor of the State, whatever they might deem proper or useful to be made known, might meet your requirement. It would not be advisable that such officers should exercise any immediate control or direction over the financial affairs of the institutions, or have anything to do with the giving out of contracts, or the buying and selling operations, so long at least as your local boards of trustees, deserving of public confidence, continue to be appointed; for I would not merely that such inspecting officers be unsuspected of favoritism, but I would place them above all reach of suspicion. As a matter of course, and a means of protection to your boards against unjust accusations or insinuations, all their transactions should be submitted to the inspectors, whose duty it would be to report faithfully any observed impropriety. Speaking from my own experience, I do not hesitate to say that I always regarded this sort of governmental supervision as my best protection against misrepresentation or revengeful slander, and I must add

that the only instance in which I suffered from these occurred before the establishment of our governmental inspectorship, when a local board failed in their duty of prompt and thorough investigation.

The Study of Insanity.—I would now crave your attention for a few minutes longer to a subject of a different character, but of no less public importance than the preceding ones, and perhaps, as some of you may fear, of no less practical difficulty. It is the establishment of a thorough system of alienistic medical training, by means of which there would be produced an adequate supply of competent and efficient candidates for the various positions from time to time becoming vacant in your asylums, and a better knowledge of insanity would be diffused throughout the profession of medicine. I think every experienced and closely observant superintendent will admit that a considerable lapse of time is required to convert a new assistant, however complete may have been his collegiate curriculum, into a useful asylum officer; and very few can entertain the belief that any course of mere didactic teaching, apart from thorough clinical observance and instruction, can ever meet the requirements of the position.

I am aware that in some of the asylums of America this matter has had consideration, but not to the extent, nor in the practical direction, that I should deem necessary for the end I would recommend to be held in view. I have recently been favored by Professor Tamburini, Director of the Asylum of Reggio Emilia, in Italy, with a number of the *Gazzetta del Frenocomio di Reggio*, at the end of which I have read with much gratification a notice to students and graduates of medicine of the practical operation of a system of training which seems to me to give promise of great public utility. I shall here introduce a translation of those portions of the above notice which appear to me most pertinent to the object I have in view. It reads as follows:—

“The Asylum of Reggio, from its central position, its material and moral improvements, effected in late years and

still in progress; from the large number of patients which it contains, and which constitute an abundant material for practical study; from its being the seat of classical psychiatry of the Royal University of Modena, in which all the practical prelections are imparted to students; from the scientific laboratories with which it is furnished, rich in instruments, and in every means of objective and experimental research; from its being the seat of the direction and editing of the *Revista Sperimentale di Freniatria e di Medicina Legale*, and consequently from the great number of scientific journals received in exchange, which enrich its library, already copiously supplied with works relating to psychiatry, it is now generally recognized as the best adapted institute for theoretic and practical instruction in this science, uniting all the opportunities for a complete education, both in the scientific sphere of the specialty, and the technicalities of management. It has therefore been designated by the Minister of Public Instruction as one of the institutions in which young men may obtain interne positions in order to perfect themselves in their studies, and already several young physicians who have completed their psychiatric studies have brilliantly distinguished themselves.

“In order to obtain the position of a medical practisant it is necessary to send in application with the diploma of graduation, and all those documents which may show the distinct capacity of the candidate to the medical director, with whom rests the nomination.

“The medical practisants have residence in the asylum, together with free lodgings, food, light, fuel and attendance.

“Besides the daily visits and all the clinical and experimental exercises, they are required to attend, assist, and in case of absence, to supply the places of the other medical officers in the treatment of the patients and the construction of the histories of cases; to attend the daily clinics, and to keep records in necroscopy; to aid in supervision of the service, and to give assistance in the psychiatric clinique, and in every other requirement of the institution, under the instructions of the director.

“These posts last for not less than six months, and not longer than two years.

“Practisants are also admitted for shorter periods, without the obligation to serve as the others; but these receive only lodgings in the asylum.

"Applications may be presented in any month of the year.

(Signed),

"G. FORNACIARI,
"Président of the Commission.

"A. TAMBURINI,
"Director of the Asylum."

It appears to me that the preceding programme is as liberal and complete as could be desired, and it does high honor to the Government of Italy that it has been induced to initiate a system of instruction so practically meritorious. Whether it would be possible to introduce some similar system in this country, I confess I am unable to foresee. For many years during my own asylum service I was able to carry out, on a small scale, a kindred arrangement, under which I was permitted to award residence and board to three young men engaged in the study of medicine, in addition to my regular assistant physician. Two of these young men were allowed moderate salaries, which by their fidelity and usefulness they well merited. I can appeal to my successor and his *confrères* in the three other asylums of Ontario whether the services rendered by these young men since my retirement have not been of very great value to the country. It would not become me to say more in their praise.

It has been with much regret that I have seen my cherished plan abandoned in all our asylums. I abstain from giving expression to my conjectures as to the reasons of our Government for making the change. I must, however, declare my believe that it has been a very unwise one, and a step in the retrograde direction, equally injudicious as regards the advancement of practical psychiatry, and unjust as relates to the interests of the medical profession and of humanity.

A Case of Insanity of Pubescence (Hebephrenia), associated with Epilepsy, Occurring in a Young Lady Sixteen Years of Age.

By EDWARD C. MANN, M. D., New York City,

Member of the New York County Medical Society, etc., etc

THE history of this interesting case is as follows: A short time since, I was called in consultation to see a case which had been differently diagnosed by several different physicians, some pronouncing it epilepsy and some general moral depravity. I found a young girl with dark hair and eyes, of fair build and complexion, neatly dressed, very ready and willing to talk about herself, who could do fancy work very beautifully, but whose intellect, in some respects, was very infantile. She would answer "Yes" to most of my questions, the answer sometimes being correct and more often incorrect. She presented the following history: Family history, good; no insanity or any neurosis on either side. Grandfather and grandmother on both sides healthy, strong country people. There is phthisis on the mother's side, which may be an illustration of the correlation of morbid forces in disease, as I have for years regarded these as mutually convertible diseases, insanity and phthisis running in and out like the twisted strands of a rope in the same family. During dentition she had convulsions. During early childhood she had them. They ceased at the age of six years, to reappear more distinctly epileptiform at the age of twelve, and have continued ever since. Since that age they have been accompanied by pallor of the face, followed by flushing, complete unconsciousness, frothing

at the mouth, but no bitten tongue. She makes a slight moan and gurgling noise in the throat, and does not fall to the ground, but clutches convulsively at whoever is nearest to her, holding them in a vice-like grasp until the convulsion is over. She then sleeps for about one half-hour, and wakes up bright and cheerful, but exhausted. Since the age of twelve her behavior has been strange and willful. She would strike back if punished for any misdemeanor, and speak of those "damn people," although she had been carefully and religiously brought up. No inducement or threats, or actual punishment could induce her to stay in school. Hence, she has never learned anything, save through intercourse with cultivated people in her own family circle. More recently, during the past eight months, since when her menses have appeared, she has developed decided mental disturbance attending the period of pubescence. The epileptic attacks are much lighter than formerly, while the mental deterioration is on the increase. She has no delusions or hallucinations. She eats and sleeps poorly. Much meat in her diet list will provoke gastro-intestinal disturbance and epileptic attack. She is sometimes very friendly, and again very hostile. She can be coaxed but not driven. She responds well to kindness. Was never cruel to her brothers and sisters, as are some cases of juvenile insanity. She has good appreciation of form, size, color, etc. Her memory for past events is very excellent. Respecting recent events, very poor. She is very erotic in her tendencies, almost at times amounting to a nymphomaniac. There is marked hyperæsthesia at times. No tenderness of the ovaries, and no hysterical symptoms could be elicited by making firm pressure on them, as would probably be the case in hystero-epilepsy, or hysteria major. The menses are painless, but very scanty. There is much irritability and excitement preceding the attacks. None whatever following them. General muscular power, as shown by grip of dynamometer, feeble. Ophthalmoscopic examination reveals nothing abnormal. No paralysis. The various reflexes are

all normal. As the convulsive attacks invariably commence in the hands and arms, we are inclined to localize the brain lesion and to pronounce it one of sub-inflammatous irritation of the ascending parietal, and foot of the third frontal convolutions of the cerebrum on both sides, which, was the case not relieved, it would probably end in atrophy and sclerosis of this tract of the motor centers of the cerebrum. There was doubtless also much irritability of the medulla oblongata in this case, and, perhaps, also in the cerebellum. There was derangement of menstruation, in that it was very scanty, and the monthly engorgement, the direct result of the scanty menses, caused the nervous disturbance to reach the maximum of intensity, and keep up a stream of wearing, irritative impressions, transmitted to the centric nervous system, causing a part at least of the mental disturbance. Warm hip baths were freely used one week before the expected menstrual period, as they seemed to be indicated, to remove the local engorgement by provoking the menstrual evacuation, and also direct depletion by means of leeches to the vulva. The secretions were regulated, cerebral and centric galvanization used to prevent further brain deterioration, and the latter also had a very marked effect in suppressing the undue sexual impulses. We put the patient also on the mono-bromide of camphor and administered four grains, twice daily, and promoted sleep by warm baths. All meat was cut off from the diet list; and the gastro-intestinal tract, which was much deranged, was regulated by small doses of the tincture of nux vomica before meals, freely diluted. This valuable medicine we have always considered exercises a therapeutical influence second to that of no other medicine upon the whole gastro-intestinal tract, antagonizing morbid states and restoring a normal condition to this region with certainty. At two different times we applied the actual cautery to the nape of the neck. We also used the nitrate of strychnine hypodermically, commencing with $\frac{1}{120}$ of a grain, and gradually ran up to $\frac{1}{12}$ of a grain, when we stopped. We regard this as very effectual in

some cases of epilepsy ; the patient's mental tone improving rapidly under its use. Our patient's insanity was fully recovered from, and the epileptic attacks at first diminished both in frequency and intensity, and have now about disappeared.

Physiological Psychology.

By HENRY HOWARD, M. R. C. S., L., England,

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I DON'T believe that it will very much interest or entertain the reader to learn, that on the 7th of May, past, I, at the request of the executive committee of the American Association of Forestry, read a paper before that assembly, then holding a session in the handsome city of Washington. Subject of my paper, chosen by the committee, "Forestry; its Effects Upon Climate and Health." Said paper, no doubt, will in due time be published in its legitimate source—the recorded proceedings of that society.

On the evening of the 8th of said month, I, by request, read a paper in New York, before that scientific body of men, the members of the Society of Medical Jurisprudence and State Medicine. Subject, "Why Lawyers and Doctors fail to Agree." Said paper will also appear in due time in its legitimate source: *The American Journal of Neurology and Psychiatry*, and the published records of the society.

As I have already said, I don't know that my readers will be at all interested in the above facts. Yet I wish to record them, if for no other reason than to take the opportunity to return my most sincere thanks to the members of both societies for their kind reception of myself personally, but more particularly for the enthusiastic reception given to my views as set forth in my papers. For personal attention and kindness, I owe a deep debt of gratitude to Drs. E. C. Spitzka and J. H. McBride, of New York.

But, my readers will ask, what has all this to do with physiological psychology? Well, it has something,

for it enables me to tell that the subjects of both my papers were based upon physical science, more particularly the physiology of matter, and that all physical phenomena was due to physical cause; again, that we know nothing of nature except in and through her phenomena or forces. In fact, all I had to say, I said as a physical scientist or natural experimental philosopher, and my gratification consisted in meeting with such a body of scientific men, who admitted the correctness of my views, and recognized the scientific fact, that all scientific subjects should be discussed from the basis of natural experimental philosophy, and only by so doing can we expect to arrive at truth in the natural order. I must be pardoned, if for the moment I felt proud and gratified, at finding myself addressing learned men, who understood the message I had to give to them from our common mother nature, and find my thoughts reflected from my audience, as I would my face from a looking-glass.

The science of psychology, as understood in the past, has led to fearful social evils, even to thousands of judicial murders, because it was not a science, but the outcome of a false philosophy which was not a philosophy at all, but dogmatic assertions, based upon the assumption, that mind was entity *causæ veræ*; will entity *causæ veræ*, and life entity *causæ veræ*, that the entity will was free, and by it man could control his thoughts, words and deeds, therefore, that man was responsible for his thoughts, words and deeds. What a fearful theory from such an assumption! No wonder that the history of the human race has been a history of crime, immorality and punishment! No wonder that with such a false philosophy, idiots, imbeciles and insane persons have been judicially murdered! No wonder that the prisons of Christendom are filled with children, so-called thieves and robbers, because that when they asked for bread, they received a stone (religious tracts); because these so-called free will could not control their desire for food when they were starving! As if there was a human being who could control his desire for

food when hungry; for drink, when thirsty; for heat, when cold, or for coolness when heated. There never was a normal human being who could, under such circumstances, control desire. Yet ontological psychologists taught that man's will was an entity and that it was free, and that man should be held responsible for his acts as to how he controlled them by his will. No wonder with such psychological teaching, men should, for hundreds of years, be groping in the dark, searching to find out the cause of insanity and never be able to define what insanity was, consequently never be able to treat it scientifically.

Now, I don't mean to try and define what is life, and mind and will in the abstract. I simply wish to point out that we only know them as phenomena or forces of matter, differing in degree as matter physiologically differs in degree. All these forces, and much more, we know as phenomena of matter, consequently as we do know them as phenomena, they cannot be entity or *causæ veræ*. These being facts demonstrable by physical science or natural experimental philosophy, if we would be logical, we must conclude that for every physical phenomena there must be, of necessity, physical cause.

This physiological psychology is so simple, that it is astonishing how long it took to be discovered, and when discovered, to be generally recognized. Even yet the greater number of the scientific men of the world, from one cause or another, cling to the ontological psychology, and believe that mind, life and will are entities, notwithstanding all the proof they have to the contrary.

We may well consider how different would be our social order from what it is, if men had only learned of nature and had been obedient to her laws, how different would have been our penal codes; and upon what a different basis would the medical profession stand to-day from what it does, had medical education been based upon experimental philosophy, recognizing that for physical effect there must be physical cause.

Let us, for example, consider the thousands of books

that have been written upon insanity and its jurisprudence, trying to reconcile a man's actions with the idea that mind and will were entities, and all these books so written, making confusion doubly confused, because the writers did not see that mind and will were phenomena or forces of matter, and consequently that every man was what he was in virtue of his physical organization. Recognizing this truth, I would define sanity to be an equilibrium of mental physical forces, due to a normal physical organization; in other words, to the physiological matter of which mind is the phenomenon resulting in a physiological psychosis.

And as a physiological psychologist, I define insanity to be a loss of equilibrium of mental physical forces, due to a pathological defect of mental physical organisms, resulting in a pathological or insane psychosis.

So do I define idiocy and imbecility to be an absence of equilibrium of physical forces, due to a teratological defect of mental physical organisms, which is generally due to arrest of development.

Sanity, and consequent intelligence, differing in degree, as mental physical organisms differ in degree, physiologically, and animal as well as vegetable organisms are developed by fertilization, particularly by environment and physical education. Education as it has been and is, tends to warp the physical intellectual organization of man, because education has been based upon so-called dogmatic *a priori* philosophy, which is no philosophy, but dogmatic assertion.

Idiocy and imbecility differs in degree, as there is teratological defect in mental physical organisms; and insanity will differ in degree, as there is pathological defect in the mental physical organisms.

Now judging a man by his history and by his conduct, which is the outcome of his psychosis, we could easily see whether a man would come under the first, second or third individual class. The conduct of all would be in accord with their physical organization—the sane

intellectual, the insane and imbecile psychoses, all differing to the greatest degree.

As a physiological psychologist, I cannot only recognize different degrees of sanity and intelligence, but different degrees of insanity. But I cannot see what benefit is to be derived from dividing and subdividing insanity into different forms, these forms simply based upon some peculiarity of psychosis, or from the fact that the insanity is complicated with some other disease, such as phthisis, etc. Such divisions and subdivisions, however, would be justifiable, if they would lead us to a knowledge of the physical organ or organs, suffering from pathological defect, but up to the present time, it has not thrown any light upon this important matter.

Where are we to-day with regard to the pathology of organism, the result of which pathological defect is to destroy, to a greater or lesser degree, the equilibrium of mental forces, causing insanity, which insanity is demonstrated to us by an insane psychosis? How much better are we prepared to answer that question now than we were three years ago, when I attempted to show that insanity rarely, if ever, was due to gross cerebral or nerve lesions; but was more probably due to peripheral irritation acting on nerve centers, or to some chemical or mechanical change in afferent nerves, acting upon the nerve center of consciousness? I doubt if our neuro-pathologists and histologists have done as much as they might have done to enlighten us on this question.

I wrote then, as I now do, as a physiological psychologist, from clinical observations, and my continued clinical observations since that time have confirmed me in my views, that in all cases of mania, when not complicated with other diseases which caused a pyretic state of the system, there was always low temperature accompanied by either analgesia or analgeria; and as I then conceived, so do I now, that if we are ever to know the pathological defect which is the cause of insanity, by causing a loss of equilibrium in mental forces, we will

find that pathological defect in the sensory nerves or their center—the organ of consciousness; and then and not till then, may we expect to learn the somatic etiology from the pathological defect, whether it be chemical or mechanical, whether it be due to atomic or molecular changes, and then will we be able to scientifically apply a remedy to remove the pathological defect.

From clinical observations I feel convinced that very frequently the difference that we find in the maniacal or insane psychosis of patients depends, to a very great degree, upon the somatic etiology of the lesion, whether it be chemical or mechanical. A practical alienist will rarely fail to diagnose a case of alcoholic mania, even though he should have no history of the person. This of course is chemical cause for pathological defect.

The same will diagnose mania from peripheral irritation, as we find it so frequently in hysterical girls. This would be pathological defect from mechanical cause.

If we are to have forms of insanity, the only two rational forms that appear to me that we could have, would be founded upon as to whether the etiology of the pathological defect was chemical or mechanical, for this might lead to different modes of treatment. There can be no objection to the term moral insanity, if it be understood that the person to whom it is applied is wholly insane, and that the psychological symptoms are strong sensual or sexual desires. It is only as thus understood, could I consider the term moral insanity at all justifiable.

No matter how we may try to classify insanity, we must never lose sight of the fact that man is one, not two, nor yet three; and that insanity is a physical disease, due to pathological defect, which causes loss of equilibrium in nerve forces. This is physiological psychology, and is in accord with the classification I made of insanity three years ago, in my book entitled: "The Philosophy of Insanity, Crime and Responsibility."

JUNE 12, 1884.

Folie du Doute and Mysophobia.*

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FOLIE DU DOUTE is generally classed among the monomanias as an insanity with fixed and limited delusion. Kraepelin classes it under the states of psychical enfeeblement, and in a subdivision under the neurasthenias. Falret, *fiils*, called it a partial insanity. Spitzka refers to it as an abortive monomania. Cases of the disease were recognized by Esquirol, and since his time a number of authors have written about it, including the Falrets, *père et fiils*; Le Grand du Saule, Ritti, Ball, O. Berger, Griesinger and Tamburini. Griesinger called the form which he described Grübelsucht, or metaphysical mania. The milder cases, at least, which English and American physicians have seen, have probably been classified as forms of hypochondriasis. Beard described a case as one of monohypochondriasis. In most instances the disease cannot be considered an insanity, unless we use that term in its widest and most rigidly scientific sense; for the patients are rational aside from the particular symptom and are conscious of the incorrectness or absurdity of their morbid ideas. Napoleon Bonaparte and Samuel Johnson are instanced as having had *folie du doute* in a limited way.

Ball† has given a classification (wrongly attributed to Tamburini,) of the various ways in which, as he thinks, *folie du doute* shows itself. We have: 1, The metaphysical variety. 2, The realistic. 3, The scrupulous. 4, The conscientious. 5, The calculating. 6, The tactile. The last named form has been described by Hammond under the name of mysophobia. The charac-

* Read at the annual meeting of the Neurological Association, June 20, 1884.

† See Bibliography at end of article.

teristic in all cases is that the patient is impelled by a persistent worry or fear to think over and refine over certain subjects or, for his peace of mind, to do over and over again certain useless and trival acts.

Ball, in the article above quoted, has given a very good description of the disease. It is also well described by Kraepelin; and monographs upon it have been written by other authors mentioned, so that I need not dwell further upon its clinical characters.

I present the record of two cases which have come under my observation. The first is a very typical case of the form known as mysophobia, and is interesting as showing the evolution of the disease, and certain evidences of a somatic basis. The second case is a very typical one of the *folie du doute*, as that disease is generally described. The patient was and is now engaged in active business, and outside of his family no one would, I think, suspect that he could be called insane:

CASE I. *Mysophobia—Tactile Form of Folie du Doute.*—Miss X., age twenty-eighth, American, school teacher. Parents perfectly healthy. No history of insanity or any of the great neuroses in the family. Has healthy brothers and sisters. The patient is of a decidedly nervous temperament, but has always been well up to the time of her present sickness. She has never had any convulsions, chorea or hysterical attacks. Physically she has been moderately strong. She was always extremely particular in the matter of orderliness and cleanliness, even when a child. Everything about her person, her dress, her room, was attended to with great care. She disliked dirt; and dirty people were a great offense to her. She was particularly careful about her school books, when a pupil in the public schools. Still her peculiarities in this respect, though noticeable, were not exaggerated or unreasonable. She occasionally, as she reached puberty, showed slight hysterical outbursts of emotion, when matters irritated her too much. She was intelligent, industrious and quick to learn. Her menstrual functions began and continued normally, and she never had any symptoms pointing to uterine disease, or, indeed, to any disease or irritation anywhere

In the fall of 1883, while teaching school, she began to feel exaggeration of sensibility as regards touching persons and things. If certain pupils at school by chance touched her, she felt uncomfortably in that part until after she had washed herself. She knew it was unreasonable. Finally, one day a lady friend called to see her. She says that she felt her coming all the way upstairs and dreaded it. This friend came up to her, shook hands, kissed her and patted her on the back. The sensation was intolerable; she wished her way; she felt saturated with her presence, and continued in a disagreeable state for sometime, despite washing herself.

I was asked to see her by Dr. Stuart, of Norwich, N. Y., and called May 21, 1884, with my friend Dr. Geo. E. Munroe. We found her sitting in bed in her night-dress. Her hair had been cut off because it annoyed her. Her face was full, she did not appear very anæmic, and her looks were that of an intelligent, but hysterical woman. She described her symptoms very clearly and recognized their absurdity. She wanted to get well and cried over the thoughts of the past. At other times she laughed heartily and easily.

She was in bed not because she could not walk, but because it annoyed her so to dress and to touch anything. And if she walked out, the sight of anything, to her mind out of order, would upset her completely. She never dressed herself for fear of touching something. Her mother dressed her, and if in that operation anything went wrong, she had to wash her and then start over again. For some time she had been in the habit of washing her own hands and face, whenever the least partical of dust or anything else touched her. This kept her at the washbowl nearly all day, till her hands became wrinkled like a washwoman's. Finally the water was taken from the room. During my visit, she burst into tears, but did not dare to wipe them away; so she held her face up to her mother, who applied a handkerchief and dried the eyes. At one time, she had her mother make her a pair of cotton mittens to prevent her hands from getting soiled. She was equally particular about the arrangement of things in her room. When the doctor came in, he had to sit in a particular chair placed in a particular position, and he was not allowed to step on particular parts of the carpet.

The presence of a fly in the room, alighting here and

there, annoyed her to the last pitch. It seemed to her to be "mixing things up." And her dread of contact was ascribed to a sense of contamination or "saturation." If in undressing her for the night, her hand received some disagreeable contact, she would hold it in a non-cramped position all night. Attempts to discipline, by preventing the washings, had for the most part only produced long fits of crying and mental excitement, after which she was worse than before.

Her appetite was good, her bowels regular, there was no tympanitis, no profuse discharges of pale urine. When the trouble first came on she suffered from globus, but it had subsequently disappeared. She had no headaches, but had had a sensation of severe pressure on the vertex of the head, and suffered from this at the time of visit to a slight extent. She slept well as a rule.

A very careful physical examination could not be made, for she would not let me touch her, even to feel her pulse. She had had no spinal tenderness or ovarian tenderness, no anæsthesia, hyperæsthesia or disturbance of mobility so far as could be discovered.

Her face looked as though she had had long before a facial paralysis on the right side. The mouth was drawn a little to the left, and the right lid-fissure was a little smaller. The right cheek less actively innervated than the left. When she protruded her tongue, it turned very distinctly to the left.

Since last winter she had been improving somewhat, especially as regards the control of her emotions. She had been treated with ferruginous and nervine tonics, and mental discipline had been tried to some extent. Bromides had been given her in moderate doses with no marked benefit.

CASE II. *Folie du Doute*.—About three years ago, a gentleman called at my office and gave me a long history of his ills. He complained of head-pressure, buzzing in the ears, constipation, seminal loss at stool, feelings of weight, and constriction in the abdomen, sweating about the anus and buttocks, mental irritability, dislike to society, etc. He had been treated for these and other symptoms for ten years by a quack. He was then extremely anxious to get well, believing that his business future depended upon his rapid and complete recovery.

I considered it a case of hypochondriasis, and laid

out a plan of moral and medicinal treatment. I soon found that I was obliged to give him the most explicit details as to every act of his daily life. When, he asked, should he wash? should he use cold or warm water, and at what exact temperature? and should he use soap and water or clear water? should he wipe himself dry with a towel, and should he rub hard and how long? when should he shave? and how many times a week? should he take his pill with water? etc., etc., I was obliged to tell him exactly how much to walk and when; to enumerate every article of diet and to prescribe the exact limits of sexual indulgence.

He had scarcely been gone from my office ten minutes when he returned, saying that I had forgotten to tell him whether he was to wash his hands in soap and water or clear water. Several other details he inquired after. In subsequent visits he almost never failed, after leaving my office, to come back again to inquire about some trivial matter. At the end of my consultations with him, which I could never make less than half an hour, he would insist on going over every detail of the treatment, diet and mode of life laid down. He admitted that he was a nuisance and a "crank," and recognized his peculiarities in a measure. His constant desire was to get well, and he for a long time lived in the expectation that the next month or next spring he would suddenly get all right and act like other people. He was book-keeper in a large banking house and held a responsible position, doing the duties satisfactorily. He was married to a sensible wife, who recognized his infirmities, and assisted, as much as possible, in judicious moral treatment.

The following letter which he wrote a few days after I had given him explicit directions, as I thought, as to treatment will show in a measure his peculiar state of mind:

DEAR DOCTOR:—I am sorry to say that I have got your directions mixed. Please let me know how often a day I am to bathe the parts in front with clear cold water, and in the event of that failing, am I to use any other water? Also say how often a day I am to use the salt bath underneath with rubbing dry afterwards. Also how often a day I am to use the eighty-five-degree-tepid, clear water sitz-bath in event of salt bath

and rubbing not answering the purpose. Also how many days I am to keep this latter up. I understand I am to keep up bathing in front till redness disappears. The salt bath beneath for two days and then resort to sitz-bath as above. How strong ought the bath to be? Please state how long I am to use the tablets if I begin to use them. I also understand that it makes no difference what time a day I use the baths or the tablets. If I am wrong please correct me. Yours truly,

J. C. C.

P. S.—* * * * I made a d—— fool of myself yesterday. I took the pill and before I knew it, had swallowed it without any water. Everything has been all down ever since.

The patient's father and two brothers died of phthisis; otherwise the family history is good.

He himself had severe attacks of headache when a boy, but otherwise was healthy. Between the years of sixteen and twenty he masturbated somewhat and indulged in great sexual excesses. Had gonorrhœa and gleet, but gave no history of syphilis; although he had a sore on the penis and suppurating buboes. Had not been a hard drinker or smoker.

About twelve years ago, when twenty years old, he began to have various nervous symptoms, such as mental irritability, dislike to society and various disagreeable subjective sensations.

The peculiar subjective symptom, which has stayed by him longest and is present still, began suddenly eight years ago, and consists in what he calls a falling down of the abdominal walls and viscera. He puts his hands to his abdomen, and says that it seems as if everything had given way there. He was asleep one time and had an emission. He got up to wash himself, and the cold water on the abdomen let out, he says, a flow of mucus, and everything else seemed to give way. It is from this time that one can probably date also his doubting madness.

When I saw him he presented no marked objective symptoms. He was an intelligent-looking man of about

thirty. He wore a somewhat anxious look. His pupils were large, and I noticed that whenever he was worse, the pupils became much more dilated.

Examination detected no organic disease anywhere. The functional disturbances were dyspepsia, constipation, occasional sweating about the anus and buttocks, and occasional frontal headaches.

The underlying characteristic of his mental condition was worry, or a condition which Ball has aptly called "cerebral pruritus." This showed itself especially as regards his routine habits and domestic life, as I have described. It affected him also in his business relations, but to a less extent. He was afraid he would lose his memory, and took pains to learn by heart every night, the whole list of stocks quotations. He had the three characteristics ascribed to *folie du doute* by Ball, viz: 1, He recognized his delusions. 2, He had no hallucinations. 3, He needed constant assurances to relieve his mind.

As regards treatment, after trying for sometime all kinds of tonics, electricity and hydropathy, I gave them up entirely. The more treatment he had, the more he refined it and the more he wanted, until the energies of his whole household were concentrated on his baths, his medicines, his exercise and his diet.

He had been taking medicine for twelve years, most of the time from an anatomical-museum quack. Medicine taking had become part of his life, and it was no easy thing to break it off. This I did, however, finally. I also gradually taught him that he could wash his hands, shave, eat and walk as he chose. It was hardest of all to make him believe he could wash his hands at any time and in any way. I encouraged him to see other people, and to believe that he was getting well all the time. In the last year he has become greatly improved, and though he still has sweatings and the "falling down" sensations, and often gets melancholic, he is decidedly better. I can say at least that his *folie du doute* has

been cured by education, though he is extremely liable to a relapse.

The cases related suggest the question, whether these two forms of mental disturbance, *folie du doute* and *mysophobia*, belong to the same category. Dr. Hughes, in reporting two similar cases (*vide bibliog.*), makes the point that in *mysophobia* or mania of contamination, there is morbid conviction, while in the other form, there is morbid doubt. It appears to me, however, that the underlying condition in both forms is an analogous one of worry or "pruritus." This leads, on the one hand, to speculating, doubting, etc., and on the other, to washing and avoidance of dirt.

Both these psychopathic symptoms of Grübelsucht and doubting are buds, not full-blown blossoms, upon psychodegenerative stems. It is the fact, that they appear upon the same kind of stem, which is the chief argument for their essential unity.

Folie du doute is more a disease of men; *mysophobia*, of women. The former is generally a more chronic condition, and the prognosis is not so favorable.

In most cases of *mysophobia* there is at least temporary improvement or cure.

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The Curability of Locomotor Ataxia and the Simulations of Posterior Spinal Sclerosis.

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NOTWITHSTANDING the rarity of the central spinal or cerebro-spinal lesion, symptomatically revealed, chiefly in ataxia of the motor mechanism of the spinal cord or medulla oblongata, and the belief of incurability of this affection, which took possession of the professional mind, especially after the definite earlier recognition of sclerosis of the posterior columns had been satisfactorily confirmed by repeated post-mortems, and which, like the hopeless prognoses of phthisis, after the discovery of its relation to tubercle, became a settled conviction, some late results of treatment in this affection, if we are warranted in diagnosing its existence without the final autopsic sign being added to ante-mortem evidence, must lead us to inquire whether posterior spinal sclerosis is not really curable in certain stages and at a certain age, or whether it has not its counterfeit of symptoms, whose spurious character only the pathologist and not the clinician can determine.

I am aware that the wide-spread prevalence of latent syphilis, the insidious character of the initial venereal lesion in many cases, followed by subsequent grave central nerve implication, as all competent observers in neurosyphilology concede, will furnish a ready conjectural explanation of curability in the cases which have recovered; but he jumps at conclusions, and but cuts the Gordian knot who thus reasons. He does not satisfactorily sever the tangled clinical cord, for if the adneurial depositions of the luetic

virus may be removed from the interstices of the strands of spinal nerve fibres and the arterial degenerations known to take place in the brains of syphilitics and elsewhere, may be regenerated and repaired under specific anti-venereal treatment, why may not the specific sclerotic induration itself, which specially characterizes the disease now under consideration, be capable of removal or arrest by a judicious therapy, permitting of the re-establishing of old, or the vicarious substituting of new channels of conduction for motor impulses? Especially if the not easily controverted later conclusions of Erb, as to the venereal etiology of tabes dorsalis, are to be regarded as well-founded; he having found reasonable evidence of the existence of syphilis in ninety-one per centum of the last hundred cases studied by him. In the study of his second hundred cases of tabes dorsalis, Prof. Erb makes the following statement as regards the etiology of this disease :

Of these cases there was only nine per cent. in which previous syphilitic infection could not be proved; with positive secondary syphilitic symptoms 62 per cent.; with chancre, but without definite secondary symptoms, twenty-nine per cent.; or, in all, ninety-one per cent. of these cases possessed a syphilitic history. In relation to the time elapsing after syphilitic infection before the appearance of tabes, he found that in sixty-nine of these ninety-one cases tabes appeared within fifteen years after infection, in fifteen cases in the following five years, and in only six cases later than this. In a careful examination of twelve hundred men over twenty-five years of age who had no symptoms either of tabes or of syphilis, he found 77.25 per cent. uninfected and 22.75 per cent. infected in early life. From this it follows, according to the author, that almost no one becomes tabetic who has not at first been syphilitic. Of thirteen tabetic females, four were free from syphilis, in three it was doubtful, four had had positive secondary syphilitic symptoms, one probably syphilitic, and one a chancre. From the above Prof. Erb concludes that syphilis is one of the most frequent causes of tabes dorsalis, if not the most frequent.

—*Centralb. f. d. Med. Wissen.*, December 15, 1883.

We may here also record our own conviction that syphilis, immediate or remote, plays a most important part as an indirect causative influence in the production of both spinal and cerebral sclerosis, and that when the syphilis has been acquired by the individual, the hopeful

issue of such a case is better assured than when the disease has been hereditarily transmitted. But the immediate (precipitating or determining) cause, in our cases, has been damp cold, or its equivalents.*

It is not strange that syphilis should be so important a causative factor in tabes and its simulations, when we consider how prevalent syphilis is in either its direct or hereditary and attenuated forms, and how diffusible and insidious in many ways, needless here to mention, its virus is.

We cannot demonstrably answer this question in regard to the curability of locomotor ataxia because, thus far, no post-mortems afforded by deaths from intercurrent causes have yet been made to confirm or deny it. We can only decide the question by analogy, on the general principles of neural pathology, and in the affirmative from what we know of vicarious nerve function, under stress of gradually invading disease and imperative demand of function, and the reparative power of nerve (motor and sensory) under certain circumstances.

These considerations should make our minds receptive to the teaching of late clinical lessons, that we may learn, if possible, to what they may likely lead in the not remote future; and if they shall conduct us clearly to the conclusion that posterior spinal sclerosis is susceptible of cure (and the indices now point that way), practical medicine will have added another signal therapeutic triumph to the many marvelous successes of the last four decades; a triumph as great as the mastery over malaria, syphilis or rheumatism, which not long ago were *approbriæ medicinæ*.

If absent patellar tendon-reflex, or the loss of the quadriceps extensor femoris clonus, be the sign essential of posterior spinal sclerosis, a sign which, notwithstanding our humble dissent, has received the sanction of the highest neurological authority, then have we certainly

* Over-bodily activity and sudden cooling off, getting wet and chilly in a cold rain, lying on the ground or sitting on a cold stone step after violent exercise, etc.

seen recoveries take place from sclerosis of the columns of Burdach. If superadded to the knee phenomenon, the coexistence of the characteristic ataxic gait, fulgurant pains, femoral anæsthesia and the peculiar illusory feet sensations, the inability to stand with eyes closed and feet together, and tactile inco-ordination without occipital pain or other head symptoms, are certainly significant of sclerotic implication of the posterior root zones, then have we to record recoveries from true locomotor ataxia. But we have seen no case of dorsal tabes recover with either glossal hemiatrophy; small, unequal or tardily moving pupils; laryngeal or pharyngeal crises, superadded to the aforementioned symptoms. When the pharyngo-laryngeal and gastric crises set in, or when the cervical cord at the point of origin of the phrenics, or when, further above, the pneumogastriacs are implicated, the final crisis which shall close the singular career of this remarkable affection is close at hand, and we cannot hope to arrest the final ending of this malady. Nevertheless, even when thus approaching the end, as some of us have seen, either spontaneously or aided by our art, remissions sometimes occur, which should at least not leave us hopeless of some day effecting prolonged and even permanent intermissions in the gravest and earliest symptoms.

Indeed, the writer has lately seen under fronto-cervical and cervico-brachial galvanism, persistently employed, the altered and embarrassed handwriting become again round, regular and natural in style; all the rounded letters which were so badly formed, correctly made, and under the same treatment, the lost verbal co-ordination regained. The lost power to pick up small objects, to easily find the nose tip with the finger ends, to co-ordinate complex phalangeal movements and the peculiar visual defects, we have seen apparently more or less improved under treatment. If improvement be demonstrable, why may not entire arrest of symptoms and a cure in the earlier stages of this affection be possible?

Dr. G. M. Hammond (*Journal of Nervous and Mental*

Diseases, for July, 1883), reports a case in which the lost tendon-reflex partially returned, with marked improvement of all the tabetic symptoms, which had appeared in January, 1882, in an ataxic, with a previous history of syphilis and inebriety. In the discussion, Dr. Wm. A. Hammond stated that he had seen a similar case in which the tendon-reflex had markedly returned, especially in one knee, and most of the ataxic symptoms had disappeared.*

The writer does not believe that these evidences are sufficient alone to indubitably establish the existence of posterior spinal sclerosis, though they plainly indicate locomotor ataxia, as we often see it clinically presented; and point to a condition of the spinal cord, which, if it proceeds to dissolution, is found on post-mortem to be one of sclerosis of the columns of Burdach and Goll. But if the patient recovers, as has several times happened under our own observation in cases of recent origin, promptly treated, no cadaveric light illumine's diagnostic conjecture, as to the causative pathology of the symptomatology.

There was a time when, if a patient recovered of a pulmonary cavity, hacking cough, purulent expectorations, emaciation and night sweats, the case was regarded as not true phthisis. The one confirmatory symptom and unerring sign of correct diagnosis was lacking in the absence of the necropsy and necroscopic testimony—so are we now in regard to locomotor ataxia. "Locomotor ataxia is posterior spinal sclerosis and posterior spinal sclerosis is incurable," hence we are not satisfied to call the symptom grouping of locomotor ataxia, *true ataxia*, unless the case progresses unfavorably and we get or have in reasonable prospect the final microscopic sign. Yet there are cases, exceptional, it is true, which appear to recover after presenting most, if not all, of the evidences upon which, in other cases, we have been accustomed to give the

* Dr. Putnam, at the same time, referred to like cases reported by Baecker and Schuster; the latter's case having been seen by Erb, and presenting on post-mortem the characteristic sclerosis.

unfavorable prognosis, and which the subsequent dead-house revelations have confirmed.

Some of these cases have presented in our own experience, within a comparatively recent period, and these it is our purpose to here record, for the lesson of caution, which their recovery may teach others respecting the sometimes uncertain prognostic significance of some of the signs of tabes dorsalis; and possibly the results in these cases may serve as a lesson of some real value in neuro-therapy.

Recent clinical observations force us to the conclusion, from which we cannot escape, that not only posterior spinal sclerosis, but multiple cerebral sclerosis is either actually curable, or that they both have such symptomatic counterfeits, as to render it impossible to distinguish the real from the genuine diseases during life.

The following apropos cases, as illustrations of conditions symptomatically counterfeiting disseminated sclerosis of the antero-lateral columns and brain, have been lately reported by Westphal. It will be observed that both cases were sufficiently grave to reach even a fatal termination, without affording the usual post-mortem evidence of organic nerve induration, to which the sclerotic symptoms have hitherto been ascribed. In Westphal's cases (*Archiv f. Psych. Bd. xiv., p. 87*):

There was paresis of the muscles of the extremities, the trunk and the neck, with rigidity of the muscles. and as a result of this, delayed and difficult movements; there were tremors when voluntary movements were made; there was "scanning speech" (in one case only, in the other it resembled rather the speech found in bulbar paralysis); sensory disturbances were slight and transient; the patellar reflex was evocable, and also the paradoxical contraction; and there were headache, vertigo, apoplectic and hemiplegic attacks, and mental symptoms, particularly dementia. Nystagmus was an important omission, but Westphal's experience is that it is frequently absent, and in its place there was an abnormality in the movements of the ocular and facial muscles; the muscles responded slowly to the stimulus of volition, and the movements when commenced were slow in execution. This was well seen in the length of time it took to open and close the eyes. Both cases terminated fatally after a very chronic course. In one case a careful examination failed to reveal any cerebro-spinal lesion, in the other the cerebral pia matter was

somewhat œdematous, the convolutions small, and the white matter of very firm consistence; but there was not any sclerosis, in the ordinary acceptation of the word. In one of the cases reported in this paper, the paradoxical contraction was observed not only in the tibialis anticus, but in the flexors of the knee-joint, in the supinator longus of the forearm, in muscles of the wrist and finger-joints. Westphal concludes from these two cases that there is a general neurosis (which, for want of a better name, he calls a pseudo-sclerosis (which cannot be distinguished, either in its symptoms or its course, from the disease known as multiple cerebro-spinal gray degeneration, or sclerosis.

And now Desnos contradicting the late positive statement of Debove, that sclerotic lesions of the spinal cord, existing at the time when lancinating pains are experienced, preclude any hope of recovery, affirms that there are cases in which the lesions existing in the posterior columns of the cord are curable, and in support of his affirmation, he relates a case of syphilitic tabes, in which the pains were very severe and the inco-ordination marked, which was cured; at least, all the symptoms were made to disappear in five weeks, by iodide and bromide of potassium with the protoiodide of mercury. Referring to ataxia, reported by Dr. Cadiat, in which the autopsy showed a simple congestion of the cord without sclerosis, Dr. Desnos regards his case as one of that kind.*

Dr. Philip Zenner, of Cincinnati, has also lately reported in the *Cincinnati Lancet and Clinic*, cases of recovery from well-marked symptoms of locomotor ataxia; and Erb, in his work on diseases of the spinal cord, reported two cases of locomotor ataxia as about cured. One of these, in whom the usual symptoms, anæsthesia, ataxia, etc., had been manifested, and later disappeared, excepting a slight bladder trouble, after an apparent recovery of about eight years, suddenly died of acute poisoning. An examination of the cord made at this time revealed the degenerative changes in Burdach's columns characteristic of this disease. So, in this case, the symptoms had disappeared, while the pathological changes, which probably produced them, remained. Here

* *Annales de Dermatologie et de Syphiligraphie*, November 25, 1883.

we must attribute the improvement as Dr. Zenner, from whom we extract this reference, does, to vicarious function; certain nerve-fibres in the cord assuming the function of those which had been destroyed.

If there be, as maintained by M. Déjérine, a *nervotabes peripherique* as contradistinguished from *tabes médullaire*, and of this fact M. Déjérine's cases recorded in *La France Medicale*, Oct. 30, 1883, and the negative results of some post-mortems reported by Dr. Walter Kempster last year to the Chicago Medical Society, the curability of certain forms of locomotor ataxia may be regarded as an assured fact.

Indeed, clinical observation does assuredly establish the curability of the symptom grouping, which we have been accustomed to regard as locomotor ataxia; all that is lacking being the cadaveric affirmations of diagnostic accuracy, and this we cannot have in recovered cases. M. Déjérine's two recorded cases presented the characteristic fulgurant pains, inco-ordination, absent knee-jerk, anæsthesia, analgesia and retarded perceptions, while autopsy revealed no central lesion; the cutaneous nerves only showing the usual results of peripheral neuritis.

We are probably on the threshold of a fuller appreciation of the peripheral nerve changes in *tabes dorsalis*, through the researches of M. Déjérine, and the successful therapeutics of this affection, of Engelskjön, Rumph and others.

Déjérine in a communication previous to the one just referred to, observes that sensation derangements were varied under the same central lesion; and the central ganglia being healthy, the peripheral nerve changes were "not dependent upon any morbid condition of their trophic centers." In two of Déjérine's cases of well-marked ataxia with absent tendon reflex, lightning pains and crises and definite areas, over trunk and limb, of anæsthesia and analgesia, the usual central changes were found, but in addition, there were "grave changes in the region of impaired sensation." In one case the nerve trunks presented exactly those appearances which are ordinarily

seen some months after section; very few of the never fibres having the normal physiological qualities. In another case, that of a woman aged fifty-five, who had pronounced anæsthesia of the legs, the cutaneous nerves showed extensive degeneration, indicative of an essential parenchymatous neuritis. The anterior roots were perfectly healthy, but the posterior roots between their ganglia and the cord were markedly altered. Below the ganglia, however, that is, between them and the point of coalescence of the anterior and posterior elements of the mixed nerve, no such changes were to be found, and the ganglia themselves were also healthy. Then we have Langenbach's (for science, fortunately fatal,) case of nerve stretching, to enlighten us. Though disturbances of sensation and disorders of locomotion, identical with the symptoms of tabes dorsalis existed during the life of the patient, no central change was found in the spinal cord. Death occurred in this case after a second stretching, apparently from chloroform.

Thus we may form a hopeful prognosis in some of these cases, if our treatment appear to progress satisfactorily, upon the supposition that the lesion may not always be central, especially if, in addition to favorable curative tendencies, we find no pupil or speech defect to indicate certain cerebro-spinal diffusion of sclerosis. The symptoms of tabes dorsalis may undoubtedly be due sometimes, at least, to multiple peripheral neuritis, if we may trust the researches of Pierrot, Déjérine, Buzzard, Gowers and the autopsic revelations of Langenbach.

There is undoubtedly a conjectural presclerotic stage in sclerosis posterior, which is amenable to treatment, especially to peripheral galvanism and hot pediluvia, associated with iodide of potassium. In this category we place those cases which, receiving amelioration under this treatment, pass from observation of the neurologist as not cured, but greatly improved, before he has made his final and definite diagnoses. Such are cases like the following:

M. F., a large man, aged forty-five years; by occupation a

wholesale merchant; ordinary weight, 225 lbs.; came under treatment, March 1st, 1883; complaining of unsteadiness of gait, uncomfortable numbness in lower limbs, actual anæsthesia, gluteal and plantar, and absent tendon-reflex, and a long antecedent history of a never very active form of syphilis. No head symptoms of any significance. The ground feels to him as though he were walking on a cushion and he stands with his feet apart, and walks as though he was on an unsteady ship.

This man improved much under descending galvanism, from motor area of head to lumbosacral spine, and feet static electricity to anæsthetic areas, kilium iodium and hot baths, which he took at home and at Hot Springs. His trouble began about two months before I saw him. He was under treatment from March 1st, to middle of April, 1883, and continued with ameliorated symptoms without other treatment than hot baths, till early part of February of the present year, when he returned in as bad a condition as ever. I diagnosed this condition as impending tabes dorsalis, and made, in mental reservation, a hopeful prognosis, conditioned on persistence in the treatment instituted, which, however, has not been and will not be carried out. Afterwards, the patient's symptoms so improved as to relieve his mind of the fear of paralysis for which he had consulted me. The patient is a man who is given to trying novelties, having tried Turkish baths, magnetic healers, etc. The galvanic belt and the mechanical massage delusion will probably complete the hopelessness of his case.

M. G., aet. thirty-two; a sporting professional; tall and slender; weight, about 165 lbs.; spreads his legs when he stands; walks with a jerk and unsteady step; inclined to fall when eyes are closed, and cannot, with shut eyes, easily and promptly find the tip of his nose. Has had syphilis remotely. Has no lancinating pains, but feels as though the ground sinks down when he walks. Under treatment, Nov. and Dec., 1883, as in a previous case, with bromide added for insomnia complication. Compelled by his

occupation to take too much exercise, he was advised to go to hospital. Improved some under rest; but symptoms have returned now, and he is doing nothing but awaiting a more convenient opportunity to come under treatment and rest at the same time.

T. Z., a young married man, age thirty-six; clerk of a large corporation; was under treatment, already indicated, in March, April, May and June of 1883, for all the symptoms of dorsal ataxia, except the lancinating pains. The pains in his case being of a vaguely rheumatic character. A short residence at Hot Springs, with baths daily, after the home treatment, seemed to complete his cure, so he thought. In February of the present year, he came again under observation with all former symptoms much ameliorated. In fact, but little of them remained. He confessed to no specific disease at any time; but iodide of potassium in the morning, and protoiodide of mercury at night, were directed to be continued. At present writing he regards himself as well, but he still balances himself somewhat when he walks.

On February 2nd, 1883, K. J. O., a young married man was seen by Dr. Mudd and myself. We concurred that the symptoms were those of ataxia, and they were all characteristic, except the lancinating pains. They came suddenly. Ergot, iodide and bromide were given with arsenic and galvanism. No immediate benefit appeared; but a residence at Hot Springs and baths seemed to effect a cure.

Dr.— a dentist, aet. sixty, has had for three years past all symptoms of spinal ataxia, including the lancinating pains, uncertain jerking step, contracted pupils, embarrassed and slow speech, absent tendon-reflex, falls forward if eyes are shut and feet placed together, fails to approximate nose tip with finger tips when eyes are shut, and has evidences of arthropathic changes. Has so markedly improved under hot baths and static electricity to extremities and spine, with constant cephalic galvanism to head and internal treatment, that he went away hopeful of recovery. We did not

endeavor to dispel the illusion. He had previously been treated for chronic rheumatism.

The incompleteness of this paper requires an apology. It was intended to be read before a medical society, where, in the discussion of the subject, some points not herein touched upon, might have been more fully elaborated. Want of time now forbids extending the paper to the limit that the merits of this subject would seem really to require.

Methods of treatment and the *rationale* thereof, together with the record of some other cases, including some clinical illustrations of amelioration in cerebral and anterior spinal sclerosis are reserved for a subsequent communication.

SELECTIONS.

NEUROTHERAPY.

ELECTRICITY IN INSANITY OF SEVEN YEARS' DURATION.—
Dr. A. Robertson (*Journal of Mental Science*, April, 1884) cites the case of a fifty-year-old woman admitted to his hospital in a condition of depression with hallucinations and delusions of suspicion. These had existed for six years, but she had been able to keep them concealed till within six weeks prior to admission, when they had led her to charge people she met with being the cause of her troubles. The mental troubles had set in with the menopause. She was given tonics, and fly blisters were applied to her neck and head, but up to October, 1882, fifteen months after she had entered this institution, her condition had grown worse. October 27, 1882, she was treated with galvanism, the current used was from a forty cell Celandee battery. The positive pole was applied over the superior sympathetic cervical ganglion, and the negative slowly moved over the same side of the head, from the brow to the occiput, and up to the middle line of the skull, for about seven minutes, and then the electrodes changed to the other side in the same way and for the same time. This was continued every other day till February, 1883. The first two applications seemed without effect; after the third, November 4, from a fifteen to twenty cell battery, her head felt clearer, but November 10th, she was much depressed. November 13 and 15, twenty-five cells were used; the current being passed for five minutes. November 28, she had a "heavy" feeling in the head, previously perceptible, was gradually disappearing, and she expressed the opinion that the battery was doing her good. January 10, she said she did not now hear the voices unless she makes an effort, and then only a little, which makes her think the voices are in her head and *not real*. March 19, she was discharged, completely recovered; at the close of the treatment she could only bear ten cells. The psychoses occurring at the menopause are of vasomotor origin, and hence, likely to be benefited by such treatment. The statement about the disappearance of hallucinations, tends to bear out the

opinions of Dr. Parant (*ALIENIST AND NEUROLOGIST*, 1882) as to the pathogeny of hallucinations.

ARTIFICIAL FEEDING IN THE INSANE.—Dr. W. J. Mickle (*Journal of Mental Science*, April, 1884), discusses the cases in which rectal feeding is indicated in the insane. One group consists of those in whom there is cut-throat, throat inflammation, diphtheria, diphtheritic throat paralysis, stomatitis, quinsy or post-pharyngeal abscess. Where the œsophagus is strictured or becomes so spasmodically from the passage of the sound, or is cancerous or where laryngeal phthisis or laryngeal luetic stenosis exists. Another group is formed by cases where gastric conditions which contra-indicate the passage of a sound. Another group consists of those in whom neuroses and psychoses contraindicate mouth feeding. He believes that in using nutritive enemata, alcohol should not be added to albuminous food. If necessary the bowels should previously be closed by a simple or an aperient clyster, and a daily copious cleansing clyster is required in some cases. The bowels may have to be rested, but the attempt should be repeated if at first failure results. When it is apt to return, the patient's best position to secure the enemata, is on his back or left side. The nozzle or tube should be comfortably warm, as also the food injected. The amount given should be small at first, gradually increasing from two to ten ounces. Plugging the anus is often necessary. He uses the food already peptonized. Dr. Siemens (*Archiv. fuer Psychiatrie. B. XIV*), has pointed out the dangers resulting from the use of the sound. In one case the tube of the stomach-pump was sent through the aorta, owing to a sudden movement of the patient. Dr. J. L. Corning (*New York Medical Journal*, April 5, 1884), is of the opinion that with care such accidents rarely happen.

DR. N. A. RANDOLPH ON THE BEHAVIOR OF HYDROBROMIC ACID AND OF POTASSIUM IODIDE IN THE DIGESTIVE TRACT.—In a series of artificial digestions, in which hydrobromic acid was present in the digestive mixture, in amount corresponding to the therapeutic dose, the doctor noted: (a) That salivary digestion was completely suspended, whereas, (b) The peptonization of proteid food-stuffs was in no wise retarded, the variation from the normal, if any, being toward an acceleration of this process, and he

concludes that other things being equal, the appropriate time for the exhibition of this drug is immediately upon the cessation of salivary digestion within the stomach, or in other words, upon the first formation of free acid within that viscous. Recent studies* have shown that the acidity of the gastric contents, found even in quite early stages of digestion, is not due to the presence of *free* acid; and the ingenious observations of Von den Velden† go far toward proving that the development of free acid within the stomach does not occur until from forty-five minutes to an hour after breakfast, and from one to two hours after dinner. These results were obtained chiefly by the use of methyanilin, violet and tropæolin bodies, delicately responsive, by color-change, to the presence of free acid. There is little doubt in his mind that hydrochloric acid is developed in the stomach at an earlier period than that above indicated, but it seems very probable that by immediate combination with albuminoid it loses somewhat its characteristic activity

TRAUMATIC CEREBRAL ABSCESS EVACUATED THROUGH THE NOSE; RECOVERY.—The *Lancet* refers to a patient of Dr. Tassi, of Rome, who had sustained a comminuted depressed fracture of the skull in the left frontal region. The patient was a robust railway engineer. The extensive comminuted and depressed fracture was caused by a sledge-hammer. There was diffuse hæmatoma, loss of consciousness, high fever, paraplegia, and paresis of rectum and bladder. Some sero-purulent fluid escaped through the center of the wound, which admitted a probe for a considerable distance into the cranial cavity. The symptoms of cerebral irritation and compression increased, the limbs became contracted, divergent strabismus and priapism ensued, and the speech was monosyllabic and unintelligible. The seventieth day after the injury, sero-purulent fluid suddenly burst from the left nostril, and continued for four or five days, amounting in the aggregate to several ounces. As the discharge progressed, the symptoms of irritation and compression decreased. The patient first recovered consciousness and speech, then sensitive and motive power. In fifteen days all the functions of organic life were restored, and in three months from the date of injury, the patient returned to work.

* *Deutsch Archiv Klin. Med.*, XXIII., 369. See also *Jahresb. ii. d. Fortsch. d. Thier-Chemie*, 1880, p. 302. and Danilewsky, *Centralb. f. de. Med. Wiss.*, 1880.

† *Zeitsch. f. Physiol. Chemie*, 111, 205.

HOT WATER DOUCHE FOR RESTORING THE HEART'S ACTION.—My father was sent for to see a girl in a fit. He found the girl dressed in her grave-clothes and "laid out." He found some warmth over the heart. He ordered hot water to be brought (not scalding hot), and poured it into a jug, tore her shroud open, stood on a chair, and poured a continuous stream of hot water, until the throbbings of the heart were distinctly seen. That girl was the mother of several children before I left Scotland, in 1848.

An old man here, Robert Robinson, several years before his death, took a fit, and apparently expired upon the floor, where he was lying pulseless and breathless. The heart had ceased to beat. I felt some warmth over the heart, and tried my father's remedy; the septuagenarian revived and lived several years afterward.—*J. C. Reid, M. D., British Medical Journal.*

STRYCHNIA IN EPILEPSY.—An old copy of the *Southern Journal of the Medical Sciences*, published at Knoxville, Tennessee, in 1855, gives the record of six cases of epilepsy in the practice of Dr. Harris, abstracted from the *New York Medical Times*, for April of the that year, which were successfully treated by the use of strychnia in epilepsia. Some of the cases appear not to have been treated long enough to warrant the statement that their cure was complete, but they are so reported. The doses of strychnia ranged from the twenty-fourth to the fortieth of a grain, three or four times a day. One of the cases was accompanied with paralysis; three had irregular menstruation, and one had intermittent. They received some *mistura ferri composita*, or quinine, in addition to the strychnia.

TREATMENT OF MORPHIA-HABITUE, BY SUDDEN DISCONTINUING OF THE DRUG.—*The St. Louis Medical and Surgical Journal*, presents from the *Deutsche Med. Ztg.*, the case of a man aged fifty, a morphia user for seventeen years, subcutaneously, until twenty-four grains were used a day; he injected it himself three times daily, sometimes he used even thirty-two grains. He surrendered two ounces of morphia on the day when treatment began. His femur was covered with a leathery, brannish, indurated skin. The treatment consisted in the administration of diluted tincture of capsicum with spirit of chloroform, later with *tinctura cannabis indica* and bromide of ammonia, extr. belladonna in suppositories and pills.

HYPEROSMIC ACID FOR NEURALGIA.—A one per cent. solution of hyperosmic acid, administered by subcutaneous injection, has been employed in Billroth's clinic. One of the patients had sciatica for years, and had tried electricity no fewer than two hundred times, while for a whole year he had adopted vegetarianism. Billroth injected the above remedy between the tuber ischii and trochanter, and within a day or two the pain was greatly relieved, and eventually quite disappeared.

CARBONIC ACID IN NEURALGIA AND WRYNECK.—Dr. M. C. Paul (*Progrès Médicale*, January 19, 1884), claims to have obtained good results in neuralgiæ and wryneck from local douches of carbonic acid. These were applied for a quarter of an hour; the skin was previously moistened, and the carbonic acid mixed with air.

LIQUOR ACIDI PHOSPHORICI.—Formula of Professor William Pepper, of the University of Pennsylvania. Each fluid drachm of this preparation contains: Three grains phosphate lime, two grains phosphate magnesia, one and one-half grains phosphate potassa, with excess of free phosphoric acid.

NEUROLOGY.

A CASE OF FRACTURE OF THE ODONTOID PROCESS.—Dr. Stephen Smith reports in (*The Medical Gazette*, November 4th, 1883): Last December a man fell from a height upon the deck of an ice barge, and struck on his neck. When taken up he was partially paralyzed in his arms, and now has permanent contraction of the muscles. He was taken to the hospital so paralyzed that he could not sit up in bed. He gradually gained more and more use of his limbs, and his head became firmly fastened to his neck with the chin bent downward upon the chest, and so rigidly that he could not move his head from side to side, or up and down. These cases of fracture of the neck present a very peculiar history. It was once supposed that fracture of the odontoid process was always immediately fatal, but it has recently proved that it may occur and the man still live and go about his business, and yet, finally, die suddenly from some accident, such as being hit upon the head. Dr. Parker tells of a milkman in N. Y. who was thrown out of his wagon upon his head; that he got up and then found that his

head was loose, and that he could not hold it up nor turn it from side to side, but he steadied it as best he could with his hand, and then got into his wagon and drove home again. For the next three or four days he could not lie down or get up without his head moving about, unless he steadied it with his hands. That man finally got so well that he resumed his business, though as he drove around he would have to hold his hand upon his head to steady it whenever he drove over a rough place. After a hard day's work, six months after, he suddenly fell dead at the table, his head dropping forward upon his chest.

Recovery takes place in these cases by the formation of an ankylosis between the vertebræ at the seat of fracture, so you might easily kill this man instantly by striking him upon the head, and so breaking up the adhesions which have formed. In this case we have exactly the same condition that existed in a case in this hospital, which I found when I came on duty here, five years ago. I found his head drawn up with his chin projecting, and he was paralyzed from his neck downwards, and he was emaciated almost to a skeleton, and was suffering intensely. He had fallen in some way and struck upon his head, and immediately afterwards he felt this peculiar looseness of the head, and he went home, and after resting three or four days he resumed his business at the carpenter trade for a time. Then the paralysis came on, and he went to the hospital, where he stayed for the next six or eight months, and then he died with his head thrown back and his chin out. I found upon examination that the atlas had slid forward so that the spinal cord was pressed upon, and this caused his death. But he had a fractured odontoid process, and yet he had continued his work for some time, so it was proved that a man may recover from this accident. At that time Dr. Smith collected a series of thirty-two cases of this nature, which had been overlooked in the medical publications, and in some of these no odontoid process could be found, and there were two or three cases among them, where the odontoid process was perfectly movable upon the atlas by an articulation with it.

In treating this fracture nothing answers so well as to keep the patient sitting in a chair with a cross piece behind him, to which his head is bound so as to steady it. This man was treated so until he gradually became

so improved that he could walk around the wards without his head becoming loose, and now he can even run a little.

The evidence of spinal injury is presented by his hands. There is an unusual thickening of the joints of the fingers and a loss of action with permanent contraction of some of the muscles, due to the injury of the spinal nerves. The man cannot turn his head around at all, and this is diagnostic almost of these cases. If he should accidentally trip or fall, there would probably be a sudden displacement of these bones, resulting in immediate death.

A case of recovery after a broken neck is also reported by C. Jordison, M. R. C. S., in a late No. of the *Lancet*.

CLINICAL NEUROLOGY.

MENINGEAL EFFUSIONS.—Dr. Morris (*Lancet*, November, 11, 1882) states that: (1.) Spontaneous effusions into the cavity of the arachnoid, that is to say, effusions of blood from disease or excitement, are very often not to be distinguished from traumatic effusions. (2.) Post-mortem examination does not always explain the cause or the source of the effusion, and the state of the blood-clot is only a very rough test of the age of the effusion. (3.) Extravasation of blood between the dura mater and the bones, as also extravasations beneath the visceral arachnoid, accompanied by brain-bruising, are almost certainly traumatic, whether fracture coexist or not. Extravasation into the substance of the brain and into the ventricles are almost certainly spontaneous when no fracture and no brain-bruising coexists, and are probable so even when fracture without bruising of the cerebral surface is found. (4.) Spontaneous effusions may occur without any naked-eye evidence of disease of the cerebral or meningeal vessels. (5.) Spontaneous effusions into the arachnoid cavity from disease or excitement have occurred as early as the twelfth year of life, and at all ages subsequent to puberty. Inter-arachnoid hæmorrhage occurs at any age from violence. (6.) In slight injuries of the head, such as small scalp-wounds, without fracture of the skull or bruising of the surface of the brain, the surgeon should be extremely cautious in attributing inter-arachnoid extravasation to a blow, and more especially when the injured person is of intemperate habits.

OPTIC NERVE ANÆSTHESIA.—Dr. Dranoux (*Recueil d'Ophthalmologie*, February, 1884) under this title describes a very well defined variety of amaurosis characterized by a more or less complete loss of vision; often be incapacity to distinguish day from night, but without ophthalmoscopic lesion. This affection sometimes appears after a rapidly vanishing central scotoma, and generally appears during slumber. It may last without modification, an indefinite time; from ten months to two years. Under proper treatment it may disappear in a few days. It usually coexists with cutaneous anæsthesia, and is to the optic nerve what anæsthesia is to nerves of common sensibility. Youth chlorosis, hysteria and allied conditions may predispose to it. Emotion, sudden eye strain, etc., may act as exciting causes. Tonics, hydrotherapy, the use of continued current, hypodermic injections of large doses of strychnine, have rapidly beneficial effects.

NARCOLEPSY.—Dr. Matas (*New Orleans Medical and Surgical Journal*, January, 1884) comes to the following conclusions on this subject: *First*, That a disorder apparently functional in character, idiopathic (because its cause is unknown) characterized by abnormally and frequently repeated sleep-spells exists; and until its aetiology and pathology have been ascertained deserves a separate and independent place in the nosology. *Second*, That in view of the periodicity of its attacks, and the facial pallor accompanying it, as its association with functional nervous disturbance, like neuralgiæ, indicate that it is a vosomotor affection. *Third*, Malaria may exert causative influence. *Fourth*, The sleeping sickness of Africa, and allied conditions of specific origin do not belong to the same category.

EPILEPTIC PHENOMENA IN ATAXIA.—Vulpian (*Revue de Médecine*, No. 2, 1882) reports the case of a twenty-eight-year-old man, who, in a few months had had repeated attacks of loss of consciousness, with, on one occasion right-sided facial paralysis with aphasia, and a month later, right-sided hemiplegia and aphasia, with feeling of laryngeal constriction. All these symptoms disappeared later on, and decided locomotor ataxia made its appearance. He had marked gastric and laryngeal crises, also contraction of the lower extremities, and tremulous movements, as if the lateral columns were involved. There were no knee or foot phenomena.

EPILEPSY ORIGINATING FROM THE EAR.—Küffer (*Deutsche Medezinal Zeitung*) reports the case of a strong girl, aged eighteen, who having put into her ear a "healing root," which gave rise to polypi and pus, became epileptic. The attacks continued after the extraction of the polypi and thorough cleansing, but ceased to recur soon after the medicinal root was extracted.

CONGENITAL CEREBRO-SPINAL MENINGITIS. — Bambas (*Progrès Medical*, No. 17, 1882) reports a case of a young woman who became affected with cerebral-spinal meningitis at the end of her pregnancy. She died after giving birth to an apparently healthy child, which presented, two hours later, symptoms of meningitis, followed rapidly by death.

PSYCHIATRY.

IMPERATIVE CONCEPTIONS.—These mental phenomena to which Poe called attention under the title of the "Imp of the Perverse," had been discussed by Ball (*L'Encephale*, No. 1, 1883). Naturally enough he referred to the impulse which prompted Dr. Johnson to touch each post as he walked along the streets—an impulse so strong that if he accidentally passed one by without the usual tribute of a touch, he felt irresistibly compelled to return and repair the omission. The overpowering impulse to laugh on occasions of peculiar solemnity is one which even the most serious persons have experienced. A still more marked instance is that which sometimes urges pious people to indulge in blasphemous or profane language—such tormented a great English divine, Bishop Butler, who only mastered it by strong and sustained efforts of the will. The imperative conception sometimes assumes a suicidal form. Dr. Ball was consulted by a young man who was engaged to be married, but who found it impossible to visit his intended bride because it would involve a journey of some length in a railway carriage, and he could never enter one without feeling a desire to jump out as soon as the train was in motion. He was advised to accustom himself gradually to this mode of traveling, by taking short journeys on the suburban line, but he could never get beyond Auteuil; there he had to leave the carriage for fear of accident. Homicidal imperative conceptions are likewise met with. Thouviot was tortured with a burning desire to kill some woman, but

never felt the slightest wish to take the life of a man. He battled with the impulse for years, but at length it overcame him. One day he murdered a young girl, a perfect stranger, whom chance threw in his way, in the kitchen of a restaurant. Dr. Ball cites the case of an artist who was a victim of murderous imperative conception. He married early in life, his family was large; his cares and anxieties large in proportion. When thirty-eight years old, without any physical ailment or any specially unfavorable turn in his affairs, he began to be thus affected mentally. If he saw a mirror he desired to smash it; near a window he felt an impulse to jump out; he never got a bank-note in his hand that he did not feel inclined to tear it in pieces. These imperative conceptions presently assumed a more formidable shape: he began to be assailed with an impulse to strangle his children. His little daughter was dying of croup, and he spent night after night by her bedside nursing her with the utmost tenderness. "Yet," said he to the physician, "at the moment when I was praying, with tears in my eyes, that the child's life might be spared, I was tormented with a horrible desire to take her out of the cradle and throw her into the fire. Even now," he added, "as I speak to you, I feel a most intense desire to strangle you; but I check myself." He was a man of powerful build, he would have been dangerous had his sanguinary impulses proved beyond his control. But up to that time, as they had been successfully checked, his nearest friends did not suspect that he was subject to them, as he fulfilled all duties of life in an exemplary manner.

BENEFICIAL INFLUENCES OF SLOUGHS ON PARETIC DEMENTIA.—Dr. H. M. Hurd (report of the Pontiac Mich. Hospital for the Insane 1881-82), cites two cases of remarkable and unexpected amelioration in the symptoms of paretic dementia on patients, who were admitted at a stage of the disease when improvement seemed impossible. In both instances improvement was associated with severe sloughs. In one, a slough appeared upon the heel, and caused extensive destruction of tissue. The vitality of the patient was so defective that the destructive process went on day after day, with little apparent effort on the part of nature to repair the injury. It became necessary to keep him constantly in bed, and it was not until after an extremely tedious illness that healthy tissue began to form at the bottom of the ulcer, and it finally healed

by granulation. Previous, however, to his recovery he began to show a remarkable improvement in mental condition. He relinquished his delusions, became appreciative of his condition, and although for many months his mind was feeble, there was progressive improvement. He was finally discharged from the institution, upon trial, and has since maintained himself by his labor. He was not discharged as "recovered," nor is it at all probable that there has been anything more than a suspension of his disease. The query arises, whether his improvement is due to the ulcerative process, and consequent death of tissue, or to the enforced quiet which the condition of his foot demanded. In the second case the patient was confined to bed by reason of serious disease of the bladder, and within a few hours developed an extensive slough over the sacrum. The destruction of tissue was rapid and deep, and for many weeks it seemed impossible for him to survive. After a time the slough separated, and the extensive excavation became filled with healthy granulations. Coincident with this, there was improvement in mental condition. Although he dropped his delusions, he did not regain a natural healthy mental state. He became suspicious, restless, apprehensive, and fault-finding. In this condition he was removed from the asylum, and at last accounts was no worse and no better than when he was discharged. These and similar cases suggest the query whether it might be possible by artificial means to cause an extensive destruction of tissue in some part of the body, and thus cause an arrest of the disease. Thus far it has not been thought wise to establish sloughs artificially. The results of Meyer's experiments would tend to answer the query last made in the affirmative.

PARETIC DEMENTIA AND SYPHILIS.—Kjellberg (*Hospitals Tidende*, 1864) claimed that paretic dementia never occurred in a subject free from congenital or acquired syphilis, and this opinion has led to a very extended controversy. Fournier claimed that brain-syphilis is distinct from paretic dementia since it has a different mode of onset, evolution and duration; since in it there are frequent partial paralysis and hemiplegia; since it presents a special cachectic appearance and finally, since it readily responds to treatment. Kiernan (*ALIENIST AND NEUROLOGIST*, July, 1883) after an extended examination of the American, English, French, German, Italian and Scandinavian literature, concluded: *First*, From neither a clinical,

nor a therapeutical, nor a pathological standpoint, can parietic dementia of non-syphilitic origin be demarcated from that of syphilitic origin. *Second*, That the etiological influence of syphilis in the production of parietic dementia has been over-estimated by some authorities. *Third*, That the value of anti-syphilitic treatment in this disease will depend upon the stage at which the syphilis is found, and in no case is it necessarily contra-indicated. *Fourth*, That the contradictory statements in regard to syphilis and parietic dementia are due to *doctrinaire* and *a priori* tendencies altogether too prevalent in medicine. H. C. Wood (New York *Medical Journal*, March 22, 1884) concludes that it must be considered as at present proved that syphilis may produce a *disorder whose symptoms and lesions do not differ from those of general paralysis; that true general paralysis is very frequent in the syphilitic; that the only perceptible difference is one of curability; that the curable sclerosis may change into, or be followed by the incurable form of the disease.* Whether under these circumstances it is philosophic to consider the so-called pseudo-general paralysis and general paralysis as essentially distinct affections, each physician can well judge for himself. He ignores American literature on the subject in a way which seems to call for comment.

CLINICAL PSYCHIATRY.

PROGNOSIS OF INSANITY REQUIRING ARTIFICIAL FEEDING:—Dr. H. Sutherland (*Journal of Mental Science*, July 1883), concludes: *First*, Prognosis (of insanity) is good when there is only a disinclination for, and not a distinct refusal of food. It is bad when there is a persistent refusal of food. *Second*, Prognosis is good when disinclination and refusal of food depend upon some removable bodily cause. It is bad when the bodily cause is irremovable, and most unfavorable in parietic dementia complicated with some severe bodily disorder. *Third*, Prognosis is good when refusal of food recurs during a first attack of insanity. It is bad if the refusal occurs during a second or subsequent attack. *Fourth*, Prognosis is good, if after once being fed, the patient takes food naturally. It is bad if the patient requires to be fed more than once, recovery of mental health being less likely to occur in cases which have been fed a great number of

times. *Fifth*, Prognosis is good if the patients' health and weight remain about the same. It is bad if the patient loses flesh, although fed daily; the tendency to death being worked in such cases. It is also bad, if the patient gains much flesh under feeding, at least as regards recovery from insanity. Such patients usually drift into placid dementia. *Sixth*, Prognosis is good if the patient wishes to recover. It is bad if the patient has persistent suicidal tendencies. *Seventh*, Prognosis is good if treatment by drugs and feeding is resorted to early. It is bad, if this be delayed. These conclusions ignore the important question of the type of insanity attacking the patient and therefore contain vitiating elements of error. Used with such elements of error eliminated, they are of value as a guide to the determination of prognosis.

THE INFLUENCE OF THE SIEGE OF PARIS ON THE INSANE.—Dr. Legrand du Saulle (*Progrès Médical*, March 29, 1884) claims that while war and riot modify the psychical symptoms of the insane, they do not tend to increase the number of the insane. If the events of the Franco-Prussian war have had an influence on the production of insanity, it is because they have modified the conditions of existence. During the siege, alcoholic types of insanity and those resulting from malnutrition were greatly increased. The hereditary types, *paranœa*, etc., as a rule, decreased, but insane inventors were especially numerous, and this fact is readily explained; for the time being the healthy idea of fighting the foreign foe dominated the insane conceptions of most *paranœacs*, but the insane idea of fighting him by inventions was directly suggested, so that this type of *paranœacs* found themselves out of accord with their surroundings, and were regarded as insane. After the Commune, these inventors were less numerous, because so many of them were killed off during that period. The influence of the siege on the women pregnant during it was so decided, that "child of the siege" became an expression among the laboring classes, synonymous with "doomed child." Out of ninety-two of these children examined by Dr. Legrand du Saulle, sixty-four were defective in some respect.

SELF-RECOGNIZED INSANITY.—Under this class of cases might well be cited the following remarks by Dr. Orange (Report of the Broadmore Criminal Asylum, for 1881): It has always struck us as most pathetic, that

poor creatures should show such consciousness of their condition, that they voluntarily seek rest and protection in an asylum. To be insane is bad enough, but to be insane and know it is perfection of misery. Among the patients admitted during the year were two who had previously been inmates of the asylum, who had been committed at their own request. One of these was a man who, in 1870, was sent to the asylum for an insane homicide on his grandchild, and who was discharged conditionally in 1879, to the care of his sons. In 1880 he gave himself up to the police stating, he did not feel well enough to remain at large and asked to be sent back. The other case murdered her sister in 1861. In 1868 was discharged conditionally. In 1880 she wrote, asking to be taken back, as she felt unable to trust herself. Of the eleven discharged conditionally, and readmitted since the asylum's opening, six have themselves asked to be taken back.

RIB FRACTURES IN THE INSANE.—Dr. Hearder (1881 Report of the Caermarthen (Wales) Asylum), reports the following case which should be read in connection with Dr. J. A. Campbell's remarks (*Lancet*, July 1882), on the condition of patients, prior to asylum admission. An acute maniac, aged 67, was so violent that physical thoracic examination on admission, February 1881, was necessary. The next day her violence continued, and required restraint at the hands of several nurses. The third an examination was effected and one rib was found fractured. Four persons were required to hold her, while one applied the bandage. She improved mentally and stated, that a week before admission, she fell down stairs and hurt her side. She died two months after admission, and after death the left eighth and ninth ribs were found fractured. Had the circumstances of the fall not been known, the nurses might have been charged with the injury. To an American, German or French alienist, free from non-restraint bias, a camisole would, from a surgical and psychical stand-point, be preferable to the hands of attendants, when the presence of these latter roused, and did not soothe the pugnacity of the patient.

SUICIDAL CASES.—Dr. G. H. Savage (*Journal of Mental Science*, April, 1884) states that hallucinated and persecuted cases, as well as all cases of depression, are likely to commit suicide. All these cases should not be treated alike,

as the "persecuted" man may become homicidal if put in with other patients. The only real method of constant watching is in associated dormitories, but here there is danger in having but one night attendant. He is of the opinion, that as a general rule, the constant watching of actively suicidal cases is not for the good of the patient. In practice, when a "suicidal" patient is admitted, he puts him for a few night in strong clothes and strong sheets, in a single room. Dr. Savage then examines him, and decides whether this is necessary, and very often accepts the patient's statement that he will exercise self-control. By encouraging self-reliance the patient generally gets well. Dr. Savage believes that this would not so often be the case if he were not trusted.

INSANITY OF MENSTRUATION.—Dr. Régis (*Journal de Médecine de Bordeaux*, March 30, 1884) says that the mental state of females is, as a rule, more or less affected during menstruation. Bertheer was of opinion that psychoses of menstrual origin were in many cases closely allied to the transitory insanities; they as a rule were short attacks of mania or melancholia. When, however, the affection was due to interference with the proper performance of menstruation, then the affection lasted longer. As a rule acute mania is the most common type presented, but an acute hallucinatory psychosis is far from infrequent. Nymphomania, kleptomania, homicidal impulses, incendiary impulses, dipsomania and suicidal impulses are often the chief psychological symptoms of the insanity of menstruation properly so called. In the great majority of cases, the appearance of the menstrual flow is an evidence and consequence of intellectual improvement. In a few cases it is the cause.

EDITORIAL.

[The Editor is Responsible for all Unsigned Editorial Matter.]

Endowment of Medical Schools.—We abstract from an editorial in the New York *Medical Gazette*, the following letter to the Boston *Medical and Surgical Journal*, in which Dr. Oliver Wendell Holmes, in 1882, said :

The only way to ensure independent action of a school which aims at teaching the whole country by example, is to endow its professorships, so that the very best and highestgrade of instruction, and not that which is popular because it is easy and superficial, may always be given from its chairs, whether the classes be large or small. A small number of thoroughly accomplished medical graduates, their knowledge based on sound scientific acquirements, and made practical by assiduous clinical observation and teaching, will be worth more to the country than twice or thrice the number of half-taught, hastily-taught, practitioners. A series of such classes will, in the course of a single generation, elevate the whole professional standard, as they go forth, year after year, missionaries in the cause of health, soldiers and, if need be, martyrs, in the unending battle with disease and its causes.

The Old World motto is *noblesse oblige*. Our generous men of wealth are changing the phrase to *richesse oblige*, and thus become recognized as our untitled nobility. It is only necessary to show them in what way their beneficence will do the most extended and the most lasting good. The foundation of five or six professorships will carry the names of their founders down to a remote posterity, and call them to honored remembrance when the stately buildings around us are replaced by other and still nobler structures.

The Harvard Medical School has established a preliminary examination for admission, thus excluding the ignorant and wholly untrained young men who would begin the arduous studies of a medical course without the knowledge and mental discipline which are necessary to fit them to profit by such instruction. It has organized a regularly systematic and progressive course of instruction, in place of the mixed courses which have long been tolerated in spite of the general conviction and confession of their unphilosophical character and unsatisfactory unpractical results. It has multiplied its courses of instruction so as to include the various important specialties which have developed of late years into separate professional branches. It has secured the co-operation

of numerous clinical teachers in different public institutions, so that many of the advantages of the great foreign hospitals can be obtained without going abroad to find them; it attempts to establish a regular course of four years for all its students; it is building a new and more suitable home for the school; it hopes to retain its present home for clinical purposes; it desires to attract a larger number of students, and it wishes to reduce their expenses; it entertains the honorable and laudable ambition of being the foremost medical school of the country; and it proposes to make such further advances in the thoroughness and completeness of the instruction it can supply, that it will be no longer necessary for the medical graduate of the United States to continue and supplement his studies in foreign lands. All this can be accomplished by the endowment of professorships and by increasing the permanent fund of the school.

If a medical school can be endowed in Boston, why not in St. Louis?

St. Louis has *one* school that deserves endowment for having made the *sacrifice* of the size of its former classes, to the *welfare of the profession, by establishing the full three year requirement and graded system of instruction*. A few other schools have followed the example of the school of the lamented Hodgen and of Harvard, but very few. One in New York, one in Philadelphia and one, we think, in Chicago; but Bellevue and Jefferson having tried it, abandoned it when classes diminished in number. Shame on them! Honor the schools that have advanced the standard of requirement of students and qualification of their *alumni*, and let the wealthy endow them that their good work may go on. Let the endowment go further. After the schools that have been true to the highest interests of the profession have been thus aided, let a few post-graduate schools, in different sections of the country, be endowed by the charitable, to give *free* instruction to the prematurely-graduated medicos, who come forth annually from the numerous hasty-medical incubators of this fast country. Dr. Edward Warren (Bey), writing from Paris, complains of the French discriminating against American physicians. But the too indiscriminate rejection of American diplomas in Paris is due to the impression that prevails there, that all the American schools are alike, and turn out graduates without adequate qualification; whereas the real fact is, that American medical schools, like American physicians, are good, bad and indifferent. Right here in this Western city is a medical school which exacts a preliminary examination as to literary qualification, three full annual courses of graded study, with lectures, recitations and examinations during

the course and at the end of each year. The graduates of such a school deserve recognition everywhere, and sooner or later they will get it.

Neuratrophic or Nervous Typhoid.—It must have fallen to the lot of some, at least, of the readers of the *ALIENIST AND NEUROLOGIST*, to have seen the phenomena of typhoid prostration when all the nervous symptoms of typhoid fever appeared, without the septic accompaniments, antecedent history or specific physical non-nervous symptom group of true typhoid fever being observable. The paramount symptomatic phenomena of true typhoid are nervous, viz.: The delirium; the general exhaustion or neurasthenia and evidences of profound central septic neuratrophia, especially in the higher centers of the brain and cord, as shown in the psychic disturbances; the delirium and defective inhibition; the subsultus tendinum; the dilated pupil and tremulous tongue; the thermic phenomena of axalted temperature, ranging above normal, but seldom above 101° F.; in nervous typhoid the enuresis and the relaxed bowels. But here the resemblance to the true septic typhoid stops. There are neither sudamina, nor petechial; lymphangitis may be detected, but it is neither persistent nor localized. Sordes does not appear on the teeth, nor does the tongue dry, coat, blacken or fissure. No flocculi appear in the stools to indicate involvement of Peyer's patches and no diarrhoea sets in. In a few weeks the temperature falls below normal, 87° F., perhaps, but soon under hot stimulating liquid nutrition rises to 98° , and the pulse, which has never reached above 96 or 100, soon, under sleep and rest of mind and body, returns to normal. The delirium of this nervous typhoid is more coherent than that of true typhoid, appertaining mainly to a single or definite number of subjects, and if the brain fails to regain its tone, passes into the fixed delirium without fever of insanity. The delirium of nervous typhoid is the delirium of brain exhaustion from malnutrition of vital nerve centers, not from septic condition super-added. In true typhoid fever delirium, the brain of its victim

"Doth by the idle comments that it makes,
Foretell the ending of mortality."

Not so the systematic incoherent delirium of nervous typhoid, which portends rather impending insanity as its sequel, if not most judiciously managed by neurological, rather than by general medical skill.

These cases fall among the victims of over-brain strain and prolonged nerve-tire, from exhaustive great enterprizes incessantly pursued, and cruel, unrelenting goading of the faculties, until tired nature can stand no more. A period of insomnia, as well as brain strain, has preceded all of the cases that have fallen under my observation. And in all of them, signs of physical convalescence have appeared in about half the time that they show themselves in true typhoid fever, viz. : in about three weeks ; though this convalescence has not invariably marked an escape from a prolonged attack of mental aberration. In those cases where a history of marked neuropathic heredity exists and the insane temperament is undoubted, insanity of a prolonged and active type is apt to follow. A previous genuine typhoid fever, in the history of the patient's life, likewise predisposes to insanity as a complication of the convalescence, and in the cases which recover without passing into confirmed or chronic insanity, it is remarkable how soon the disordered physical functions regain their normal condition. Sleep "that knits up the ravelled" functions of unsound and spun out nerve and brain cells, soon returns spontaneously to the patient, and a stretch of twenty-four hours' obliviousness in "the arms of Morpheus," without morphine, or other hypnotic aid is not unusual. In the approach towards perfect recovery, appetite returns in full vigor without the further aid of medical appetizers, and the torpid inactive bowels begin to move daily without assistance from the physician. "The life of all the blood is not touched corruptly" as in true typhoid. The incubus of a blood poison is not on the nervous system, only the pressure of nutritional atrophica in its highest centers. This condition is the nervous typhoid of general functional neuratrophia ; neuratrophic typhoid, as contradistinguished from that typhoid neuratrophia which attends typhoid fever. It is a grave condition, not as portending the dissolution of that specific typhoid which has for one of its chief symptoms delirium, but as tending towards mental aberration of a *prolonged character*, unless most judiciously managed by those methods best known to neurological and psychiatric science. Some of the cases of insanity attributed to typhoid fever are due to this form of neuratrophia and non-septic exhaustion of the cerebro-spinal centers. A trifacial or sciatic neuralgia may be an incipient complication.

Dr. Tucker's Impression of Gheel.—A lunatic colony founded on superstition :

Dr. Geo. A. Tucker, who has been engaged some time, under the auspices of the New South Wales Government, in a tour of America and Europe, investigating the cure and treatment of the insane, has published in a little pamphlet just issued in Birmingham, Eng., an account of the lunatic colony at Gheel, Belgium, which he visited in December last. Dr. Tucker does not give a captivating description of Gheel, which is a rather gloomy, dirty place, with narrow, ill-kept streets. The commune of Gheel has a population of over 100,000, of whom nearly 2,000 are lunatics. The town itself has a population of 6,000. The leading feature of the place is the frequent drinking shops. The hospital, to which the new patients are first brought, is a building suggestive of melancholy. New-comers are retained for a while at the hospital, and then drafted out among the cottages, one or two patients, and sometimes three, being assigned to each cottage. In ancient times the patients were at first lodged in an old house near the church, in the Flemish language the "Ziekenkamer," or sick room, where they underwent religious treatment for nine days with a view of their cure. Sometimes a second course of nine days' similar treatment was gone through, and if they still showed no signs of recovery, they were committed to the care of some family in the neighborhood of the church which they daily attended, to participate in the benefit of the prayers specially offered in their behalf. In addition to the medical director, who resides at the hospital, there are four medical assistants living in the town, and to each of these a quarter of the colony is assigned, which they are expected to visit twice a month and personally to inspect each patient. There are, besides, six inspecting attendants, who are also supposed to visit each patient twice a month.

Dr. Tucker inspected the hospital very thoroughly and went about among the people freely, talking with many of them. He found the dullness and monotony universal. There is nothing to occupy the time or attention of the patient, but the almost enforced labor imposed upon them, which in many instances is repugnant to their feelings and unsuitable to their mental and physical conditions. In other respects they are left to their own resources in the families and amongst the frequenters of the houses in which they are lodged. Their life from day to day, and year to year is a mere torpid existence, devoid of variety in the present and of hope in the future—an existence as stagnant and unwholesome as that of the water in the dirty pools scattered all over the place. At the hospital he learned that the patients on their first coming are detained there from five to eight days. Every Wednesday the medical staff meet and decide what patient shall be drafted out. At the time of his visit there were in the hospital thirty-two men and twenty-two women.

The drinking shops referred to are very freely patronized by his patients, numbers of whom are domiciled therein. Generalizing on the aspects of the place, Dr. Tucker says: "Many if not most of the patients I saw looked neglected, cold, dirty and miserable. A number of them seemed to have no object or purpose in life but that of sitting near a smoky stove (if they have one, which is not always the case) of the kitchen, with nothing to divert the mind or break the eternal monotony of their existence. Only in one house did I find any books, and nowhere did there seem to be any

provision made for the intellectual or other amusement of the patients. In this, as in so many other respects, all the canons of modern treatment, agreed upon by the best authorities in lunacy, are ignored and probably unknown.

The patients are watched by the whole population, as well as by the authorities, and escapes are rare. One of the methods still used for the treatment of patients with a view to their cure is so full of superstition as to seem scarcely possible in this age in a civilized country. It is pursued in the old house or "Ziekenkamer" already spoken of. The ancient house is said to stand on the spot, where the saint was slain by her unnatural father. The first room shown to visitors is a kind of a kitchen, dark and gloomy, with iron-bound windows, a stone floor, and a large, open, old-fashioned fire-place. In the uprights on each side of the fireplace two large iron rings are fixed. One is close to the floor, and the other about two and a half feet higher. To those rings the faithful patients are fastened, the ankle of one leg to the lower ring, and the wrist on the same side to the upper ring. By this arrangement the patient on each side of the fireplace is doubled up in a kneeling position, and the evil spirits by whom he is possessed can incite him to no effective resistance to the exorcisms of the priests or the operations of the saint. In an adjoining room the only light and air is admitted, pass through an iron-bound, unglazed window, looking into the kitchen. The room is almost dark, and can be rendered completely so, by a heavy wooden shutter attached to the window and fitting close to the bars. The door is strong and further secured by iron. To the fixed wooden bedstead at one end, heavy iron chains are attached for securing the patient in bed. The floor is of stone, the room is cold and prison-like, and the grim gloom of the apartment (however much it may favor saintly interposition) is not, from the mundane point of view, at all calculated to mitigate the insanity of an inmate.

Dr. Tucker's convictions are altogether against the Gheel system in all of its particulars, and in concluding his observations, he says: "I have visited some hundreds of lunatic asylums in four out of five of the geographical divisions of the globe, and in the worst of them I have seen some fearful faces. At Gheel I did not see a single one, and (apart from the other causes of this) the dreary aspects of the town, and the entire country, is incompatible with cheerfulness of spirits in any mortal not endowed with the Tapleyan gift of being happy under the most adverse circumstances. In a word Gheel is an abode of desolation—a lingering survival of remote ages—a monstrosity in this nineteenth century and a humiliating reproach to our modern civilization."

The Late Dr. Willard Parker, who died April 5th, at his home, 41 East Twelfth street, of old age, was one of the most famous surgeons in America. He was born in Francistown, N. H., Sept. 2, 1802. As a boy he worked on his father's farm, near Chelmsford, Mass., and went to school winters. When eighteen years of age, he taught school, and began to prepare himself for college. In 1822, he went to Cambridge, and he was graduated

from the academic department in 1826, and from the Medical College in 1830. He was at once appointed professor of anatomy in the Vermont Medical College. In the same year he accepted the chair of anatomy in the Berkshire Medical College, and three years afterward the chair of surgery. In 1836, he was appointed professor of surgery in the Cincinnati Medical College. This he soon left to study and practice in European hospitals. On returning to America, in 1838, Dr. Parker was appointed resident surgeon in the Massachusetts Hospital. He resigned to accept the chair of surgery in the College of Physicians and Surgeons in New York. He had large and lucrative private practice. In the early days of Bellevue Hospital, Dr. Parker and Dr. James R. Wood had charge of the surgical ward. He was a consulting surgeon to the New York Hospital forty-four years ago. His eminence as a surgeon made his services in great demand in all parts of the country. Among his celebrated operations was the removal of the tumors from the neck of John Stevens, of Hoboken, the heir to the great Stevens estate. Dr. Parker, it is said, was presented by the grateful patient with \$100,000. For forty years Dr. Parker delivered lectures in the College of Physicians. After holding the chair of Professor of Surgery for thirty years he resigned, but accepted that of Professor of Clinical Surgery, which he held up to a short time before his death. He delivered lectures to thousands who are now practicing medicine. He had the degree LL. D. from Princeton. He wrote frequently on surgical topics, and invented the operation of cystotomy and other surgical operations.

American Public Health Association.—The Twelfth Annual Session of this Association will be held on Tuesday, Wednesday, Thursday and Friday, October 14-17, 1884, at St. Louis, Missouri. The following topics will come up for consideration: 1, Hygiene of the Habitations of the Poor. 2, Hygiene of Occupation. 3, School Hygiene. 4, Adulteration of Food. 5, Water Pollution. 6, Disposal of Sewage by Irrigation or Chemical Action. 7, The Observable Effect upon the Public Health of Official Sanitary Supervision. 8, The work of Municipal and State Boards of Health. Persons intending to present papers on any of these subjects are requested to notify the secretary at once, and to furnish him with a condensed abstract of the same not later than

September 1st. Members desiring to participate in the discussion of these papers are also requested to inform the secretary. It is requested that the complete papers shall be in the hands of the secretary at least three days prior to the meeting, as all papers must be examined by a committee before being read. They may be sent by mail or express to the secretary at his office prior to the 1st of October, after which date to his address at St. Louis, Mo., care of Dr. Jos. Spiegelhalter. Active and associate members have equal rights and privileges in the presentation and discussion of papers. The coming meeting will probably be the largest that the Association has ever held. The committee urge the attendance and coöperation of persons in all trades and professions interested in the advancement of public health and general sanitary science. A circular, giving full and concise information regarding local matters, programme, transportation, etc., will be issued in due season before the meeting. We hope to see this body at this session take some action in regard to the prevention of the spread of mental and nervous diseases. A committee on mental and nervous sanitation would not be amiss.

Paraldehyd.—This agent promises to prove a real hypnotic. Dr. E. Kurz (in the *Centrlb. f. d. cl. Med.*, 18, 1884,) gives the result of his experiments with the remedy on twenty-four cases. With few exceptions the effect was favorable. Usually he administered the drug in the dose of three, sometimes four grammes (gr. l. to gr. lxx.) and in watery solution. But in this manner taken, the remedy has a very disagreeable taste, and Dr. Sutter, of Illenau, recommends rum as a medium. Paraldehyd is incorporated in sugar, so that in the form of troches, one of these contains sixteen grains. Three or four of them, according to Sutter, are then dissolved in rum and a few drops of essence of lemon added. Thus prepared, the disagreeable taste is utterly concealed, and the patients do not object to take it. Of these cases four evinced but partial hypnotic effects from the remedy. Excitation was not seen in any case. Sleep generally set in within thirty minutes, and lasted from five to seven hours. In the few cases in which no hypnotic effect ensued, the patients admitted having felt much quieter after the paraldehyd; with slower pulse and arterial tension lessened, if previously increased. No disagreeable effects were noticed.

The Management of Chorea.—

In the management of chorea it is essential to make a prompt and thorough cure of the first attack, if possible, for while benignant nature often supplies an efficient therapy for this disease, she more often fails, and violent cases may die or pass on to choreic insanity, and the less violent in the beginning, may, without medical interference, become paralytic or a chronic habit, and if recovery does eventually take place, a latent diathetic condition of the voluntary motor centers may become a part of the patient's constitution, to reappear whenever subsequent neurotrophic conditions exist in the patient. In the management of this affection, therefore, no plan could be more prejudicial to the real welfare of the patient, present or future, than the so-called expectant plan, a most pernicious plan when carried out in many other diseases as well as in chorea, and only justifiable when we are in doubt as to the proper therapeutic measures to be employed. He who has become familiar with the possibilities of chorea, from observation of a large number of cases, will never counsel expectancy, or be satisfied with letting the disease wear itself out, if he can do better by more efficient treatment.

An essential therapeutic procedure in a large majority of cases, promotive of a tendency to recovery, is the removal of the child from home and the unsanitary surroundings (speaking in a neurological sense), under which the morbid condition has been engendered.

The change from usual environment should be agreeably diverting to the patient, and calculated to call into exercise the volitional powers while being of such a sanitary character as to be promotive of exalted nutrition, invigorating sleep, mental tranquilization and hæmic enrichment. Pure air, free sunlight, and an agreeable temperature should be sought in making the change.

Despite the theories that have been advanced of the dependence of chorea upon rheumatism, based upon its frequent association with antecedent rheumatic fever and co-existent cardiac bruit, it will be found to often follow after a scarlatina, aggravated measles, whooping-cough or other cause of depressed vitality if of sufficient intensity to implicate the stamina of the cerebro-spinal axis in such as possess inherent neuropathic tendencies. It is often associated with hysteria and epilepsy. For all the cases put forth by Mr. Hughlings Jackson and Dr. Kirkes to show that the origin of the trouble is rheumatic, other cases can be offered to show the non-existence of previous rheumatism, though rheumatism is markedly, if not primarily, a disease of the nervous system, as a careful examination of all the facts will show, and it should not therefore be strange to find rheumatism as one of the links in the chain of nervous phenomena, and that chorea is not unfrequently the neurotrophic substratum just as the lesion of the trophic nervous system which underlies rheumatism may give rise, and does sometimes, to the phenomena of chorea.

The essential neuropathic condition of chorea is a neurotrophia and consequent instability of the cerebro-spinal motor area, seldom grave enough to be considered organic, strictly speaking, though in a sense or degree we must concede that all disease is organic, and the post-mortem changes that have

been found in the corpora striata, cortex, and elsewhere in the brain, such as erosions, hemorrhages, etc., in the fatal cases, are sufficient to satisfy us that in many cases the lesion is grossly structural, though hyperæmia and irritation of the motor area of the cortex and subjacent portions of the brain and the cord are often primarily at fault, and this is obviously due to atonic vaso-motor conditions. Beginning in the motor area of the brain and cord, chorea may in its progress, and often does, invade the psycho-sensory regions, giving rise to imbecile and insane states and anæsthesia.

To treat chorea successfully, therefore, we should suppress, as far as we can, involuntary movement from the very beginning; by giving the child the necessary moral encouragement and strengthening its will-power, by surrounding the child with new demands upon its attention and volition as well as by medication. The sympathetic treatment that fosters hysteria is equally objectionable in chorea. The child wants encouragement that it may not yield any more of its control than it is obliged to, in order that it may not become discouraged and give up entirely to the erratic movements. The will should be made to pass, even though ever so imperfectly, over the channels of motor nerve conduction so that the "insanity of the muscles" may not become complete, pending our efforts at physiological reconstruction.

The medical treatment should be descending cerebro-spinal galvanism and arsenic to restore trophic nerve power and tranquilize the psycho-motor area, chloral hydrate and sodium bromide in moderation, especially at night, to secure cerebro-spinal rest; and the neurotic and hæmæmic tonics, iron, the hypophosphites, zinc, cod-liver oil and strychnia, the latter very sparingly. A milk diet is preferable to all other simple substances, but the patient should be fed on a generous variety of food.

After the involuntary tumult of the muscles has subsided, the physician should still look after the patient until a reassuring vigor of constitution is established, and such advice should be given as will tend to promote continued growth in new strength and give the best assurance against the return of this singular and sometimes formidable expression of nerve instability.

If we watch our patients closely we shall find some of them troubled with symptoms of laryngeal nerve irritation and spasm. When the spasm is not great enough to attract our attention in the day-time, we may often learn of its existence from statements made by the patient or nurse in regard to the child's having a troublesome night cough, or emitting a peculiar short coo sound, day or night.

I do not know why the cough should appear at night and be absent all day, but I have seen it regularly recur at bed time and continue through the night, to the great disturbance of the patient's rest, if not relieved by chloral.

The above remarks are recorded in the Proceedings of the St. Louis Medical Society, for February 15, 1884. The papers presented in our present number from Santini and Erlenmeyer, show how clinical observations of late

tend to locate chorea in the cerebral cortex, which is undoubtedly the place for it. Neither Santini's nor Erlenmeyer's views were familiar to us at the time our paper was read. Nor do we know how long previous to the appearance of their papers they have held their views, neither does it matter, so that we march on to more correct knowledge and more successful sanative results, for the latter is the ultimate end of all medical research and endeavor.

Encephalatrophia and General Functional Neuratrophia.—In the present number of the ALIENIST AND NEUROLOGIST are papers by Drs. Ira Russell and C. L. Dana, describing what they term *Mysophobia and Folie du Doute*. In the January number of this JOURNAL the writer also recorded one of the cases which Dr. Russell completes in the present number. The case described by us as *pazzia del dubio*, is unique. Yet there are many phases of this affection, which have not yet been described, but which are prodromal of insanity. The irresolution of cerebral malnutrition and overtax—the encephalatrophia—of what I have termed general functional neuratrophia reveals it. A patient of the writer, under this condition, recently hesitated about accepting a position of great honor and trust contrary to his usual custom, and then lamented having yielded so unexpectedly and unusually to the feeling of doubt and timidity which seized him.

He was suffering from the encephalic form of functional neuratrophia, caused by psychical overstrain. He had no other physical trouble. The liver, bowels and stomach had been kept in good condition by appropriate medication.

The physical cause of his trouble was cortex instability with associated insomnia and emotional overtax. Beard in his "Treatise on Neurasthenia," associated too many physical causative conditions with this undoubted morbid state of the nervous system; but Bartholow has not obliterated nervous exhaustion as a distinct and primarily induced condition of the nervous system, by showing its frequent association with hepatic and other visceral derangements. What we meant by the encephalatrophia and the general functional neuratrophia of over-nerve strain, which expresses itself in the various symptoms of neurasthenia, is a functional failure of the nervous system, due to inadequate nutrition and recuperation for the daily demands made upon it, in persons without strong hereditary tendencies to break down in special organs.

What Beard called cerebraesthesia, if he had only more narrowly differentiated it, is a rather hopeful condition. For when it falls upon a person and manifests itself only in exhaustion (psychical and physical), recuperation may be re-established by the judicious neurologist and alienist, before those conditions, which in the hereditarily neuropathic appear always with neurotrophia, are developed into an acquired diathesis.

The Standing Committees of the Association of Superintendents of American Hospitals for the Insane, appointed May 16, 1884: 1, *On the annual necrology of the association*—Drs. E. Grissom, of North Carolina; A. B. Richardson, of Ohio, and E. Cowles, of Mass. 2, *On cerebro-spinal physiology*—Drs. J. Strong, of Ohio; Theo. W. Fisher, of Mass., and J. Z. Gerhard, of Pa. 3, *On cerebro-spinal pathology*—Drs. R. Gundry, of Maryland; C. H. Hughes, of Missouri, and H. Wardner, of Illinois. 4, *On the therapeutics of insanity and new remedies*—Drs. J. B. Andrews, of New York; H. H. Hurd, of Michigan, and A. N. Denton, of Texas. 5, *On bibliography of insanity*—Drs. W. Channing, of Mass.; H. P. Stearns, of Conn., and P. L. Murphy, of North Carolina. 6, *On the relation of eccentric diseases to insanity*—Drs. J. H. Callender, Tenn.; D. Clark, of Ontario, and S. S. Schultz, of Pa. 7, *On asylum location, construction and sanitation*—Drs. J. Rogers, of Indiana; J. T. Steeves, of N. B., and Geo. C. Palmer, of Michigan. 8, *On medico-legal relations of the insane*—Drs. J. P. Gray, of New York; P. Bryce, of Alabama, and Geo. C. Catlett, of Missouri. 9, *On the treatment of insanity*—Drs. H. F. Carriell, of Illinois; D. R. Burrell, of New York, and A. A. Shew, of Conn.

The Abuse of Insane Patients.—The *American Journal of Psychiatry and Neurology* misinterprets us in regard to a special law against abuse of patients in asylums, and posting the same in a conspicuous place. By conspicuous place we mean conspicuous to the employees, as the room which they occupy, in every well regulated asylum, the patients are not allowed to enter. It is base enough for a man to strike a woman, but it is fiendish to strike a lunatic. No man would do it, save under most exceptional circumstances of self-defense, which very seldom occur. The law should treat such a man as a brute. The provocation subterfuge for retaliatory violence should never be considered. Those who

are practically conversant with the insane, know how seldom, in any asylum, violence is justified toward these unfortunates. Yet it is often practiced by the cowardly brutes, who disgrace the name of humane, by secret methods that leave no marks, such as ducking, chest pounding and choking with towels. Superintendents of asylums cannot be too vigilant toward attendants. Kind-hearted asylum heads are sometimes imposed on by these fiends in human form, who abuse in secret the helpless lunatic.

The Fifty-Second Annual Meeting, of the British Medical Association, will be held at Belfast, July 29th, 30th, 31st, and August 1st 1884. George Henry Savage, M. D., London, is President of the Section of Psychology; Daniel Hack Tuke, M. D., London, and Isaac Ashe, M. D., Dundrum, Dublin, are Vice-Presidents. In addition to the usual papers, the following special subjects have been selected for discussion in this section: 1, Employment of the Insane. 2, Varieties of General Paralysis. 3, Use of Alcohol in Asylums. 4, Moral Insanity and Imbecility. 5, Legal Persecutions by Discharged Patients. Abstracts of all papers to be read in the Section should be sent to Alex. Stewart Merrick, M. D., District Asylum, Belfast, or S. Rees Philipps, M. D., St. Ann's Health, Chertsey.

The Asserted Frequency of Epilepsy in the Negro is a myth, and Lawson Tait is mistaken. The editor has now under treatment a negro girl, not three years old, who has weekly attacks of grand mal, entailed as the congenital result of alcoholism, as one of the hereditary causative factors. The most violent case of epileptic insanity we ever saw was in a negro woman. We have seen it in many negro men. There are more white men than negroes who come under the observation of the civilized races, hence there ought to be seen more epileptics among whites; but the proportion is not greater, at least, among the latter, than it is among the negroes seen in the United States. The writer has seen a dozen colored epileptics and one case of hystero-epileptoid in a mulatto woman.

The Valuable Contributions of Dr. Kiernan to psychiatry in the *Detroit Lancet* have ceased to appear. The *Lancet* has shown intelligent appreciation of the manifest destiny of medicine to fall into psychiatric and neurological channels, by admitting these contributions.

We hope to see more of them in general medical literature.

Twelve years ago, the editor of this JOURNAL offered to a leading medical periodical a series of similar papers, but the offer was declined on the ground of professional non-appreciation of the subject. But, *tempora mutantur et mores!* The ALIENIST was founded and has been maintained to attract from the profession a recognition of the practical importance and value of psychiatry to general medicine. Its mission, though not finished, is being satisfactorily accomplished.

Inebriate Legislation.—The London *Medical Times and Gazette*, of Sept. 16, 1883, commenting on the unsatisfactory results of some recent experiments in England in reforming inebriates, remarks:

So far, the Act has certainly not realized the hopes of its promoters; but this has arisen from the permissive character of the Act, and from its having been enacted for a short period only. With the jealousy which surrounds the liberty of the subject in this country, it must be very difficult to obtain positive and sufficient legislation on this subject; but undoubtedly, could such be obtained and carried out thoroughly and well, it would be an immense boon to the class for whom it is desired.

This is the whole difficulty. The cure of inebriety is a matter of restraint and treatment for a long time.

A Dangerous Anodyne Mixture without Opium, but with *hyosciamia quantum sufficit*, has been going the rounds of our exchanges. We have waited three months to see if some one would condemn it. An anodyne mixture containing hyosciamia, without specifying either the amorphous or crystallized, is meant to deceive; and leaving the quantity *ad libitum*, is without utility and dangerous. Here is the formula: Chloroform, 100; ether sulphur. spts., 025; tincture cannabis, 175; acid. hydrocyan. dil., 030; hyosciamia, q. s.; ol. menth. piperit., 003; tincture capsici., 003; alcohol, ninty-five per cent, 350; glycerine, ad 1.000. Dose 10-30m.

The American Neurological Association held its tenth annual meeting in New York on Wednesday, Thursday and Friday, June 18th, 19th and 20th. Papers were read by Drs. Walton, Putnam and Webber, of Boston, and by Drs. Rockwell, Seguin and Dana, of N. Y., and others. Dr. Burt G. Wilbur, of Syracuse, N. Y., was elected President for the ensuing year.

HOSPITAL NOTES.

VIRGINIA ASYLUM PHYSICIANS.—Dr. A. M. Fauntleroy has been reinstated as Superintendent of the Western Virginia Asylum, with Drs. William Hamilton and Edward C. Fisher as assistants. At the Central Asylum, Dr. Randolph Barksdale has been restored as Superintendent, with Drs. R. G. Cabell and R. H. Jones assistant physicians. At the Eastern Asylum, Dr. James D. Moncure has been made Superintendent, with Drs. John Clópton and A. Monteiro as assistants.

THE ELECTION OF PLINY EARLE, of Northampton, as President of the Association of Superintendents of American Hospitals for the Insane, at the late meeting in Washington, was a long deferred, but well deserved honor. Dr. Orpheus Evert, elected Secretary at the same meeting, will make a good secretary; but the policy is bad of changing secretaries. The secretaryship should be permanent till vacated for the presidency.

THE DEATH OF DR. P. H. GALE, late Superintendent of the Anchorage Kentucky Asylum, will be mourned by a large circle of devoted, personal and professional friends. The cause of his death was cancer of the stomach, hastened, doubtlessly, by the over-strain of his late harassing official position.

EASTERN MICHIGAN ASYLUM.—Died, June 15th, 1884, Charles Doolittle, only son of Dr. Henry M. and Mary D. Hurd, aged eight years and three months.

DR. MORSE, of the Oxford Retreat, is writing a book on insanity and homicide.

REVIEWS, BOOK NOTICES, &c.

CLINICAL LECTURES ON MENTAL DISEASES. By T. S. Clouston, M. D., Edinburgh, Physician-Superintendent of the Royal Edinburgh Asylum for the Insane, Lecturer on Mental Diseases in the Edinburgh University. Henry C. Lea's Son & Co., Publishers, Philadelphia.

Lecture 1. The Clinical Study of Mental Diseases. 2 and 3. States of Mental Depression—Melancholia (Psychalgia). 4. States of Mental Exaltation—Mania (Psychlampsia). 5. States of Alternation, Periodicity, and Relapse in Mental Disease (Folie Circulaire, Psychorhythm, Folie a Double Forme, Circular Insanity, Periodic Insanity, Recurrent Mania, Katatonia). 6. States of Fixed and Limited Delusion—Monomania (Monopsychosis). 7. States of Mental Enfeeblement (Dementia, Amentia, Psychoparesis, Congenital Imbecility, Idiocy). 8. States of Mental Stupor (Psychocoma). 9. States of Defective Mental Inhibition (Impulsive Insanity, Volitional Insanity, Uncontrollable Impulse, Psychokinesia, Hyperkinesia, Inhibitory Insanity, Insanity without Delusion, Exaltation or Enfeeblement, Affective Insanity); The Insane Diathesis. 10. General Paralysis, Paralytic Insanity (from gross brain disease). 11. Epileptic Insanity, Traumatic Insanity. 12. Syphilitic Insanity, Alcoholic Insanity. 13. Rheumatic and Choreic Insanities, Gouty and Podagrous Insanity, Phthisical Insanity. 14. Uterine or Amenorrhœal and Ovarian Insanity, Hysterical Insanity, Insanity of Masturbation. 15. Puerperal Insanity, Insanity of Lactation, Insanity of Pregnancy. 16. The Insanities of the Times of Life, Insanity of Puberty, Insanity of Adolescence. 17. Climacteric Insanity, Senile Insanity. 18. The Rarer and less Important Clinical Varieties of Mental Disturbances. 19. Medico-Legal and Medico-Social Duties of Medical Men in Relation to Insanity. The author very properly treats his subject from a clinical standpoint. The description of his cases are all practical by one familiar from daily observation with the disease he is discussing. In the chapter on melancholia the following forms are distinguished: simple m., hypochondriacal m., delusional m., excited m., resistive (obstinate) m., epileptiform (convulsive) m., organic (coarse brain disease) m., suicidal or homicidal m.

This book does not require the apology that the author makes for its appearing, for it is from a thoroughly competent and practical source. The author's ample clinical experience and resources as Physician-Superintendent of the Royal Edinburgh Asylum and co-editor of the *Journal of Mental Science*, having fully qualified him for the work before us, which he has so well and opportunely undertaken.

His remarks on treatment are generally judicious; though we treat some forms of melancholia with opium, etc., somewhat more satisfactorily on this side of the Atlantic than we could by the author's method. The clinical features of the book commend it. The pathological plates are good, but not over many, and the chapter on the medico-legal and

medico-social duties of medical men in relation to mental diseases is timely and valuable; but the "abstract of the statutes of the United States and of the several States and Territories, relating to the custody of the insane," which follows, is rather superfluous, since "Ray, Blandford, Mann's Manual, Harrison's Legislation on Insanity, and Hamilton's Types of Insanity" all contain about the same information.

The author reports three case of myxœdema, "who were positively insane," and judges "from them that myxœdema always tends towards mild dementia, if it lasts long enough, and that before that occurs some patients may have maniacal attacks."

The author bears testimony to the simulation of insanity by the insane, but not so emphatically as he does to the existence of moral insanity as a fact. "He has seen such cases. It is not a question of theory, but of fact." The author, however, commits a rather too common error in restricting the term moral insanity to loss or aberration of the moral sense through disease, though it might perhaps have been well if Prichard, who founded the doctrine, had so restricted the signification of the term. Such a restriction would have saved much subsequent misconception and blind debate among alienists.

The author likewise recognizes the clinical facts which dipsomania, kleptomania and pyromania represent, thus showing his unbiased, non-theoretical recognition of the clinical facts of psychiatry, and confirming the claims to authority, which his experience in and practical familiarity with insanity would warrant us in believing he possessed. The book could doubtless have been enriched by more numerous pathological illustrations from the author's rich store of observation. One of the plates (plate III.) "presents a pathological deposit yet undescribed, all through the convolutions." The case was one of acute mania.

Some typographical errors inseparable from a first edition, such as the misspelling of the name Dowse, etc., appear, but altogether the typographical execution is good, the print is clear and the style is smooth; and although the book might have been made much more elaborate, it contains almost entirely the author's own record of his experience, and is worthy of a place beside Bucknill, Tuke, Maudsley, Blandford, Arnold, Combe and other English masters in psychiatry. The physician who buys it, and reads it, will be repaid for the time expended in its perusal, in true clinical instruction, and will not be misled by theoretical misinterpretation of psychological facts.

DISEASES OF THE BRAIN AND SPINAL CORD. Guide to their Pathology, Diagnosis and Treatment, with an Anatomical and Physiological Introduction.

This is the title of a new book published by Henry Kimpton, 82 High Holdorn, W. C., London, under the authorship of David Drummond, A. M., M. D., 7 Saville Place, Newcastle-on-Tyne.

The increasing interest taken in nervous diseases has created a demand, the author thinks, for a work, which, like the present one, shall be accessible in a reasonable compass to the student and the busy practitioner, whose engagements do not admit of the leisure necessary to master voluminous works.

The author's "aim has been to make the book essentially practical," and in this he has succeeded quite well, and to furnish the reader with the main facts and features of the diseases of the brain and spinal cord in as concise a manner as possible. The treatise is imperfect, as the author fears, and in such a compass it must necessarily be; but it is nevertheless a useful book, plainly written. The book will answer the student quite well for summer reading, as a review of what he may have heard from the chair of neurology during the past winter. But some nervous diseases are omitted, as Thomssen's disease, exophthalmic goiter, etc.

The author justly concedes that epilepsy may exist without complete loss of consciousness and denies the existence of the knee jerk or ankle clonus as true reflexes. The author cautions against regarding the absence of the ataxic gait as evidence of the non-existence of ataxia.

There is not much that is new in the book and many new things are omitted from its pages. The author seems to know of no other æsthesiometer than Sieveking's, and no better dynamometer than Matthiew's. His therapeutic knowledge is equally limited. He has freely laid under contribution the writings of Charcot, Erb, Bastian, Ross, Rosenthal, Bramwell, Gowers, together with many others, and this is a commendable feature of the author's work. The author is evidently a faithful and practical, though not a mature student of neurology. Nevertheless we commend his book as possessed of many practical features plainly presented, which will tend to popularize with the profession at large, the study of nervous diseases; and it is in this direction that more knowledge of neurology is especially needed, for nervous diseases are still too often saddled upon the unoffending stomach or on the poor liver or womb, often more sinned against than sinning, in the economy, or upon hypochondriasis, hysteria or "just nervousness" and nothing more.

THE ADJUDGED CASES ON INSANITY AS A DEFENCE TO CRIME. By JOHN D. LAWSON. F. H. Thomas & Co., Law Book Dealers, St. Louis

The author's design in this work, as recorded in the preface, is to present in a single volume all the reported cases where insanity has been set up in defense of a criminal charge, and has been passed upon by a court of justice in America or Great Britain. How far he has succeeded it would be impossible to say without great and prolonged research, which we have neither the time nor facilities to give to the investigation.

The author has endeavored to give every reported case. "If the case turned wholly on the topic of insanity, then the case is given in full; if there were other questions involved, then only that part relating to insanity is given."

This is a gigantic task, and if the author has successfully accomplished it, he has encompassed the work in a singularly compact manner; the book before us numbering not quite a thousand pages. A glance over the "table and concordance of cases," discovers to us are the historical criminal *causes celebres* in the United States and England, with which the reviewer is familiar, and many other interesting cases and references besides. The book is compactly written; its style is plain, forcible and as brief as the subjects permit. It has a double index, one of contents and one of rulings, adapted especially for legal reference. Besides

possessing an interest to all students of forensic psychiatry, it will prove of especial value to the jurist and lawyer, practically or philosophically interested in the relation of insanity to criminal law; and for the latter it is particularly interesting. No "criminal lawyer" or "insane physician" should be without it.

ELEMENTARY PRINCIPLES OF ELECTRO-THERAPEUTICS, with 135 Illustrations. Prepared by C. M. Haynes, M. D. Designed for the use of Students and Physicians.

This volume of 420 pages purports to contain in a clear, concise form, with no attempt at theorizing, the elementary principles of magnetism, Franklinism, galvanism and Faradism. The following extracts from the contents give a general idea of the ground covered by the text: Suggestions in regard to the selection and care of batteries; the different forms of electricity compared—(a) according to their physiological effects, (b) according to their therapeutical effects; differential indications for the selection of current; electro-diagnosis in obscure diseases; resuscitation of those in a state of asphyxia from anæsthetics, drowning, etc., or in new-born infants; to distinguish between real and apparent death; detection of malingerers by electricity; diagnosis and prognosis in various forms of paralysis; location of the motor points of the body through which any single muscle or group of muscles may be stimulated to contract (illustrated); illustration of nerve centers and mode of treating the various organs of the body through them; "landmarks" for locating the various organs of the living body, illustrated, with directions for conveying electricity directly to them; influence of galvanism on the sensory, motor, vaso-motor and on the dilator nerves; electrolysis of tumors, nævi, strictures, etc.; electrolysis for the permanent removal of hair from the eye lids or other situations (illustrated); electro-thermal baths—the method of giving them and the apparatus required (illustrated); complete and definite directions, collected from the best American and European authors, for the treatment of all diseases to which electricity has been successfully applied; galvano-cautery—its history, advantages and method of employing it; a full vocabulary of electrical language, containing all the terms which are employed in medical literature, defined according to the revision of the electrical congress assembled at Paris, in 1881. The work herein described is designed for the student who wishes to commence at the beginning and master the foundation principles of medical electrical science, before attempting to become acquainted with the theories and elaborate investigations of the founders of this science. The busy practitioner who wishes to get at the practical facts of medical electricity without being compelled to search for them through a mass of material which, however interesting and valuable, is not absolutely essential to an understanding of the subject. The electro-therapeutist who wishes to review half-forgotten facts, and also keep posted in regard to the latest literature on the subject of his specialty, should read this book. This is a much better book than business houses are usually interested in, and while it is a McIntosh Battery book, it surpasses in reliability some of the treatises in medical electricity which have lately been blindly lauded by our cotemporaries.

SLEEP-WALKING AND HYPNOTISM. By D. Hack Tuke, M. D., Fellow of the Royal College of Physicians of London; Co-Editor of the *Journal of Mental Science*. Blakiston, Son & Co., Publishers, 1012 Walnut St., Philadelphia.

This is an interesting brochure on an interesting subject, and not too tediously or exhaustively treated for summer reading. The well-known repute of the author in matters psychical, sufficiently commend the book. The subjects are discussed rather too cursively for their real magnitude, but with sufficient prolixity and force to dissipate the astounding skepticism of Casper, the Prussian medico-jurist, and the uncharitable and unsound conclusion as to the culpability of somnambulists, held by the French medico-legal writer, Foderè. In this book Elliotson and Braid find another real, though tardy vindication. It would have been better had such a book antedated the contributions of Beard and Charcot. But in the recognition of hypnotism and somnambulism, or what would be a better term (if the literary critics would permit the hybrid compound, somnavolism—*somus-o-volo*—the obedience or abolition of the will by sleep), history but repeats the adage, "a prophet is not without honor, save in his own country." Our British cousins recognize the demonstrations of Elliotson and Braid after their repetition across the British Channel and the Atlantic. Though the evidence in the author's possession is not deemed by him as conclusive, he regards the relation between decidedly well pronounced somnambulism and other nervous affections as fairly intimate, and holds that a neurotic constitution is a predisposing cause of sleep-walking.

The book is especially interesting as containing the questions of the circular of inquiry, sent out six years ago by the author and his lamented son, on the subject of sleep-walking, and the answers received thereof, together with the author's comments thereon, and the author's critical examination of the mental condition in hypnotism. An interesting chapter on artificial somnambulism at Salpêtrière, concludes the book.

A TREATISE ON OPHTHALMOLOGY FOR THE GENERAL PRACTITIONER. By Adolph Alt, M. D. J. H. Chambers & Co., Publishers, St. Louis, Mo.

The book is well written and thoroughly, but inexpensively, illustrated. The illustrations are all of a practical character. The drawings are good, but they merit finer execution, and the demand for the book we hope may be sufficiently great to justify finer work in this regard, in the subsequent editions which will undoubtedly be called for. The general practitioner will find it the most practical, because it is the most instructive and plainly comprehended book on the subject yet published for his use and benefit. It clarifies where others have mistified precepts and procedures plainly within his legitimate province. The chapters on eye affections caused by diseases of distant organs or diseases of the system generally, and on the diagnostic value of eye diseases in intracranial affections are interesting, and the author's views upon the relationship of ophthalmoscopy to cerebroscopy are quite reasonable. The author is probably in error in attributing a causative, rather than simply concomitant rôle to diabetes mellitus, and is in error in regard to the necessity of more than the cardiac symptom in Basedow (Grave's)

disease. But these are minor faults and do not at all impair the value of the book. The only incongruity we see in the book is in its dedication to a clever specialist, rather than to a general practitioner. The author seems to have been a little color blind for Green, ophthalmologically speaking.

REMARKS BY PROF. GEORGE GROSS, M. D., No. 311 East Capital street, Washington, D. C., on a Bill to "Prohibit the Manufacture and Sale of Intoxicating Liquors in the District of Columbia."

We have received a batch of balderdash entitled as above, beginning with the remark: "I appear before your honorable body as a prohibitionist, as a beverage and medicine for fifty years." To appear as a prohibitionist, a beverage and medicine for fifty years, is a rather peculiar and lengthy appearance. The "*Prof.*" announces at the conclusion of his "fifty-year" harangue, that "he will go to any place and explain this important subject more fully, by merely having his expenses paid." He will probably secure more invitations to go than to come.

THE URINE IN DISEASE. Arranged by Louis Lewis, M. D.

This publication comes to us as a supplement to the *Medical World* of Philadelphia, the best weekly medical brief extant. Its price is only one dollar per year with the chart. The chart is an invaluable exhibit to the practitioner of the assential clinical points in urinology. And the articles in the *World* are generally like the chart, pointed, clinical and practical.

HOMICIDE AND INSANITY (In Press). By D. A. Morse, M. D., Medical Superintendent of Oxford Retreat, Oxford, Ohio. Formerly Professor of Nervous Disorders and Insanity, Starling Medical College, Columbus, Ohio. Robert Clarke & Co., Publishers, Cincinnati. Price, paper, fifty cents.

THE JURISPRUDENCE OF INSANITY (In Preparation). By the same Author.

BRAIN EXHAUSTION.—By Dr. J. Leonard Corning, of New York.

This book will be reviewed in the October number. A cursory glance over its pages gives us a good impression of the book.

THE ANNALS OF HYGIENE. The initial number of Dr. Joseph F. Edward's new journal is received, and its table of interesting contents fulfills the promise of the prospectus issued some months ago. It is devoted to the fostering of preventive science and the preservation of health. It will succeed.

The Planet, as its name implies, has proven an eccentric star in the firmament of journalistic endeavor. It revolved eccentrically about the central sun of medical solar system, which begins in the Academy of Medicine and ends in the Neurological Society of New York, and, after "flaming, meteor-like, lawless through the [journalistic] sky," it went out like a comet, with its tail full of glittering stars; and like a comet, its like will not soon be seen again.

A BEAUTIFUL PICTURE of the main building of the Southern Exposition, which opens at Louisville, Ky., August 16th, and continues until October 25th., is received. The building covers thirteen acres of ground, and will be lighted throughout with five thousand electric lights.

The Case of James Graves, the Insane Murderer Executed at Newark. Being a paper read before the Society of Medical Jurisprudence and State Medicine. By E. C. Spitzka, M. D., Professor of Neuro-Anatomy and Pathology at the New York Post-Graduate Medical School. Together with the Discussion by Counsellors-at-law Kalisch, Kitchell, Ex-Judge Hull, and Doctors Young and Gray. (Reprinted from the *American Journal of Neurology and Psychiatry*, for April, 1884.)

Electrization of the Sympathetic and Pneumogastric Nerves, with Simultaneous Bilateral Compression of the Carotid. By J. Leonard Corning, M. D., New York. (Reprinted from the *New York Medical Journal* for February 23, 1884.)

Rapid Lithotripsy. By Dr. Henry H. Mudd, St. Louis, Mo. Read before the Tri-State Medical Society at Indianapolis, Sept. 19, 1883. (Reprinted from the *Weekly Medical Review*, of October 20, 1883.)

Criminal Responsibility of the Insane. By Orpheus Everts, M. D., Medical Superintendent Cincinnati Sanitarium, College Hill, Ohio. (From the *American Journal of Insanity*, for April, 1884.)

Detention in Asylums. By Ralph L. Parsons, M. D., Greenmont-on-the-Hudson, near Sing Sing. (Reprinted from the *Journal of Nervous and Mental Diseases*, Vol. XI. No. 1, January, 1884.)

Board of Health of the State of Louisiana. Inaugural address of the President to the Board. (Reprinted from the *New Orleans Medical and Surgical Journal*, May, 1884.)

Not Guilty: By Reason of Insanity. By N. Roe Brander, Jr., A. M., M. D., 2038 Race street, Philadelphia. (Reprint from *Philadelphia Medical Times*.)

Report of Inspector-General of the Insane of New South Wales. By Dr. Norton Manning.

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ORIGINAL CONTRIBUTIONS.

Recent Scientific Progress in Nervous
Diseases.*

By L. A. MERRIAM, M. D., Omaha, Neb.

Professor of the Principles and Practice of Medicine in the University of Nebraska,
College of Medicine, Lincoln, Neb.

NOT having read all the recent literature on nervous diseases published in various countries during the last few years, I cannot give all the new facts and principles discovered in neurological science, nor tell what may be their bearing upon the theoretical or practical problems of to-day. And if I had them all, I could not, in the short time allotted me to-day, present them in detail so as to make them of value to you. Even if I should sift out all the unproved theories and present only what is accepted truth, it would take several half-hours to make clear what progress has been made. I shall, therefore, present only such topics as seem to me to be of most interest and value to the general practitioner and such as I have gathered in my reading and study, leaving the subject of insanity to the pen of him who makes it his daily duty to care for these unfortunates. Progress has been made in this branch of medicine because of new facts learned in physics, chemistry and physiology, and well supplemented by practical study of pathological

*Read before the Nebraska State Medical Society, May 14, 1884.

processes and careful clinical observations. With full and accurate data, a rational hypothesis may be formed of unseen processes and, with the light we possess, correct methods of treatment adopted. That our data are often imperfect and our hypotheses unsound we are all well aware, hence our treatment is often wrong and the results disastrous. That this is true is not because of the imperfection of science alone. More often it is because we have not familiarized ourselves with the latest and best teachings upon the subject.

That mind exists wherever gray matter is found, whether in the axis-cylinder of Purkinje or the neuroplasm of the cell itself, and whether found in the tentacle of the cuttle fish, the tail of a dog or the brain of a man, has been taught and proven by Herbert Spencer and accepted by the best men of the world, among whom we may mention Stricker, Bain, Gegenbauer, James Ross, Hughlings Jackson and George Lewes. That the nervous system bears an intimate relationship to all normal, and also to every morbid process, is an established fact in medical science. The epithelium, nails, teeth, hair and beard are permeated by nervous influence and respond readily to its action.

An instance of this kind is given by Austie in his work on "Neuralgia," page 121, (a) where the hair becomes white during and immediately after an attack, returning to its normal color when free from neuralgia. Changes in the size and texture of the hair has also been noticed in neuralgia, many of the individual hairs becoming permanently hypertrophied. Even the terminal nerve fibres are not stable and unchangeable formations, but on the contrary, new nerve fibres may form at any time of life from the living matter present in all tissues. Thus nerves may appear and disappear according to certain physiological necessities or certain physical conditions of the body. Motor and sensory nerves are not so radically different as many suppose. They not only both receive and conduct impressions, and in both directions, differing however only

in degree, but they do something more, they have a certain power of simultaneously giving out molecular motion, so sharing the property of the vesicular matter.

It is a popular notion of the laity, held also by many physicians, that the anterior lobes of the cerebrum are especially the seat of intelligence, but this is erroneous, for it has been demonstrated that an injury or disease of the posterior lobes of the cerebrum does more damage to the intelligence than the same injury or disease when existing in the anterior lobes.

The hypothesis that there are particular nerves and particular centers possessing the particular power of inhibition, has been much weakened by recent discoveries and experiments. "The chemical, physical and biological sciences have overthrown the vitalistic doctrines of the past, and demonstrated a relationship between the forces which rule the inorganic world and the so-called vital force which is manifested in living forms." More than this the energy resulting from nerve action is but a modification of these same chemical and physical forces, and this correlation doubtless extends to the higher manifestations of nerve-energy, feeling and thought. The recognition of this correlation of the higher with the lower forces is a great step forward toward the solution of the intricate problems as to the cause, nature and treatment of some nervous diseases.

The localization of cerebral lesions is receiving considerable attention of late, and bids fair to compare favorably with the localization of diseases of the chest. Ferrier, Hitzig, Schiff, Broca, Jackson and others have done good work, the details of which would take too much of our time if now presented. There is a growing sentiment that many diseases, not heretofore regarded as nervous (and, perhaps, all diseases), are of nervous origin. Herpes, vitiligo, ichthyosis, ecthyma and pemphigus are now recognized as neurological in character and very likely cholera, cancer, phthisis, diabetes, Bright's disease, Addison's disease, and some others, will be ere long.

Neural physiology, neural pathology and neural therapeutics are receiving marked attention of late, and neural pathology bids fair to take a prominent place in the pathology of the future.

Progress in physics, chemistry, physiology, psychology, and in short, all biological sciences, opens the way to changes of views, not only in pathology, but also in therapeutics; and the position taken that most medicines given internally act through their influence on the nervous structures is well sustained. Among neurological new diseases, I call your attention to a transitory tetanic rigidity of certain muscles first described, in 1876, by Dr. Thomsen, of Schleswig, who had been subject to it all his life. The prominent symptom is a painless spasmodic rigidity of various and varying muscles coming on at the moment of executing a movement. For instance a patient closes his hand and is unable to open it; or, attempting to rise from a seat, finds himself poised in the act and unable to proceed. The diagnosis of this disease is easy, but the cause and the pathology are not well understood.

Lathyrism is a new toxic paraplegia, epidemic among the natives of the mountains of Kabylie, in Africa, during the months of March and April. The cause is the ingestion of a leguminous plant (*lathyrus cicera*), common to the country, and resorted to at certain times by the natives as food. The lateral columns of the cord seem to be mainly affected, and the symptoms are fever, pain in the back, formication and trembling, paralysis of motion and sensation, and vesical troubles, and in a later stage, contractures, twitchings and exaggerated reflexes. Cases are frequent, but few are fatal. It is hoped that this plant may be of value in the treatment of diseases of the spinal cord.

The new disease called *Beriberi* or Barbiers, or the Japanese *kak-ke*, is a disease of the peripheral nervous system, and is a subacute multiple neuritis. The characteristic symptoms of the disease are a motor and sensory paralysis of the legs with muscular atrophy, enfeebled

heart action, and in the acute and pernicious form of the disease, dyspnoea and final asphyxiation.

Katatonía is a vaso-motor affection, characterized by a paralysis of the vascular coats, and by a consequent hyperæmia of the cerebral tissues. Allochiria is a peculiar disease characterized by a perversion of sensibility, and the erroneous reference of sensory impressions to the corresponding part of the other side of the body—as tickling the sole of one foot caused retraction of the other foot, etc.

Other comparatively new diseases are polio-myelitis anterior acuta, athetosis, pseudo-hypertrophic spinal paralysis and myxædema. Hystero-epilepsy has attracted some recent attention; but it is a misnomer, for there is no epilepsy present. It is pure hysteria of a severe type and should be termed hysteria-major; the more common form being properly termed hysteria-minor.

Fifty years ago, Dr. J. R. Mitchell, of Philadelphia, held that acute, sub-acute and chronic rheumatism were diseases of the spinal cord, and evidence is accumulating to support the position; while progressive arthritis deformans has been placed among diseases of the nervous system. Certain maculæ, papulæ or ecchymoses have been observed in some cases of locomotor ataxia, and it is thought that they are intimately connected with morbid alterations of the posterior columns of the spinal cord. In an epidemic of ergotism, Tuzek found that tabes dorsalis was artificially produced by this drug in many of his patients. Passive exercise and rest as the principal remedies, even when the cause is not syphilis, are held to cure some and to relieve many of these cases of posterior spinal sclerosis.

The effect of syphilis upon the nervous system has been thoroughly studied during the last few years, and many important additions made to our knowledge of the pathology and symptomatology, which, were I to discuss to-day, would extend this paper far beyond the time allotted me. The treatment of diseases of the nervous

system has improved because of an increasing confidence in the remedial powers of nature, and because physicians discriminate better in the choice of the agents they use, giving less in quantity and paying more attention to the environment of the patient.

The surgical treatment of epilepsy by ligature of one or both of the vertebral arteries has been done in the Liverpool Workhouse Hospital many times during the last three years. The results have been very satisfactory in the first twenty-one cases operated upon by Wm. Alexander, M. D. Twelve are said to have been cured, eight were very much improved and one died in a fit two months after, having left the hospital very much better than when he entered. Several other cases have been reported by other surgeons, and the outlook is favorable for the surgical treatment of epilepsy. Static electricity has come into use in several forms of paralysis and has been successful where other forms of electricity have failed. The therapeutic action of magnets or magneto-therapy has been introduced by Dr. John Vansant and later by Dr. Bartholow. They found that when the south pole was applied to a blister it caused a momentary sharp sensation, but when the north pole was applied to the blister there was no sensation at time of contact, but after removal of the magnet the original pain remarkably decreased. Numerous experiments upon other parts of the body, upon animals and vegetables prove the influence of the magnet to be of value in the treatment of nervous diseases.

Much more has been done in the way of scientific progress in the management of nervous diseases, but its presentation at this time would make this report too long. In conclusion let me call your attention to one of the greatest works on the diseases of the nervous system that has lately been issued from the press, and it is from the brain and pen of James Ross, of London. In this work he passes in review the fundamental laws of nervous structure and function, and he shows that the whole of the intricate processes illustrates the one great law of

evolution. It is supposed by many persons that evolution has to do only with the development of animal life, with what is commonly called Darwinism. But those of you who are familiar with Herbert Spencer's system of philosophy know better. Ross recognizes Spencer's work as of great value and as bringing into fundamental harmony many superficially different phenomena of nervous diseases. He says:

That law may be described as a progressive integration both of structure and function, during which there is a passage from the uniform to the multiform, from the simple to the complex and from the general to the special. During the evolution of the nervous system of man the fundamental portion is first developed. The nervous system of man is at first similar to that possessed by all animals which possess a nervous system, or at any rate all those which are sufficiently elevated to possess a spinal cord; but as development proceeds, the nervous system of man becomes gradually differentiated from that of an ever increasing number of the lower animals, while still maintaining a general likeness to the nervous system of the higher animals up to the time of birth. This then constitutes the *fundamental* portion of the nervous system of man; but after birth the accessory portion, which up till this time only appears in a rudimentary condition, now undergoes progressive development, and the nervous system of man becomes gradually differentiated from that of all other animals. It will thus be seen that the fundamental portion is first developed and that the superaddition of the accessory portion greatly increases the multiformity, the complexity and the specialty of the human nervous system, and it is consequently the latest product of its evolution.

Law of Dissolution.—We must now proceed to regard the phenomena of the structure and function of the nervous system from a new and opposite standpoint. We must watch the cells lose their processes and from the multiformity of the caudate cells with numerous processes pass to the uniformity of the round cells destitute of processes; we must observe the fibres losing their medullary sheath, then their elastic sheath and finally the axis-cylinder itself becoming disorganized so that the nervous tissue gradually gives place to a simple and uniform connective tissue; we must observe accompanying this process a corresponding loss of function, in which the complex movements that characterize health become difficult or impossible; in one word, we must trace the records of a process in which the progressive integration, during which the phenomena of structure and function, instead of passing from the uniform to the multiform, from the simple to the complex, and from the general to the special, manifest a reverse tendency of passing from the multiform to the uniform, from the complex to the simple and from the special to the general. The law which governs this process is the law of dissolution, and it is the great law which regulates the phenomena of disease of the nervous system, just as evolution is the great law which regulates its growth and development.

It is scarcely necessary to add that the phenomena of evolution manifested in the growth and development of the organism are exceedingly gradual and continuous, and consequently the operation of the law of evolution can very readily be traced. Disease being on the other hand often sudden and violent in its onset, striking at times at the fundamental, at other times at the accessory portions of the nervous system; now producing its baneful influence at one stroke, again acting fitfully and only on rare occasions in a gradual and progressive manner; it may be inferred that the operation of the law of dissolution can never be so clearly traced amongst morbid phenomena as that of evolution in the development of the organism. Nevertheless, there are some diseases of the nervous system which are gradual in their invasion and progressive in their course, and in them the operation of the law is clearly visible; and it is astonishing how glimpses of the law may be obtained, even when the disease is sudden in its onset and rapid in its progress. One important corollary may be drawn from what has been said: that as the *accessory* portion of the nervous system is the last to be developed, it is the portion which is most liable to become diseased. Several reasons might be given why this should be the case, but it will suffice at present to say that the accessory portion, from the late period of its development, is less stable than the fundamental portion, and that its necessarily frail structure will render it more liable to suffer both from accident and the inroads of disease.

The appreciation of the truth of the great law of evolution and the application of it, in the study of disease of the nervous system, is to my mind one of the grandest steps of progress recently made in our profession.

Aphasia and Other Forms of Loss of Speech in Brain Disease.

By EDWARD C. MANN, M. D., New York.

APHASIA is a condition in which a patient can think and can understand language, while he has no power to express himself, either by speaking or reading. He can *think*, because the cortical gray matter is comparatively uninjured, but the thought cannot resolve itself into speech or language because "the first part of the path, along which the motor stimulus would have to pass in order to incite the necessary combined muscular movements, is broken up or damaged."

Amnesia is a state in which there is an inability on the part of the patient to recall words, and the power of thought is also impaired.

Aphemia is a condition in which the patient can think and write, but cannot speak.

Agraphia is a condition in which the patient can think and speak, but cannot write.

Dr. Popham, Prof. Lordat, Dr. Marc Dax, Dr. Osborne, M. Broca, Trousseau, Dr. Alex. Robertson, Dr. Wm. Ogle, Dr. Hughlings Jackson, Dr. Dunn, Dr. Seguin, Dr. Hughes and Dr. H. Charlton Bastian have all written on loss of speech in brain disease—most ably and exhaustively.

Aphasia is most frequently caused, probably, by plugging of the middle cerebral artery on the left side by an embolus derived from valvular disease of the heart. Aphasia may also be produced by congestion, hemorrhage or tumors of the brain. An aphasic patient can perfectly understand what another person says to him, and can follow up a train of thoughts consecutively as when they are read aloud to. Dr. Bastian says of these cases that :

¶We presume that the afferent fibers connecting the auditory centers

of the medulla with the auditory perceptive centers of the cerebral hemisphere, and also these latter centers themselves are intact, so that the spoken sounds revive their accustomed impressions in the hemisphere, these being perceived as words symbolic of things or ideas, which, being duly appreciated by the individual as they are conjoined up, suggest to him the thoughts which they are intended to convey.

In certain severe cases of aphasia where the patient either does not gather at all or with difficulty and imperfectly the import of words when he is spoken to, although he can be made to understand with great readiness by signs and gestures, Dr. Bastian says:

Must we not suppose that in such a condition, either the communication of the afferent fibers with the auditory perceptive centers is cut off, or that this center itself, in which the sounds of words are habitually discriminated and associated with the things to which they refer, is more or less injured? In either of these cases, though the sound is not appreciated as a *word* having its definite meaning, we must not expect that there would be deafness; the sound would be still heard as a *mere sound*, only it does not call up that superadded intellectual discrimination, by the ingrafting of which upon it, it can alone be made to serve as a symbol of thought. Hence the individual does not adequately comprehend when spoken to, though he may be quite capable of receiving and appreciating fully the import of signs and gestures, which make their impression upon his visual perceptive centers.

If in cerebral hemorrhage the lesion involves convolutions near the corpus striatum, and notably the left, there is, according to the size and exact position of the lesion, more or less defect of speech or complete aphasia. We may also have an epileptic aphasia, where the patient loses speech without losing consciousness. Dr. J. Hughlings Jackson thinks that epileptic aphasia most often occurs when the fit begins on the *right* side of the *face and tongue*, and may be observed in cases where the spasm is limited to the right cheek and tongue.

Aphasia may follow infantile convulsions and may be permanent. Dr. J. Hughlings Jackson describes such children as being spiteful, vicious and having uncontrollable tempers. Dr. Jackson says:

I do not know how it is that there is loss of speech after some convulsions and not after others. It is not, I believe, the result of the convulsion,

but is another result of the disease in the brain, be it what it may, which gives rise to or permits the convulsion.

Aphasia in rare cases may be noticed in abscess of the brain. It may also be associated with a limited facial palsy as a premonitory symptom of cerebral hemorrhage, or there may be amnesic defect of speech only. Occasionally we meet with a case of traumatic aphasia, but very rarely. The following interesting case was recorded in the *British Medical Journal*, by the patient himself :

When about twenty years of age, being incited by exaggerated descriptions of the genial climate and fertile soil of the western states of America, I emigrated from Scotland to those parts; and having purchased land, began with the other pioneers of civilization to cut down the forest and cultivate the land. Having brought in the course of three years, a considerable space of land under cultivation, I was enabled to let as a favor to Wilson, a man with a family who had recently come to that quarter, half of a field for the purpose of raising wheat, retaining the other half for my own use. When the wheat harvest came (about the middle of July) I hired two men (Vert and his son) to cut down my half of the field; but when they were thus employed, Wilson and his family came and began to cut, insisting that half of the wheat of the whole field was his, and not what grew on half of it. High words arose, but through the intervention of Vert it was agreed to refer the matter to the man who sowed the wheat when he returned towards evening, and that in the meanwhile each party should begin to reap on opposite sides of the field. Accordingly, Vert, putting aside with his hands some very tall rye, was proceeding towards the house, I following close after; when, as it were, a flash of lightning passed before my eyes, and I became on the instant unconscious. On recovering my faculties (which I thought I did immediately, although as I was afterwards informed, I lay senseless for a space of ten minutes,) I was sitting with my hands full of blood, which continued to trickle from my head. On looking round I saw Wilson at some distance behind with a club in his hands, and Vert amongst the rye some paces in advance, and became immediately aware of what had happened. As I perceived that Vert was terrified, I attempted to say

something for his encouragement, but to my surprise and horror, I found that I could utter only unintelligible sounds. I remained sitting for some time, not from inability to rise, but from amazement, making repeated attempts to speak. At length, having taken Vert's arm, I went to my house at about two hundred yards distance and sat down, hoping that in a short time I should recover the faculty of speech; but finding I was deceived in this respect, I determined to call in the only medical practitioner in the district, who lived at the distance of about three miles. Accordingly, having intimated to Vert by signal to hand me writing materials, I took a sheet of note-paper for the purpose of writing the doctor, with whom I was intimate, that I wished his attendance. But here a new surprise awaited me; for having dipped the pen into the ink, I found that I could not express my desire by any words whatever. I attempted to write the word "doctor," but could proceed no further than the initial "D." However, by showing that letter to Vert, and pointing in the direction in which the doctor lived and other pantomimic gestures, I made him understand my desire; and he accordingly sent his son for the medical man, after which I went to bed and soon fell into what appeared to be a placid sleep, out of which I was with some difficulty aroused on the doctor's arrival. On perceiving the doctor I immediately extended my right arm and drew up my shirt sleeve, in reply to which signal the doctor said, "you wish to be bled, which is exactly what is required." After failing to draw blood from any vein in the right arm, he had recourse to the left and succeeded; dark blood flowing very slowly at first, but afterwards in a full stream. To what extent he bled me I cannot exactly say, but several who saw the quantity said that they had never seen so much drawn from any man. For the first six days and nights I layed on my back almost motionless, having no pain nor uneasiness nor sensation of hunger or thirst; and, although I was observant of all that was said and done in my presence, I distinguished the lapse of time only by the light of day and the darkness of night. I did not sleep during all this time, but on the morning of the seventh day I awoke apparently from a quiet sleep, and as the fringe of the bed-quilt tickled my upper lip, I attempted to remove it with my right hand, but to my surprise my hand was not obedient to my will. I discovered also that the nerves

of sensation were completely paralyzed from the points of the fingers to the shoulder. Sensation was also gone in my right leg and foot. On discovering this I attempted to pray mentally, but failed, not from any confusion of ideas, but from some inexplicable cause—possibly from the want of words to convey my requests. But what seems most mysterious and almost incredible, while I was in this state I perfectly understood what was spoken by others. For some days, I cannot exactly say how long, after this time my mind was in a state of apathy as to what was passing, and I was with difficulty induced to take medicine or sustenance; my bowels at the same time being torpid, and the action of the kidneys being in a great measure suppressed. At length I began gradually to recover my general health, the inability to speak or write still remaining. I rapidly recovered the use of my right arm and hand. The nerves of sensation remained many paralyzed, but recovered gradually their function from the shoulder down towards the fingers, in which it has never fully returned. When I was able to get out of bed, being desirous to regain the use of my vocal organs, I sat for hours at a time anxiously attempting to repeat the first letter of the alphabet. After numerous attempts I succeeded in uttering the sound A, which, accomplished, I could speak it any number of times without difficulty, but on attempting to pronounce B, I repeated the sound A. At last, having succeeded with B, I had as great difficulty in returning to A. These repeated and anxious efforts at pronunciation caused my ignorant attendants to think I had become perfectly idiotic, and they expressed themselves accordingly in my presence. I being irritable or rather irascible from weakness, my assaults upon them when they had made such remarks confirmed them in their opinion, but as they found that I was quite acute in matters of business and could calculate, they at last concluded that I was "more rogue than fool." After a while I was able to repeat the first five or six letters of the alphabet in succession, where my memory failed me as to the order in which the letters succeed each other. Notwithstanding all my efforts to speak, my recovery was very slow. I could converse with none but a man (Davis) who had been in my employ previously and my constant attendant after the accident, to whom I communicated my ideas and desires, partly by gestures and partly by my attempts at speech. So much

was this the case that at the trial of Wilson, which occurred nearly three months after my injury, he had to be sworn as my interpreter.

My examination in court, on account of this was so grotesque, and at the same time so interesting to the members of the law that it was continued till I was quite exhausted; and it effected the audience as laughable or deplorable, according to their different bent of minds. At this time I understood what others said, by taking the words of every clause collectively; but when I attempted to analyze it into its constituent words, I utterly failed. For instance, Davis having replied to an interrogatory, "I don't know," rapidly, as if he had said *I don know*; and it was somewhat remarkable that, in my attempts to speak, it was not a single word that I pronounced intelligibly, but a short sentence. Several persons were sitting in my company disputing as to the number of dollars in the English pound; at last they asked me to settle the question by representing the number in figures; but, as the dollar is not a British coin, I could not do this, which made them conclude that I had lost all knowledge of such matters. On perceiving this I became angry and exclaimed "no dollars there." This surprised all present so much that they started to their feet and besought me to repeat what I said; but this I could not do, although I made several efforts, and it was months afterwards before I could utter an intelligible sentence. Of course, I could not read, nor did attempt it for a long while; but I understood what was read to me by others. Through perseverance and the partial recovery of my faculties, in the course of a year, I was able to return to Scotland alone; the strangers with whom I met on the way conceiving, some of them, that I was a foreigner who could speak the English language very imperfectly and others that I had a natural impediment in speech.

The patient was injured when twenty-three years of age, and at the age of sixty-four still spoke with hesitancy and especially so if agitated. He was often at a loss for the right word, but generally found it if allowed time. There was both an irregularity and a depression appreciable to touch over the seat of his old injury, about an inch above the left ear and close to the squamous suture. The power of motion was all but restored in his right arm; but the

sensation was still so defective that he would drop his knife at dinner, if not watched by the eye, and this because he did not feel it in his grasp.

Dr. J. P. Bramwell, of Perth, who saw this case says respecting it:

It is a curious circumstance that paralysis of the right arm and leg did not come on for six days after the accident. One would have expected *a priori*, that it would have been contemporaneous with the aphasia, seeing that the case was a traumatic one; but in point of fact, we find it was not so. It is not easy to offer a solution of this strange phenomenon. Probably, at first, the lesion was all but confined to the posterior portion of the cerebral lobe, but that afterwards the diseased action set up by the injury penetrated to the corpus striatum, the pons Varolii and the optic thalami. Such an hypothesis, at least, would account for the order of these phenomena as they presented themselves before us in this case—first aphasia and then paralysis.

In Aphasia we have seen that the loss of speech is due to an impediment to the passage of the motor stimulus, which translates itself into articulate speech, while in amnesia the power of voluntary recall or recollection of words is wanting. The case of a young artillery officer, comes under the latter head, who was able to articulate distinctly any words which either occurred to him spontaneously or when they were slowly and loudly repeated to him. He strenuously exerted himself to speak, but an unintelligible kind of murmur was all that could be heard. The effort he made was violent and terminated with a deep sigh. On the other hand, he could read aloud with facility. This was a decided amnesic defect. He could utter a word which came to him spontaneously and he could repeat words uttered before him; but he could not himself voluntarily revive the sounds of words in his auditory perceptive center, so as to be able to recollect them and speak them. Similarly, with a book before his eyes, visual impressions were recognized; these revived their corresponding auditory impressions and the volitional channel between this center and the corpus striatum being uninjured, the motor stimulus passed over for the articulation

of the revived words. Some aphasics can read to themselves and some cannot; and, also, if the patient cannot write a word of his own volition, he will copy for us what we write for him or can write from a printed copy. The *amnesic* patient has good power of utterance, but through his inability to recall the words he wishes to use, he is debarred from conversing. He cannot read, as a rule—although his eyesight is good—and he cannot write.

Typical cases of *aphemia* are very rare, where patients recovering from an attack of unconsciousness are found by their friends to be speechless and to remain so for weeks and months, although their other faculties seem to be intact. Their understanding is good, they can read, they can write and the lips and tongue are not at all paralyzed. It follows epileptic or apoplectic attacks and is due probably to some lesion or shock to the co-ordinating center of speech in the brain, or to the communication being shut off between it and the intellectual center of language above.

Amnesia is due generally to lesion of the left cerebral hemisphere and that part of it supplied by the left middle cerebral artery, notably, the corpus striatum, island of Reil and posterior third of the third frontal convolution. We are naturally led to suppose, therefore, that it is in this part of the brain that words have to be revived and that the process of recollection takes place.

There is a last form of loss of speech associated with difficulty of deglutition which depends upon impaired ability to articulate. If there is any articulation at all, it is thick and indistinct. Slight difficulties of articulation may pass off entirely in a few days or they may last for a long time, particularly when the lesion is in the pons Varolii. An interesting case, happening in Dr. Wilk's practice, is reported by Dr. Bastian. There was disease of the pons and complete loss of speech:

A lady fell into a so-called fit during dinner. She was taken up speechless and put to bed. She lay with her mouth open and with the saliva running from it, and she

was unable to swallow or to speak. There appeared to be no paralysis of her limbs, and from her gestures and expressions there was every reason to believe that she was perfectly sensible. She was soon able to leave her bed and recovered her usual health, but *she never lost the paralysis of the tongue or palate.* She wrote down all her wants on a slate. *She swallowed with difficulty* and the saliva was continually flowing from her mouth; but she was able to walk three or four miles a day and was accustomed to join in a game of cards. About two years after the first attack she had another apoplectic fit, in which she died. On post-mortem examination, there was found to be a great amount of disease of the cerebral vessels; much blood, which had escaped from the pons was effused at the base. Within the pons there was an old brownish cyst. The central ganglia were healthy.

Dr. V. V. Adamson, of Holton, Kansas, records in the Leavenworth, Kansas, *Medical Herald* the following case of aphasia:

Was called to see a Mr. Joseph S., aged about thirty-two years; found him a stout able-bodied German, of marked nervo-bilious temperament; is a farmer by profession and has never suffered from any serious illness heretofore; his ancestors have, as a rule, been healthy and subject to no hereditary disease; yet a brother and one of his parents died of a disease simulating tuberculosis.

The symptoms presenting were as follows: Skin moist and of natural temperature, except over the left occipito-temporal region, and extending as far forward as the median line of the superciliary ridge; it was here a few degrees above the healthy standard; tongue coated with a heavy brown fur, except the tip; bowels very much constipated; pulse fifty-two, full, soft and compressible; respiration slow and principally abdominal; eyes injected; pupils active under the stimulus of light; hearing dull; complains of intense pain in the region of the middle lobe of left hemisphere of cerebrum, is slightly comatose, and unable to answer questions in a satisfactory manner.

From his wife I learned that for the last three weeks he had been suffering from a mild form of intermittent fever, of the quotidian type, yet he had continued to labor hard each day, in a stone quarry near by, until three days previous to my seeing him; was attacked with

severe intercranial pain whilst lifting a heavy stone; this at once sent him to the house and to bed, and from that time to the present he had suffered from this hard headache, and that it was greatly aggravated each afternoon.

14th, A. M. Cephalalgia continues and is almost unendurable; hearing slightly improved; well-marked aphasia has now presented itself, he being unable to communicate his ideas either orally or written. Sulphate of quinia and morphia ordered.

15th, A. M. Less pain; pulse fifty and stronger; paralysis of left genio-hyo-glossus. Iodide of potassium added to quinia and morphia.

16th, A. M. Improving. Quininism apparent; strychnia substituted.

19th, A. M. Cephalalgia, paralysis and aphasia continues as when last described. I should have mentioned that anorexia had been present from the beginning. The iodide having produced irritability of the bowels, diminish the quantity given to grs. v. every six hours. He is losing strength.

20th, M. Continues to fail. Continue treatment.

21st. Failing. 22nd. Finding him still going down, discontinue strychnia and resume quinia, grs. v, every two hours, with morphia sufficient to control the intense pain.

23rd. Bears quinia well; evidently improving; pulse sixty and regular; has slept some; tongue cleaning and moist.

24th. Appetite returning; tongue still cleaning; intellect clearing up; is fully quinized; strength improving. Continue treatment.

25th. Tongue clean; bowels regular; paralysis of tongue has disappeared; calls frequently for something to eat (by signs). Continue treatment.

26th. Complains of but slight pain in his head; aphasia growing less; in every other way he is rapidly improving. No change in the treatment.

27th. Find him up and about the house; no cephalalgia whatever; has been trying to read the news, but gave me to understand that it confused his ideas, and could not comprehend what he read; forbid any further attempt at reading for the time being; withhold morphia; continue quinia and the iodide.

30th. Has greatly improved, except in speech; is now perfectly rational upon all subjects; is beginning to count the cost of his sickness; gave me to understand that he

considered himself well, or would be, if he could only talk or write, so as to be fully understood, and that from this time on I could treat him by prescribing at the office, and save him the expense of frequent professional visits. Withdraw all remedies, save tonic portions of quinia three times a day; discharge him with instructions to report in person once or twice a week.

Nov. 3rd. Was summoned in hot haste to see Mr. S., whom the messenger reports dead or dying. On my arrival find him just coming out of a congestive chill; attendants have used stimulants, both internally and externally, with good effect; resume the inevitable quinia in full doses, with the addition of pulv. capsii. off.; push it to complete quininism, which I keep up for some days. From this time on he continued to improve, and at the present time (Feb. 11th), he is conducting the affairs of his farm; the aphasia in part remaining. The most of the time it is impossible for him to call to mind proper names; he cannot tell the name of his horse that he is driving every day, his wife's or even his own name. Yet he continues with true German tenacity to chase the almighty dollar. During the latter part of November, and through the months of December and January, Mr. S. was without medication, yet his aphasia diminished in the same ratio, as compared with the time he was kept under the influence of remedies. At present he is taking bromide of potassium, grs. xxv., three times a day.

QUERY.—Was this a case of aphasia from structural lesion? If so, what was the nature of that lesion? It could not have been emboli, for there was no anæmia; no rheumatic diathesis, and no disease of the heart or arteries could be detected. Broca, Hughlings Jackson and the Daxes would tell us there was lesion of structure of the third convolution of the left anterior lobe of the cerebrum. Receiving their pathology as correct, is it not reasonable to suppose that there was rupture of an arterial branch, which resulted in the formation of a clot; and that we have the aphasia disappearing as the clot is absorbed? Or could it be that there was no lesion of structure whatever, but only one of function, having as its prime cause malarial poison, hence the regular exacerbations, the urgent demand for antiperiodics, making it a necessity to keep the patient fully quininized; and might not this excessive quininism account for the aphasia remaining, as at present it seems to be, from loss of

memory? There are many respectable practitioners who hold that if this remedy is pushed to excess, it will produce such an effect upon the mind.

Cases illustrating impairment of the power of intelligent language, in connection with disease of the nervous system.

I have drawn up the following cases from the observations by others who have written in connection with the subject of disease of the nervous system. I have as much as possible confined myself to cases in which post-mortem evidence of the change undergone by the nervous structures had been obtained.

First, cases in which the right side of the brain was the side diseased, and this alone, as determined by dissection, or assumed to have been so, according to the symptoms:

CASE I.—Benjamin B——, aged forty-eight, was admitted into St. George's Hospital on the 16th of October, 1861, with hemiplegia of the *left* side, the sensibility of the skin being entire. He was quite rational, and said that he had had a fit the day before. The muscles of the face unaffected; but the tongue was protruded to the left side. Later on giddiness and loss of power of sphincters supervened; and on the 22nd, though he had regained some use of the arm, his manner was confused, and his *articulation less clear*. "His manner became more weak and lachrymose," and his speech became *more indistinct*. Afterwards he rallied, so as to ask for what he wanted. Subsequently he became worse, cried a great deal, and "seemed to lose all power and will." An abscess formed on his hip; and later on he became drowsy, then unconscious, and died on the 16th of December.

After death the dura mater was found thickened, and much fluid was found in the lateral ventricles and under the arachnoid. The remains of two apoplectic clots were found in the right cerebral hemisphere: one, indicated by rusty discoloration, beneath the surface of the corpus striatum and behind its center, of the size of a horse-bean, and surrounded by soft cerebral substance; the other, anterior and external to this, between the corpus

striatum and the Sylvian fissure, was larger and also of a rusty color, the surrounding brain *not* being softened. Examined by the microscope, the smaller vessels were found to be natural; the larger ones very fatty. The large ones at the base of the brain were natural. Nodulations were found on the surface of one of the lateral ventricles, in connection with which the case was described in the *British and Foreign Medico-Chirurgical Review*, April, 1865, p. 305.

CASE 2.—A woman aged seventy-nine, complained of pain in the right side of the head, with numbness and formication of the *left* arm and leg. There was some *impediment of speech*. She became hemiplegic on the *left* side.

After death, softening of the right cerebral hemisphere was found. No other organic alteration was found. (Quoted from Copeman "On Apoplexy," p. 54.)

CASE 3.—A gentleman aged fifty, subject to attacks of giddiness and headache, attended by loss of recollection and *impaired speech*. The attacks subsequently became more permanent, and he had violent paroxysms of pain, at one time relieved by arsenic. Mania-like attacks and then epileptic seizures came on, and then attacks of stupor. He died after an apoplectic fit.

After death a large coagulum of blood was found in the substance of the right hemisphere; and the whole arterial system of the brain was found much thickened and "ossified." No other morbid appearance in the brain. (Quoted from Abercrombie's "Researches on Disease of Brain," 1834, p. 242.)

CASE 4.—A gentleman had a blow on the back of the head. Several days afterwards he had much pain at the same part, where the scalp was tender. Subsequently, along with other symptoms, he lost the use of the *left* side of the body, and *nearly all the power of speech*. He became drowsy and died.

After death a large quantity of blood was found on the posterior surface of the *right* cerebral hemisphere, which ran between the convolutions; and much serum was effused beneath the cerebral and spinal membranes generally. (Quoted from Bright's "Reports of Medical Cases," Vol. II., p. 268.)

CASE 5.—William W——, of short stature, but not of full habit, enjoyed good health until the beginning of June, 1829, when he frequently lost his sight several times

a day, so that suddenly, as he walked along the street, he was in total darkness for a few minutes. Towards the end of June he fell down unconscious, and had all the symptoms of apoplexy. Having been bled and cupped, he recovered his senses the next day; but both the arm and leg of the *left* side were completely paralyzed, and his *speech affected*. Sickness and giddiness occurred later on; for which he was again treated—purged, blistered and cupped—with relief. He recovered the use of his limbs eventually, and in the middle of September was dismissed, having no complaint but a little unsteadiness in his walk. (*Op. cit.*, Vol. II., p. 323.)

CASE 6.—A man aged twenty-five, after headache had numbness in the left arm, followed by left hemiplegia, the mouth being drawn to the left, and the tongue protruded to the same side. He did not, however, altogether lose consciousness, “but the articulation of sounds’ was lost.” Delirium and *erysipelas of the affected limb* came on and he died.

After death an abscess of the size of a chestnut was found in the right half of the tuber annulare, but passing a little beyond the median line. (Quoted by Dr. Copeman from the *Medical Times*, Vol. V., p. 60.)

CASE 7.—A woman aged thirty-two, fell down in a fit and became *speechless*. Her speech soon returned, and she went to her work next day. For a week she progressed well; and then a second fit occurred, and she again *lost her speech*. Later on weakness in the right arm and leg came on. She died after a convulsive attack.

After death two clots of blood were found in the *right* cerebral hemisphere, external to the lateral ventricle. (Quoted from Dr. Boyd’s “Contributions to the Pathology of the Brain,” in the *Edin. Med. and Surg. Journal*, Case No. 807.)

CASE 8.—Mary M., aged thirteen, was in her usual health at the beginning of May. She was sent by her mother to a shop, and on her way fell down insensible. She was found to be hemiplegic on the right side, and to have lost all articulate speech.

On admission into the Bristol Royal Infirmary, June 5th, 1866, the right hemiplegia was almost complete. She could not lift the right arm at all, nor flex the fingers and she could scarcely stand. She could not walk at all. Slight facial paralysis of right side. No paralysis of tongue. Organs of special sense unaffected. Pupils

natural. Sensation good everywhere. There was no loss of the general faculty of speech, as she could express herself fairly well by signs, and nodded or shook the head rightly. She evidently understood all that was said to her, and the expression of the face was very bright. But she could not pronounce anything except "ta" and "to," and had lost all power of saying another syllable. She had never suffered from rheumatism; had no valvular disease of the heart; and was a pale, cachectic-looking child.

June 20th. She had so far recovered as to be able to walk about and to move the arm well, but she could not clasp with the fingers. She had learned several words, as "yes," "no," "tea," "bun," &c. She seemed very bright, and read to herself with evident pleasure.

Two or three days after this her mother secretly brought her in some cheese and port wine. She became intoxicated, fell into a succession of convulsive attacks, and sank during the night.

We were only able to examine the head:—Much black discoloration along the fissure of Sylvius on the left side. Beneath this region was an old clot, partially discolored with creamy brain-tissue all round it, the softening, extending slightly into the anterior lobe, but mostly into the middle lobe, and implicating the corpus striatum, except the upper layer of it. This clot was evidently the result of a ruptured left middle cerebral artery. Just at the commencement of the fissure of Sylvius the artery was enlarged to the size of a small haricot bean, and this enlarged portion had given way. No plug was found in any of the vessels. The posterior portion of the third left frontal convolution was discolored for about one-fifth of an inch in depth, and sensibly softened over a space the size of a small walnut. The immediate cause of death was the rupture of a vessel in the left lateral ventricle, on the upper and outer side of it, just above the corpus striatum. The whole of this ventricle was full of clot, which filled all the cornua, and had found its way to a small extent into the right lateral ventricle. The rest of the brain was healthy. Considering the amount of lesion in the corpus striatum, it seems extraordinary that she should have recovered the use of the limbs so well.

CASE 9.—Wm. D., aged forty-seven; a great drunkard. Right hemiplegia, with total loss of speech, except that he utters the words "yes," "no," "pooh," "Lord-

a-mercy." These he uses indifferently to express everything; and when he is in a passion he will ejaculate "Lord-a-mercy," evidently with the idea that he is using an oath. He can, to some extent, express himself by signs; as when he can escape from his wife's surveillance he is able to get spirits from a public house, and pay for them without any assistance. He can write his own name, and understand all that goes on. He has been quite three years in this state; and although the hemiplegia is much diminished, the loss of speech is the same.

CASE 10.—John S., aged thirty-five. At ten years old he had right hemiplegia, loss of speech for three months. For six months afterwards he had to learn to speak like a little child. He has now contraction of the right wrist.

Although both these cases are still living, it is probable that they have suffered from a similar lesion to that which caused the symptoms in the first patient, especially when we view the symptoms in connection with the case quoted by S. Van der Kolk (*New Syd. Soc.*, Vol. IV., p. 165, note). "In consequence of a wound, a long splinter from the os frontis above the left eye compressed the anterior part of the left hemisphere, subsequently causing loss of speech; which faculty was completely regained after the removal of the fragment by the trepan."

Some very striking cases, mentioned by Abercrombie and Andral, show at least the connection between the symptoms of loss of speech and lesion of some portion of the left frontal convolutions.

No one can study Broca's views, nor the very excellent papers which Dr. Hughlings Jackson has written on this subject, without acknowledging that there is decided evidence in favor of the seat of the faculty of articulate speech being located in the posterior portion of the third left frontal convolution. Dr. Jackson's papers are written with so much scientific accuracy, and with so much candor and fairness, that they are models of the result of medical observation; and in a late paper he modifies his adhesion to Broca's views.

The following are exceptions to the rule:

CASE 11.—S. Van der Kolk's case. (*New Syd. Soc.*, Vol. XI.) Right hemiplegia. Partial imbecility. She had learned to speak, and made known her wants in broken language. Atrophy of left hemisphere of brain and atrophy of right side of body.

CASE 12.—Abercrombie on the Brain. (Case 37.) Right side convulsed and then paralyzed. No loss of speech. Two defined abscesses, containing six or eight ounces of pus, one behind the other, in anterior part of left hemisphere, near the surface. A small abscess in posterior portion of right hemisphere. One would imagine that these two large abscesses must have implicated more or less all the convolutions of this anterior part of the brain.

CASE 13.—Andral. (Clin. Med., Vol. V., p. 392.) No paralysis. No loss of speech. Softening of base of anterior part of left hemisphere over a space the size of a hen's egg.

CASE 14.—Andral. (P. 66.) Child, aged two. Permanent contraction of limbs, especially of right forearm. Intellect good. Speech good. The pathological appearances are thus described: "On trouva le lobe antérieur de l'hémisphère gauche comme déprimé par un sillon que remplissait une infiltration séreuse de la pie-mère. Les circonvolutions étaient refoulées en dedans, rapetissées durcies et jaunâtres: le septum lacidum n'existait point."

CASE 15.—Mary Ann C., aged seventy-one. Left hemiplegia. Speech not lost, but no words could be understood. She sank in the course of two months. Clot in middle of right hemisphere. Arteries of brain atheromatous. An exostosis, the size of a nut, from inner table of left parietal bone.

CASE 16.—Quoted by Abercrombie. (Appendix, Case 32.) Woman aged seventy-seven. Left hemiplegia. Loss of speech. Large cancerous mass in right hemisphere.

CASE 17.—Quoted by Abercrombie. (Appendix, Case 35.) Boy, aged thirteen. Left hemiplegia. Loss of speech and of memory. Tubercle, the size of an egg, and five or six smaller masses in the substance of the right hemisphere. Pus between arachnoid and pia mater. Turpid fluid in ventricles.

CASE 18.—Andral. (P. 316.) Right hemiplegia. Loss of speech. Clot in posterior lobule of left hemisphere. With reference to this case, Andral says: "If, then, a former observation, in which we have also seen loss of speech, seems to confirm the opinion which places this faculty in the anterior lobules of the hemispheres, this observation completely nullifies that opinion."

CASE 19.—Andral. (P. 322.) Woman, aged fifty-five. Right hemiplegia. Loss of voice and of speech. Extravasation in middle of left hemisphere, and softening for the space of two or three lines around it.

CASE 20.—Perhaps this case, quoted by Abercrombie, (Appendix, Case 23), should be added: Man, aged twenty-six. Severe and increasing headache. Impaired vision and dilated pupil. Paroxysms of giddiness, with blindness, loss of speech, stiffness of the limbs during the paroxysms; then double vision, violent pain in the neck, with convulsive paroxysms affecting the muscles of the neck, and drawing the head violently backwards. Two months after this he had numbness and spasmodic motions of the superior extremities. After seven or eight months he died suddenly in a fit resembling epilepsy. A hard tumor, two inches long and an inch and a half broad, was firmly attached to the tentorium, and imbedded in the posterior lobe of the left hemisphere. It contained an ounce of greenish pus, and the cerebral substance near it was softened.

CASE 21. Andral. (p. 454.) Woman, aged eighty. Loss of speech, intellect clear. No motor paralysis. A softening, the size of a large pea, just outside the posterior extremity of left corpus striatum. A softening of similar size exactly in the middle of right hemisphere.

Andral made the following remarks more than thirty years ago:

Professor Bouillard published some years ago a memoir filled with curious facts, from which he thought himself able to draw the conclusion that the formation of speech has as its instrument the anterior extremity of each hemisphere, inasmuch as he found lesion of that part whenever during life speech had been lost. But mark what our researches have shown us with reference to this question: In thirty-seven cases observed by myself, or by others, in relation to hemorrhages and other lesions, in which the alteration was situated in one or both of the anterior lobules, speech was abolished in twenty-one cases and preserved in sixteen. On the other hand, we have collected fourteen cases in which speech was abolished without any alteration of the anterior lobules. Of these fourteen cases seven were connected with disease of the middle lobes, and seven others with disease of the posterior lobes. Loss of speech is not then the necessary result of lesion of the anterior lobes; and besides, it may take place in cases where anatomy shows us no alteration in these lobes. We will add that M. Lallemand has cited a case in which no other alteration was found than softening of the white substance of the left lobe of the cerebellum; in this case the faculty of speech was completely lost. You will read also in M. Ollivier's work on the "Spinal Cord" an observation of an individual in whom one of the chief phenomena was the loss of speech, at first incomplete, and then total; in this case the meso-cephale was found softened at its interior surface to an extent equal at least to a filbert.

Professor Robert Bartholow, M. D., has said :

In regard to a case of aphasia, the subject of the lecture, so much has been said on the subject of late in the medical journals, that it is hardly necessary to say that this term means loss of the faculty of articulate language. But this definition applies in a restricted sense. When I ask this patient a question, he comprehends me, but he replies in a manner quite unintelligible. I say to him, "How long have you been in this condition?" He replies, "Hode to-de hode." Recognizing the unsuitableness of these expressions, and being unable to recollect any words, he shakes his head in a slow, sad way, that is quite touching. We find that his tongue is not paralyzed, for he protrudes it and moves it, as you see, in every direction, at my request. He forms sounds and uses phrases in his unknown language, and he utters the monosyllables "Yes" and "No," although incorrectly, for he says "yes" when he means "no," and *vice versa*. His vocal organs are, therefore, not paralyzed. This is an important fact for you to note; for if he had paralysis of the speech-forming organs, his loss of language would be easily explained. You perceive, further, that his faculties are intact; that he appreciates events about him, and reasons as well, probably, as he ever did. He has also lost the faculty of written language. He cannot write; neither is he able to read the printed character. He sees them, but they convey no information to his mind. Dr. Bartholow has at the present time under treatment a private patient, who has lost the faculty of written language only—in other words, he has *amnesia* of written language. Strange to say he can write a note, but is unable in a short time after to read it. The writing is merely an automatic act. He cannot read. His books, his newspapers, his papers, are as blank pages to him. He sees the characters, but they convey no meaning to his mind. Yet he converses well, and although often at a loss for names of persons and things, his command of language is quite extensive. Thus you see, we have *amnesia* of verbal language, *amnesia* of written language, and we may also have *amnesia* of sign language or gesture. The three may be combined, or may exist independently, as in cases referred to. In a perfect case of aphasia, the faculties of spoken, written and sign language will be abolished. This patient before us has *amnesia* of spoken and written language, but not of signs. On the contrary, we find that he expresses his thoughts quite freely by significant gestures, and indeed, so readily does he resort to sign to make replies to questions, that this fact indicates the nature of his disability. He has also right hemiplegia; but it is paralysis with rigidity. The fingers are flexed and the forearm bent at a right angle to the arm. The effort to extend the arm gives pain. When a single hair is seized, the patient cries out with pain. There is, therefore, cutaneous hyperæsthesia and the muscular sensibility is heightened.

The relation between right hemiplegia and aphasia, although a pretty constant one, is by no means absolute. Various instances to the contrary have been reported. The great frequency, however, of this relation, is a most interesting fact. The brain is a symmetrical organ. The apparent existence of a faculty upon one side, and not upon the other, is an exception to the "law of bilateral symmetry of the organs of relation," Mr.

Moxon has given us the most satisfactory of the numerous explanations of this fact. He affirms that education is unilateral, but the brain becomes more and more unsymmetrical with the progress of education, and that with great intellects goes unusual asymmetry. He concludes that one side of the brain operates immediately, and the other consensually in all symmetrical movements.

Do the facts which have been brought forward throw any light upon this case before us? We see that the lesion is on the left side; we have learned that this rigidity of the paralyzed parts is associated with an *irritative* lesion above the corpus striatum and optic thalamus; and as aphasia is a pre-eminent symptom, we locate the lesion in the left anterior lobe—probably involving the hinder part of the third left frontal convolution.

We have now to consider the cause of the lesion producing the symptoms in the case. Our patient is about forty years of age, and presents the aspect of robust health. He has not labored under kidney disease, and this is a material fact, for we find many cases of cerebral disease dependent upon granular degeneration of the kidneys. He has, it is supposed, drank more or less whisky, but he does not appear to be damaged by this habit. He does not present any of the evidences of cardiac disease, which, as Dr. Jackson has shown, is so common a cause of right hemiplegia. He is a painter by profession, and occupies a large part of his time in mixing paints, the most hazardous in respect to toxic effects of the employment of a painter. When he came into the house he had a distinct blue line on the gums, and a general slate-colored line of the mucous membrane. This seemed an explanation of the symptoms in this case. We know that lead has a special affinity for nervous matter.

The treatment which was pursued in this case was based upon this idea: He was ordered ten grains of the iodide of potassium three times daily. In addition to this there was injected into the paralyzed limbs one-fourth grain of strychnia. To overcome the rigidity, there was added to the injection the last few times one-ninth grain of atropia, and with a beneficial result. Under this treatment he has certainly improved.

Dr. J. C. Dalton has remarked as follows:

Aphasia takes up a topic which has excited much discussion at the hands of able writers on both sides, and the theory it propounds having been debated with varying fortunes for something like thirty or forty years. It is very certain that if we could succeed in locating in any particular part of the brain so very important and peculiar a function of mental power as that of speech, it would not only be of great moment in itself, but it would have a strong bearing upon the old doctrine of Gall and Spurzheim concerning the location of all the mental faculties in special parts of the brain. This gives the subject additional interest.

We have traced very satisfactorily and completely the history of the various attempts to localize the faculty of speech—first, in the anterior lobes of the brain; then in the third convolution of this lobe; and, finally, in the whole region supplied by the left middle cerebral

artery. It has brought out very clearly the distinction, of cardinal importance, between ataxic aphasia, dependent on inability to co-ordinate the muscles of articulation, and amnesic, or true aphasia, dependent on the loss of the mental power to remember words or to represent ideas by them. A point new to me, and of the greatest interest, is the ingenious explanation given of the habitual occurrence of aphasia as a result of lesion of the left hemisphere, taken in connection with its occasional occurrence from lesion of the right—the theory that this is analogous to right—and left-handedness, and due not to original difference in function of the two hemispheres, but to their independent action, and to the earlier and stronger development of the left, so that it comes to be used in preference to the right, and acquires its predominant functional power by this kind of education.

There is a consideration which strikes me as important in judging of the value of the very numerous cases adduced in support of the localization of the faculty of language; that is, to determine exactly what the faculty of language is. Is there any distinct mental endowment which we can designate as this faculty—that is, as the faculty of articulate speech? For there are, as it seems to me, two essential different kinds of language—one possessed by animals, sometimes even in greater perfection than by us; the other peculiar to us. There is a language altogether emotional—springing from the emotions and appealing to them—which conveys very definite information within its own sphere; this is the language of expression. When we observe the vocal sounds of a dog or cat, for example, and the postures and movements that accompany them, we know perfectly well whether the animal is pleased or angry, frightened or feeling at ease. Perhaps nearly all the emotions may be thus expressed, without articulate language, simply by the tones of the voice and the manner in which they are emitted. This language we, of course, possess in common with animals, though not to the same extent as they.

But when we come to articulate speech, that is a very different thing. The word which we employ to represent an idea is entirely an arbitrary symbol, it has nothing of the character of the object for which it stands. Articulate language, then, is a series of sounds arbitrarily determined on to represent our ideas. In order to use it, or to comprehend it, it is necessary that the memory should be very highly developed; and I am not sure but that may be all that is necessary; but the "faculty of language" may be simply a very highly developed function of memory. We know that a deficiency of memory always produces difficulty in the use of language. And the cases most interesting to us, in this point of view, are those of pure amnesic aphasia, where there is no paralysis of the muscles of voice or of articulation, but simply loss of memory of words. I think every one has felt more or less of a transient deficiency in the power of language from a momentary failure of memory. It requires no apoplexy or embolism to make us conscious that at some times we cannot command words as well as at others. The words we are most apt to forget are those expressing a rather complicated idea. We never have any difficulty in recalling words expressing ideas simple

and familiar, as *dog, cat, to-morrow, yesterday*; but those required to express the exact shade of meaning of ideas perhaps complicated, perhaps unfamiliar, as *reputed, transubstantiate, rehabilitate*, these words which now and then elude us. We loose, too, the names of unfamiliar persons or things. I suppose every one has gone up to a door, rung the bell, and then been covered with confusion at his inability to remember the name of the person he was to see; or has been telling a story, and suddenly forgotten the very word that was to give it point. I was once relating a humorous incident, the whole gist of which depended upon the contents of a bottle which a gentleman had been handling in a careless fashion, and upon his terror upon being told what he was doing. I knew, as soon as I had begun the narration, that I had forgotten the name of the liquid in the bottle, and that if I did not recall it in time my story would fall perfectly flat. I had in mind all the while the appearance and character of the liquid—an oily compound, highly explosive, and by no means to be knocked about in the rough manner I was describing; but it was only at the very instant it was wanted that the name *nitro-glycerine* came to me. We see, then, that words are forgotten by men in perfect health. I do not think that we can draw any sharp line of distinction between the failure of language in these cases and that observed in the morbid condition known as complete aphasia. When the aphasia is complete, I suspect that it is nothing but simple loss of memory.

Now, can we locate this faculty of memory, if you choose to call it such? Can we place it in the anterior lobe, or in those parts of the brain in the neighborhood of the fissure of Sylvius? We have noticed, in reviewing all the cases reported, that at first there were quite a number showing the occurrence of aphasia with injury of the anterior lobes; after a time there were others showing injury of these lobes, and even an entire destruction of them, without aphasia, and consequently the theory which located the faculty of language here had to be given up. Then, from certain cases exhibiting aphasia with lesion only of the third left frontal convolution, the faculty was located in this more limited spot; but since that time there have been many cases in which this convolution has been nearly or quite destroyed, and yet no aphasia had existed. I fully agree that these negative cases are entirely sufficient to overturn the theory, that the power of language exists exclusively in this part of the brain. But may it not be questioned whether it exists exclusively in *any* part of the brain? There is no distinct line of demarcation between any two parts of the hemispheres. We find the two opposite sides fully connected by the transverse commissure, and fibres from all parts of the anterior, middle and posterior lobes converge to form the cerebral peduncle. If we were to depend alone upon the anatomy of the fibres of the brain, I do not think we could form any *a priori* notion of the possibility of locating any faculty in any one part. I think it possible that the brain may act always as a whole, and that, if the power of language depends simply upon a highly developed faculty of memory, we may regard the memory as located in the whole brain, right and left side alike, both acting together. How, then, have we loss

of memory when a limited part alone is injured? I think that is explained by the diminution of the functional power in an organ, which acts as a whole by the injury of any part of it. Perhaps if we had as many cases of embolism of the posterior lobes as the anterior, we should have aphasia as often resulting from lesion of these lobes.

The most curious thing about aphasia is its occurrence, in such a vast preponderance of cases, in connection with hemiplegia of the right side. I think the explanation we have heard is the first which has been offered at all satisfactory—Moxon's theory of the habitual left-handedness, so to speak, of the brain. Until this was suggested, there seemed to be a good deal of force in the argument of Broca's opponents, that he gave different functional endowments to corresponding parts of an organ so symmetrical as the brain. But the new suggestion meets this very happily. There would seem to be a certain analogy between the habitual use of the left brain and that of the right hand, and yet the analogy may not be so close as it first appears. There is a mechanical necessity for using one hand or foot rather than both in many cases; and if the right happens to be originally a little the stronger, it gets the preference, and then holds it by virtue of education and habit. I think it doubtful, however, whether we can extend this analogy much further. I do not know of any reliable facts to show that we use one eye or one ear rather than the other; certainly there is no evidence that one lung, or one kidney, or other symmetrical viscus, has any precedence over its fellow, as there is no apparent necessity for it. It is questionable, therefore, whether we can credit the left half of the brain with greater functional activity than the right. But if we admit it—and it is claimed, that the left side is the earlier developed and the better nourished—may not this superior activity and efficiency afford the explanation of the fact that aphasia occurs oftenest with lesion of this side? If the left hemisphere is the stronger and the more used, it is this which will assist us the most in the use of language, as in other mental processes. Consequently, lesion of this hemisphere will be most likely to produce aphasia in all its varieties, from the simple forgetfulness of particular words to the complete form where all power of articulate expression is lost. I think it possible to explain all the facts in this way.

Although, then, many instances appear to point to the location of the faculty of speech in some part of the brain situated near the fissure of Sylvius, I doubt very much whether we can place it exclusively in so broad a defined region as this; and I am in still greater doubt whether we can locate this faculty, or any faculty, upon one side of the brain alone.

In the *Medical Times and Gazette*, Henry Carnley, M. D., London, in reporting the case of a female patient under his care, who is unable to express by words the ideas she wishes to convey, remarks:

That in the expression of words a long practice has produced such an "association" in the action of certain muscles that we as readily pronounce the word "clock" upon seeing either a clock or the word "clock"

on hearing the sound "clock," as we exactly measure the distance between the morsel on the plate and our own mouth.

Although this latter is wholly a matter of experience, and only acquired by constant practice, persons differ greatly, even in health, in this matter of association. Some orators would find it hard to write down beforehand any speech to be made, but can easily and fluently talk upon the occasion, the written symbol being inadequate to call up any association of ideas, while they can readily form such association by the sound of words. Therefore, in any cerebral disorder or injury, it is reasonable to suppose the weaker association would be lost first, so that the optical impression and association being stronger, things will be thought of as they appear, and the visual symbol remain associated when the association of sight and sound is absent. Again, it is quite possible that the sound expressed by another may recall the sight of the object such sounds represent, when the patient cannot associate the two himself, so that the idea (memory or optical impression) of the thing may not recall the sound; or again, and this more frequently, (this is the case in the patient under observation,) the muscular association of speech fails to associate itself with the sight or sound of the object. Dr. C.'s patient knows perfectly well her friends and their names, but cannot associate the two; and having expressed a wrong name, will frequently, knowing it to be wrong, endeavor to recollect the right one, and then, sighing, give it up in despair. So complete is the association and want of correct association evident, that very often, having commenced a sentence, she will complete it by another, the words of which are correctly associated, but have no connection with the previous parts of the sentence, and do not at all express what she wishes to convey, and on many occasions she has laughed heartily at the incongruity of the whole.

One author therefore suggests that it is in association simply that a large number of aphasics fail, and that such associations of the senses and muscular association will not be connected with any particular cerebral lesion, but with any that will destroy temporarily or permanently those associations which a long process of education has affected.

At the meeting of the British Association for the Advancement of Science, held at Norwich, from the 19th to 25th of August, 1868, the interest of the medical philosophers culminated in the three following papers: "The Physiology of Language," by Dr. Hughlings Jackson; "On the Seat of the Faculty of Articulate Language," by Professor Paul Broca, of Paris; and "On the Power of Utterance in Respect of its Cerebral Bearings and Causes," by Mr. R. Dunn. In reality these three papers were upon aphasia, and Professor Broca had discovered the cause in 1861. Two facts he noticed: one was that when speech was gone by aphasia, there was always some lesion of the brain; sometimes there were conditions that leave no trace of disease in the brain, but this does leave some; the other fact was that this alteration or lesion was almost always in the left hemisphere of the brain. He thought at first it was always in the left side, but it is now known to occur in the right side, perhaps once in fifty cases. It is therefore exceptional. A third fact was that the lesion of the brain involved almost invariably part of the third convolution.

He had given numerous proofs of it; first the traumatic, wherein he and others had observed the destruction of this part of the brain, and language was destroyed. This class of cases was more demonstrable than that from disease. He had seen three cases of traumatic injury on the right side, and speech continued till death. Traumatic cases, therefore, prove that the left, and not the right side affects speech when the part described is involved. Of pathological cases the lesion is almost constant on the left side; exceptions are very rare, and are of two kinds. Sometimes the lesion is on the right side, and sometimes it is neither on the right nor left, but *very near* to the third convolution on the left. He had seen it in the groove near the third convolution. In summing up, he stated that the seat of articulate language is at the posterior part of the third convolution; this convolution of the right and the left side possesses the same function; but why aphasia was produced by lesion on the left side, and not on the right, was a question still unsolved.

A very animated discussion took place.

Dr. Bateman, of Norwich, had collected seventy-five observations of aphasia, and in twenty-seven there were autopsies. In thirteen there were lesions elsewhere than in the anterior lobes; in five none at all. There were twenty-two against, and five only in favor of Professor Broca's theory.

Professor Hughes Bennett, in some lengthy remarks, expressed his belief that the left side of the brain received more blood than the right, which might possibly explain why the left side exerted such an influence upon the faculty of speech.

Sir Duncan Gibb thought it worthy of mention, that in a large number of cases of functional aphonia he had found the left side of the larynx at fault, probably, to the best of his recollection, to the extent of seventy-five per cent. In aphasia the organs of speech were not involved, as stated by Professor Bennett.

Dr. Humphry, of Cambridge, was opposed to the localization of organs in the brain; he was in favor of unity, and the structure of the brain favored that view. He confessed that he was prejudiced against the theory of Professor Broca.

Mr. Gilson and Professor Voit also made some remarks.

It must be stated that Professor Broca, in reply, combated with great ability the objections to his theory, and explained away the cases referred to by Dr. Bateman.

The subject is still open to further investigation.

Dr. Frederick Bateman, M. R. C., London, Physician to the Norfolk and Norwich Hospital, records in the *Journal of Mental Science*, for October, 1868, p. 345, the clinical history of the cases of aphasia, referred to by him in the above discussion. In a previous number of the same journal (April, 1868, p. 74), he at length critically reviews the question of the localization of the faculty of speech, as illustrated by the labors of the French, Dutch and German pathologists, as well as by those of the different branches of the Anglo-Saxon race.

CASE 22.—George C——, aged fifty-one, was admitted

in a state of unconsciousness. For a year and a half he had clipped his words, and been inarticulate. He often appeared to be drunk, when in reality he had not at all exceeded. Four months before admission he had a "fit," with numbness of the *left* side of the body, and contortion of the face; but he did not then lose consciousness. He died after an attack attended by unconsciousness. On post-mortem examination the cranial bones were found to be in a natural state, and the brain was firm and apparently healthy. The cerebral arteries at the base were atheromatous.

CASE 23.—Charles H——, aged twenty-six, was admitted into St. George's Hospital. He had had no regular "fit"; but about six days previously he had been affected by giddiness, and two days previously had lost his power of speech. Hemiplegia on the right side had followed, without any fit having occurred. On admission he was hemiplegic, could not speak, and intimated his wishes by movements of the left one. Temperature under right axilla, $103\frac{4}{10}^{\circ}$; in left one, 103° . After death it was thought that in the general white substance of the brain there was a want of firmness; but this was very uncertain. The whole of the basilar artery, and the adjoining quarter of an inch of the *right* vertebral artery, were plugged up and distended by buff-colored coagulum, which was more or less adherent. The other vessels of the brain were natural.

CASE 24.—Matthew B——, aged thirty-five, was admitted into St. George's Hospital, with renal disease. He had had "fits" and other cerebral symptoms. There was no paralysis. The speech had been noticed as being *slow* for some days, and the intellect rather obtuse. On admission he was hemiplegic on the right side; he was unintelligible, and made no attempt to speak. Later on he could understand everything; but his speech remained inarticulate. After death the ventricles of the brain were found very distended, especially the left one, which was three times larger than its fellow. Otherwise the brain was natural.*

CASE 25.—J. W——, a compositor, was under private care for pains in the head, &c. There was no paralysis. His most important symptoms were written

* I have notes of other cases in which it would seem that hemiplegia was due to extensive effusion into the cerebral ventricles. Bonetur, in his "*Sepulchretum*," pp. 369, 370, describes such.

down by himself as follows:—"From having a strong mental faculty, retentive memory, and accurate spelling of words, &c., in the printing business, I was seized one day suddenly with inaction, not being able to articulate. I remain now very absent. Can converse much better; but hesitate in finding language. Well know what I require; and can attend to the business as regards general health. Sometimes I write all sorts of inaccuracies. Once again this week was quite paralyzed in a desire to explain a matter of business at the office for upwards of half an hour. It then passed off to some extent. I am now uncertain in calculation, and am not at all like a fortnight since you left me. My frequent absence causes me thus to explain to you my case, as I feel much alarmed." The above remarks were written quite legibly, and in all respects well. I never saw this patient again so as to watch him, and cannot say how the case ended.—(Dr. Ogle.)

CASE 26.—Thomas B—, aged sixty-one, was an out-patient at St. George's Hospital, with "general paralysis" of six months' standing, which began with what was termed "thickness of speech," and frothing of the mouth in speaking. He fancied he lost things, and mistook the names of people and places. The speech was stammering, and soon became more affected and unintelligible. Great tremor of the hands and head came on. After this lost sight of him.

CASE 27.—A man aged sixty-eight was suddenly seized with loss of speech, but no weakness in the limbs. After two years his articulation was little impaired. He could move his tongue, swallow, and taste well. "His malady, therefore, appears to have been *oblivion* of words, which extended equally to writing as to speaking, but which is considerably diminished since the first attack. The faculties of his mind are in other respects good. Dr. Pavy observes of this case: "This example seems similar to what we see every day with regard to persons who understand but cannot speak Latin, French, and other languages. The sound or sight of a word immediately suggests the idea and corresponding word in English; but the converse does not take place." In connection with the above remark I would quote the following case:

CASE 28.—Dr. Rinkenbach* relates the case of a

* See Arch. Gen. 1865, Vol. II., p. 105.

soldier who spoke French and German (his native language), and who became hemiplegic on the *right* side and quite lost his speech, the movements of the tongue being quite free. At first, though he apparently comprehended all, he could only say "yes" and "no" (in German). At the end of three weeks he had recovered the memory of a great number of words, and at the end of two weeks he was able to converse so as to make those around understand him. All this was, however, in German—for he remained singularly enough, unable to reply to questions in the French language. Eventually he recovered to a great degree the power of speaking also in French. The hemiplegia persisted.

CASE 29.—A man, aged thirty-five, the subject of syphilis, and latterly of convulsive attacks affecting mainly, though not entirely, the left side of the body, was brought into the hospital on February 6th, 1862, in a convulsive seizure, but perfectly conscious. He wrote down what he wished to say, *for he was unable to speak so that people could understand him.* After the attack was over the left side of the body was found weaker than the right. More convulsive attacks came on, consciousness remaining, and he died on the 23rd. After death syphilitic disease of the cranium and dura-mater on right side was found. The brain was otherwise healthy.

CASE 30.—An unmarried woman, aged thirty, lost the use of her left side immediately after a menstrual period, and had two subsequent similar attacks. Subsequently she was the subject of "struggling fits," in which the *left* side was chiefly, if not entirely, affected, and the intellect was seriously disturbed. "Each hemiplegic attack comprised the loss of sensation and of motion of the left side, as *also affection of speech.*"

CASE 31.—John B.—, aged forty-nine, out-patient, a painter, suffering apparently from lead-poison. It was stated that his illness began with "loss of power of speech," and want of power of the limbs on the *right* side of the body. Subsequently he was unconscious for three days. When seen he was again quite conscious, but was unable to express himself quite rightly. He became very obtuse in understanding and in talking, and had convulsive attacks, in one of which he died. After death we found the *right* corpus striatum and optic thalamus broken down by extravasation of blood. Some

blood was also extravasated into the center of the pons Varolii.*

CASE 32.—James L——, aged thirty-two, was admitted on June 24th, 1863, with fracture of the third, fourth, fifth, and sixth cervical vertebræ, and almost complete severance of the spinal cord at the lower part of the cervical region.

Remained quite conscious, but *was unable to articulate*. He had neither power of movement nor any sensibility of the skin in any part below the clavicles. He died two days afterwards. Temperature in axillæ, 103°; in popliteal space, 102°. The brain was not examined.

CASE 33.—Dr. Alison, of Edinburgh, records a case of which I give the following abstract: A man, aged thirty-two, intemperate and paraplegic, had epileptic attacks, the last one resembling an apoplectic seizure. Since then his speech was imperfect; partly, perhaps, as Dr. Alison observed, "from forgetfulness of words, as well as from impeded articulation." There was no paralysis; "Though the temporal muscles act in rather an unusual manner, and would lead to the suspicion that the motor branch of the fifth nerve, or that nerve itself, near its origin, was affected. The impediment of the speech would also indicate an impaired condition of the ninth nerve, either in its course, or near its origin. To be sure, the diagnosis was not always clear between forgetfulness of language and actual physical hesitation, depending on diminished nervous power."

CASE 34.—Arthur H——, aged two years and a half, out-patient, was said to have inflammation of the brain nine months previously. For six months he had gradually been losing all power of speech and of hearing, but could quite freely move the tongue. Previously he had had a fall downstairs. No further history.

CASE 35.—Joseph S——, aged sixty-eight, was admitted into St. George's on March 30th, 1857, for the removal of a small tumor at the right side of the nose. After operation he did well until the 8th of April, when erysipelas came on. From this he recovered, and was going about the ward on the 18th. On the following day he had a kind of fit, during which, although quite sensible, he was quite unable to articulate words. He gradually

* This case is one of a series which I have collected, showing the more unusual pathological appearances in paralysis, especially lesion of the brain corresponding with the paralysis.

sank, and died after frequent convulsions. After death much recently-formed fibrine was found in the subarachnoid spaces, covering both cerebral hemispheres, and also, though to a less extent, at the base of the brain. The arteries of the brain were in some places atheromatous. The brain itself was generally softened, but otherwise natural.

CASE 36.—William M—, aged twenty-seven, was admitted, having been phthisical for eighteen months. On the night of 21st he had suddenly lost *all power of speech*, after having had an attack of vomiting and pain in the head. When admitted he was in a speechless state, but apparently understood all that was said. Indications of arachnitis came on, and preceded death, which occurred three days after admission. After death the cerebral convolutions were found flattened, and the ventricles distended, the central white parts of the brain being softened. Much soft fibrine existed beneath the arachnoid membrane, but no tubercle in any part of the brain. Tubercles existed in the lungs and mesenteric glands.

CASE 37.—Sarah T—, aged forty-two, was admitted unwilling and unable to give any account of herself. There was no indication of febrile action going on. One week previously, whilst in good health and vigor, she had suddenly lost speech, no loss of power of any part or strabismus being indicated, and she had continued in this speechless state. On the 27th she had no sleep, and the pulse was found to be 102 per minute. She became unconscious and died August 1st. After death the ventricles of the brain were found distended, and the fornix softened. Soft fibrine was found beneath the arachnoid at the base of the brain, corresponding to the third ventricle and the right Sylvian fissure. No tubercle was found in the brain, but much in the lungs.

CASE 38.—A woman, aged thirty, had had symptoms of cerebral disease, including partial impairment of memory and speech. For some time the speech continued affected, and at length she had an apoplectic attack. After death no vestige of disease could be discovered in the brain or any other organ. Case quoted by Dr. Copeman (58) from Abercrombie's work.

CASE 39.—Richard W—, aged fifty-two, out-patient, suffering from lead-poisoning. His illness began with

melancholy. His speech was difficult, and he said he had become "bothered" in bringing out his words. No paralysis noticeable. No further history.

CASE 40.—Mary L——, aged twenty, was admitted into St. George's, March 26th, 1845, with tuberculosis of most of the organs of the body. The speech was noticed as being very remarkably "slow."* She had had epileptic attacks, and had several in the hospital. She died April 9th, and after death nothing but slight congestion was found about the brain.

CASE 41.—George L——, aged thirty-eight, was admitted on January 31st, 1866, with paralysis of the left arm, of one month's duration. Subsequently there was twitching of the left side, and for a time he had the *greatest difficulty in speaking*, but afterwards could answer questions sensibly. The right pupil was smaller than the left one. The urine contained granular casts and sarcinæ. He had a convulsive fit, and subsequently died. After death the brain was found very anæmic, and the gray matter very pale, all the blood-vessels being empty. The brain was everywhere firm.

CASE 42.—Robert E——, aged thirty, out-patient, described himself as having been "bad for two or three years," owing to a sunstroke. When a boy he had had syphilis. Three weeks before attendance he had had a "fit," attended by vomiting, of several hours' duration. From this he appears to have quite recovered. When seen he had much pain in the head. The only indication of paralysis was a slight drawing of the mouth to the left side. The speech was noticeable as being remarkably *slow and measured*. Soon ceased to attend.

CASE 43.—John W——, a compositor, under my care formerly at the dispensary, had had an attack in which he quite lost consciousness, followed by tremor of the facial

* An interesting instance of *slowness* of speech in a case of hard tumor of the anterior lobe of the right cerebral hemisphere is related by Dr. Mesnet in the "Archives Gênerales de Mèd." for May, 1862, p. 513. The intellect was seriously affected. "Les rêsponses sont lentes, mais justes, quoiqu'il laisse toujours un certain intervalle entre le moment de la question et celui de la rêsponse." The words, however, always responded to the idea which the patient wished to express. The case is recorded in connection with epilepsy and certain peculiar circular movements to which he was subject. This excessive slowness of speech, unattended by any want of mental apprehension, has often been noticed in connection with other symptoms in a variety of cerebral affections. I find it noticed by Dr. Boyd in a case of cancer of the dura mater, covering the outer and upper part of the *left* side of the brain, affecting the brain-substance (see No. 784 of his cases, before quoted). It is also noticed in one of our hospital cases, one of serous effusion into the cerebral ventricles, with paralysis of all the limbs.

muscles and occasional double sight. Subsequently he went out of London for some weeks, and when he returned it was noticed that he *clipped his words*. He thought that he had bitten his tongue. This was now noticeable about his speech—that he could not, as he said, “collect his mind quickly enough to speak when necessary.” No further history.

CASE 44.—A needlewoman, also a dispensary patient, was evidently suffering from severe cerebral mischief, had attacks of vomiting, and was at times *unable to speak* for half an hour, the memory and mind being, notwithstanding, at that time apparently very good. No positive indication of paralysis existed; but the arms were complained of as being often cold. She continued under care for some time, during which she was seized with *loss of speech*, lasting for twenty minutes, excepting so far as to say “No, no.” Her memory, chiefly of familiar places, became at times effaced. No further notes of the case.

CASE 45.—Frederick C——, an out-patient at the hospital, aged thirteen, was in manner usually “babyish,” with large pupils and a staring look, having the right arm longer than the other one. He was quite able to understand what was said, but could not talk beyond barely answering questions, saying “Yes” or “No.” Eventually he became mischievous in habits. At a later period the left shoulder and arm diminished in power. Then lost sight of him.

CASE 46.—A boy, aged two years and nine months, an out-patient, and very irritable, had had many fits, in which he lost consciousness. When he was brought to the hospital he was quite intelligent, but never could be made to speak, though he would make all efforts with his mouth and tongue, whose movements were quite free, so as to do so. He remained under care for a short time. No paralysis existed.

CASE 47.—Abraham S——, aged thirty-nine, a coachman, out of work for six months, became an out-patient with pain at the vertex of the head, which came on the day before. He stated that he had “lost his speech” entirely three months previously, but regained it. When seen, the tongue was tremulous, and there was stammering and stuttering of most of his words. There had never been any loss of power of any of the limbs.

CASE 48.—Sarah B——, aged fifty-four, became an out-patient, with pain in the right side of the head. The sight

of the right eye was gone, owing to disease of the eyeball, which was constantly oscillating in its movements. She stammered whenever she spoke, and, as she observed, was "unable to pronounce *certain* words." Among other mis-pronunciations, she always said "eskwith" instead of "quite." She soon ceased to attend.

CASE 49.—H. S——, aged thirty-seven, was an out-patient, with general paralysis of the insane. He had two or three convulsive attacks, and his speech had become *slow and hesitating*. Tremulous movements of the muscles of the face, forehead and tongue existed, especially on the left side. No further history, except that when seen there was no paralysis of the limbs.

CASE 50.—William T——, aged seventy-two, an out-patient, had suffered from hemiplegia, first on one side and then on the other. He was quite intelligent, and for the most part intelligible; but at times could not pronounce his words clearly, sliding them one into another. At a later date I find it noted that he often pronounced words wrongly, and that he spoke of himself as calling things "backwards like." He sometimes stuttered, especially at night-time. No further history.

CASE 51.—W. W——, an out-patient, aged twenty-two, had had an attack of partial unconsciousness some weeks before. He gradually became more conscious, and could put out the tongue when asked, but to every question never replied anything but "Yes." It was said that in a week's time he spoke much better, but still *mispronounced* words. No paralysis existed. He soon ceased to attend.

CASE 52.—Thomas W——, out-patient. Had had a fit some weeks previously. Pain across the forehead remained, and the speech was stammering, and had been so since the fit. There was no loss of power or sensibility of the skin in any part, excepting that the *left side of the face* was wanting in expression. He soon ceased to attend.

In 1868, Dr. Seguin reported fifty cases of aphasia, in forty-three of which aphasia occurred with right hemiplegia; three in which aphasia occurred with left hemiplegia; two in which aphasia occurred with double hemiplegia, and two in which aphasia occurred without hemiplegia. Trousseau, in 1865, reported 125 cases of aphasia with right hemiplegia, and ten cases of aphasia with left hemiplegia. Baillarger reported thirty cases of

aphasia with right hemiplegia, and one with left hemiplegia. Hughlings Jackson reported thirty-four cases of aphasia with right hemiplegia, and three cases with left hemiplegia. Dr. Austin Flint, Sr., reported four cases of aphasia with right hemiplegia, and the New York Hospital forty-three of aphasia with right hemiplegia, and three cases with left hemiplegia. The left anterior lobe has been found damaged 514 times in autopsies, by M. Dax, S. Dax, Bouillaud, Trousseau, Vulpian, New York Hospital, Jackson, Richardson and Prof. A. Clark. The right anterior lobe only twice. The third frontal convolution was reported damaged in aphasia nineteen times by Seguin, and he also reported three cases of aphasia with no lesion.

Finally, impairment of the power of intelligent language is due generally to lesion of that part of the left cerebral hemisphere supplied by the left middle cerebral artery; notably the corpus striatum, island of Reil, and posterior part of the third frontal convolution of the left side of the brain.

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It is only very exceptionally that a destructive lesion of the posterior part of the third right frontal convolution gives rise to any disorder of speech. The lesion will be found in the left hemisphere in nine cases out of ten of hemiplegia with aphasia. The lesion, where an autopsy is obtained, will generally be found in the third left frontal convolution or neighboring parts.

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INSANITY DEFINED.

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DEFINITION of this subject is confessedly difficult, but advancement in intimate knowledge of the varied and once obscure and unrecognized phases of insanity and other disorders of the nervous system, brings us nearer to a correct comprehension of the real nature of mental disease.

Definitions of insanity have hitherto been predicated on either the personal observation of the individual definer, or upon his theoretical conception of what ought to constitute mind deranged, as contradistinguished from mind rational, or upon both observation and conjecture.

Definitions have also often been embarrassed by hypothetical conceptions of the nature of the human mind and its operations in health.

A correct comprehension of the subject can only be satisfactorily reached by joint presentation and free discussion of all of its multiform phases, as gleaned from the experience of all alienists, and a thorough examination of the symptom data of mental derangement, with a view to reaching what is common to all of its forms and underlies all of its symptomatology.

The many definitions of this subject, more or less accurate, but none perfect, have grown out of individual, rather than collective, attempts to define this difficult subject, and the mistaken idea that it is essential to have a certain definite metaphysical conception of the nature of mind to correctly define it when it is disordered,

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whereas the real nature of mind, whether it be a force of matter or a psychical entity allied to matter as the physical substratum of its functional display, is not important.

The essential fact to a correct comprehension of insanity has been demonstrated and is beyond disproof, namely: that whatever conception we may hold as to the essential nature of mind, it is allied in all its manifestations to organism and can not in life be dissevered from it. From Cœlius Aurelianus and Celsus to Hippocrates, Broussais, Rush, and all the later reputable writers of our own time, mind deranged has been and is, allied to organism disordered.

The question now only remains unsettled, as to how and in what manner is disordered organism associated with mind deranged?

It is conceded that not the brain alone is at fault. But since Democritus made the historical dissection in the garden at Abdera, to find out if the seat of melancholia or atrabilis was in the liver, to the present, organic causative conditions of insanity have been found in the system outside of the brain, and especially in the sympathetic nervous system, as well as directly in the brain.

The older idea of the condition of insanity, after the idea of the intervention of the gods as a causative factor, was abandoned, made delusion, associated with intellectual misconception, due to subjective morbid cerebral change, the basis of insanity.

The error of that definition consisted mainly in the restrictions as to the nature of the delusive impressions; the delusion being confined to tangible, but perverted *concepts*, and usually originating in illusion or hallucination, associated with the *special senses*, whereas *all insanity consists of an illusory or hallucinatory organic impression, or concept, or perverted impulse, due to some morbid condition of the organism, deluding and misleading in its character, and wrongly influencing and affecting the conduct of the individual, either in thought or action, or both.*

Where this defect is not inherent, and does not display

itself before or during the period of the organic evolution of the individual into maturity of mind, it effects a change in his character by which he *is not only out of harmony with his environment, but is out of harmony with his natural self. But the standard of comparison in all cases of insanity cannot be the person's natural self, because in some instances insanity is natural to the individual,* because it is hereditary and evolved with the natural evolution of his organism.

The real essence of insanity is, therefore, a subjective morbid change in an organism (due either to ante-natal or post-natal conditions, but usually to both,) in the nature of deranged organic, or special, sensation or impulse. *Organic feelings mislead the mind and may prove as delusive as special-sense subjective perversions,* misleading the mind, so that it acts in a manner neither natural to the individual nor to the normal type of that individual. The standard of comparison in insanity can not always be self, but the normal self-type before the morbid ancestral departure.

The so-called delusional insanities, because they reveal morbid mental action associated with subjective mistaken concepts or perceptions, or pure intellectual delusions founded on illusion or hallucination of the special senses, are not the only forms of delusional insanity which should be recognized in psychiatry. Many other subjective sensations which are at the foundation of the morbid egotism and impulses of insanity are equally delusive, such as the exaggerated muscular sense or feeling of strength, or *vice versa*, hyperæsthetic or anæsthetic and motor subjective illusory conditions, and those undefined perversions of feeling displayed in melancholia and megalomania and suicidal and homicidal impulses, as well as the klepto, pyromanical, nymphomaniacal and yet unnamed morbidly erratic feelings which mislead the judgment and conduct of the insane. The organic feelings are as delusive as the perverted special-sense perceptions and as justly entitled to recognition, when

perverted and delusive in their nature and influence on mind.

The organic conditions of the emotional forms of insanity, as of religious exaltation and insane enthusiasm and the condition of the nervous system, in fact, in all the psycho-sensory forms of mental derangement, under which should be included the moral insanity of Prichard, is in a sense delusional to the individual, and so modifies mental conduct, though not delusional in the hitherto recognized sense.

The basis of insanity, therefore, is a delusive feeling or impulse, probably always an underlying perverted feeling, special or general, dependent upon morbid organic conditions, and impressing itself on the conduct or character of the person affected by it.

Definitions of insanity describing a departure from natural habits of thought, feeling or conduct, are correct descriptions of the non-hereditary and most common forms of insanity; but the essential condition is *the changing and misleading subjective impressions of the insane person, coupled with the resultant change of conduct or of reasoning, or both.*

Delusion, therefore, notwithstanding the antiquity of the criterion, is not so bad a test of insanity after all, if we no longer unwarrantably restrict its meaning to perverted intellectual concepts, and the old-time special-sense delusions restricted to the five senses, but extend its meaning to *any subjective morbid condition of the nervous system which misleads the mind or conduct.* This latter phrase defines the writer's conception of a delusion; and as such delusive, subjective morbid states of the organism are at the foundation of all insanity, it is the abnormal condition of the organism which deranges the normal display of psychical function, and causes the departure from what we recognize in the individual, or in the healthy members of his family, or in mankind in general, as natural healthy mentality. The victim of insanity is misled and perverted in the exercise of his

psychic powers by conditions of the system induced by disease, either primarily affecting the intellectual faculties and disturbing the normal self-conscious relation to surroundings—usually first affecting the organic feelings, and secondarily influencing the reasoning powers—so that, but for this degree of disease, the latter might act correctly, and the reason becomes under the dominion of the dominant morbid feeling, either a perverted or an abeyant servitor. Sometimes, however, the reason seems first affected, and delusive concepts appear to precede the morbid change of feeling or action.

Alienism has many symptomatic data, because of the many varieties of insanity and the many-sided observations of the disease, but all of the data of mental alienation may be formulated in one proposition, viz: *morbid delusive conception or perception of subjective origin, causing change of mental character as compared with former self, or normal ancestral type* through organic conditions originating in disease within the system, external motives playing but a secondary part when they influence at all the mental conduct. Change of character is the ultimate symptomatic expression of insanity; change of mental conduct, the immediate. And repetitions of conduct, make character.

Change of function is the symptomatic expression of *all* disease, to which *mental* disease offers no exception; and, obeying the laws of hereditary transmission, it may, in its hereditary forms, exhibit only an abnormal aptitude, requiring an additional excitant factor to develop it into active morbid expression; or the inborn defect may be so great as to require only the natural organic evolution of growth to reveal it, or still greater, it may require not even this to unfold it, but may display itself in states of organic retrogression and nerve instability, so extreme as to be perceptible at the earliest period when the display of mind is perceivable at all—idiocy, congenital imbecility, and infantile insanity.

These latter states are the extreme products of

pre-existing insanity, the death stages of a previous mental derangement in which psychical function has been disordered by disease. Here, however, function is not perverted, but often ceases because of the cessation of the psychical cell-life of the *cerebral substratum* of mentality. Mental disease has pre-existed and may be said to still exist, but only in the sense that necrosis following an inflammatory process may be called disease.

MORBUS THOMSENII.*

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THE morbus Thomsenii, known also under the name of tonic cramp of the voluntary muscles, and of muscular rigidity, is one of the new morbid forms which have been established by clinical investigation, but upon the nature of which much obscurity as yet obtains. It is a subject well deserving of study, as well because of the physiological and pathological significance of the phenomena which characterize it, as for the practical interest it may present to physicians, and, above all, to those of the military class. In writing this article it has been our intention not so much to give a description of the malady drawn from the observations of others, and wanting those made by ourselves, as it has been to set forth prominently the analogies which have hitherto been overlooked by observers, but which, in our opinion, present a certain importance, because they may throw a little light on the pathogeny of the affection. We have before treated of it in a memoir published by us on the subject in the *Gazetta degli Ospitali*, but still we do not deem it useless to return to it, and to bring it under the attention of the cultivators of neurology.

The more characteristic traits of this affection were first pointed out by Charles Bell, in his classic work "On the Physiological and Pathological Researches of the Nervous System" (1832). We find them well delineated afterwards in a case described by Leyden, in his "Treatise on Spinal Diseases" (1866); as well as in some observations presented in the first (1864), and the second edition (1874), of the "Treatise on Electricity," by Benedikt. But the first who gave a very accurate description of the phenomena

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characteristic of the affection, from studying its etiology and pathogeny and demonstrating the interest which it might present to practitioners, was Dr. Thomsen, to whom it happened, by great misfortune, to be himself affected with the malady, together with many other members of his family. Furthermore, to him belonged the merit of having considered the affection as a morbid entity *a se*, and not to be confounded with other pathological states. It is for these reasons that we have believed the designation "Morbus Thomsenii" appropriate, as already used by many observers who have described it, and all the more as the nature of the affection is yet very obscure.

Since the publication of Thomsen's work in 1876, additional observations on the same affection have been presented by Seeligmüller, three cases; by Strumpell, one case; by Erb, one case; by Bernhardt, one case; by Peters, one case; by Petrone, one case; by Vizioli, one case; and by Ballet and Marie, one case; in all eleven cases. Westphal gave recently, in a sitting of the Medical Society of Berlin, a summary description of Thomsen's disease, mentioning two cases observed by himself. English physicians have not published any case of it. Chapman merely summarizes the studies hitherto made on the affection in the April, 1883, number of *Brain*.

The principal and truly characteristic phenomenon of Thomsen's disease consists in a state of rigidity, a tonic contraction of the muscles, which is produced at the moment in which the patient desires to accomplish a movement, without, however, the accompaniment of any painful sensation. The volitive act meets with an obstacle to its immediate effectuation, in a spasmodic tension of the muscles, but not such as altogether to prevent contraction and movement. The muscular rigidity retards, for some seconds, the volitive motor act. The muscles do not, when they have contracted in execution of a given movement, relax immediately, as they do in ordinary conditions, but remain contracted for a longer or shorter time.

It would almost seem, as Erb justly says, that there is

an internal force which opposes their voluntary contraction, and that this force prevents the muscle, when once it has contracted, from falling back into the state of relaxation or rest.

The special disorder of the voluntary motor mechanism is manifested as well in the most complex as in the most delicate movements. It is easily understood that this must expose the patient to very strange and ridiculous difficulties. Thus, if after having been seated for some time he wishes to rise, he finds a sense of tension or spasm in his lower limbs, which, for some seconds, hinders him from attaining the erect position; if he wishes to walk, he encounters the like difficulty in taking the first steps. Peters describes the mode of walking presented by his patient, in the following words:

Whenever he determined on moving, after having rested for some time, he remained at first as if rooted to the ground, notwithstanding the visible effort made by him to overcome the obstacle; he, therefore, made some uncertain, awkward movements with his arms and legs, aiding himself with the pelvis. After making about ten paces, his walking became less staggering or uncertain, and presently more regular, and finally it could not be at all distinguished from that of a healthy person: If he laid hold of anything with his hand, he was unable to let it go at the moment his will determined; he remained for some seconds without the power to open the hand; in like manner, when he desired to seize an object, he found a sense of rigidity in the fingers, which prevented the effecting of the movement for a few seconds.

The tonic spasm may be provoked by a muscular effort: for example, the forced and rapid flexion of the fore-arm gives place to prolonged contraction of the biceps and the supinator longus, in consequence of which the patient cannot immediately stretch out the arm; the forced shutting of the fist prevents the hand from opening suddenly; an energetic movement by a member fixes it for some seconds in the assumed position.

Our Vizioli was the first to entertain the idea of studying, by means of a dynamograph ingeniously constructed by himself, with the aid of a common dynamometer and a sphygmograph of Marcy, the state of the voluntary muscular contractility, both in its initial moment

and when the muscle had already reached a certain degree of contraction, or was in the state of relaxation. In this way he was able to gather, in graphic curves, the image of the muscular phenomenon characteristic of the affection. He observed that by making the patient hold the hand open, and ordering him to close it, there passed some five seconds before the movement was accomplished; if the hand was, on the contrary, a short time closed instead of being open, that is, put into the state of flexion, the patient on being told to close it fully, was observed to do so almost immediately, without the volition being sensibly retarded. This contraction was, however, marked by a line composed of many ample oscillations (tremor oscillatorius). The patient took up from five or six to ten seconds in opening the hand, when it had been contracted, in consequence of which the relaxing of the flexor muscles was not marked in the graphic curve by an almost right line, as in the normal state, but by an oblique line with irregular oscillations. These experiments of Vizioli show very clearly that there is a retardation between the voluntary impulse and the execution of a movement.

The same morbid phenomena, but ordinarily less intense, may be verified in the muscles of the face as well as in those of the upper and lower limbs. Hence, when the patient wishes to speak, he finds that his tongue is rigid, it does not yield the required movements, and in consequence he is constrained to halt in his utterance. If he laughs he feels a sense of rigidity in the muscles of his face; when he swallows he perceives it in the pharynx.

A patient observed by Westphal found difficulty in opening his eyes, after their closure in sneezing. It frequently happened, when he opened his mouth to eat, that he was unable to close it immediately. The ocular muscles also may take part in the affection, so as to be impeded in their free movements.

In the case observed by Ballet and Marie, it was noticed that the patient, when he looked upwards, per-

ceived that his eyes were as if fixed in that position, and that during a second or two he found much difficulty in bringing them into the horizontal direction.

In the disease of Thomsen, the tonic cramp is observed exclusively in the voluntary muscles; the sphincters of the rectum and bladder present no disturbance.

One very important character which distinguishes the special mode of the behavior of the voluntary muscles in the disease of Thomson is that the tonic spasm, the rigidity of the muscles, is not a constant phenomenon. In proportion to the repetition of the movement, or in other words, in consequence of the will, the rigidity of the muscles gradually diminishes to final disappearance, so that the movements which at first were difficult, slow or heavy, become afterwards more prompt and regular, and present very little or no difference when compared with those of a normal individual.

We may therefore regard it as established, that in the disease of Thomsen there intervenes between the voluntary impulse and the execution of the movement, a lapse of time longer than the normal. But this retardation, which in the mean oscillates between one and ten seconds, is not due to a weakness of the volitive activity, which appears to be well preserved, but to the difficulty which it finds in passing into motive action, because of the rigidity of the muscles. The same obstacle that the will encounters in provoking immediately the muscular contraction, it finds when it is diverted to the relaxing of a group of muscles that have been already brought into contraction. The muscular contraction persists for a time longer than the normal.

But the tonic contraction of the muscle, somewhat prolonged, is not manifested after the voluntary motor impulse alone; electric or mechanical excitation applied to the muscles also determines the same phenomenon.

In the case of Seeligmüller the contraction provoked in the muscles by the Faradic current, was prolonged for a rather long time (five seconds and over), after the electric

excitation had been withdrawn. Moeli observed a case of Thomsen's disease in which the contraction of the rectus abdominis, produced by the Faradic current, lasted thirty seconds. In the case of Petrone, also, the muscular contraction persisted after the electric excitation; and in the first of the two observations related by Vizioli, the induced current produced energetic contractions which lasted for some seconds after the removal of the stimulus. Ballet and Marie noted in their cases the facility with which the contraction provoked by the electric current became tetanic; this persistence of the contraction was better produced when the Faradic or galvanic excitation was applied over a nerve-trunk.

Tonic contraction of muscles may also be obtained by mechanical excitation. If percussion is made over a muscle, for instance over the biceps, it is seen that it contracts strongly throughout and it remains in a state of tonic cramp, which relaxes by little and little. The curve of the contraction is, in its phase of descent, extremely slow. The Faradic and the galvanic excitability of the muscles and the nerves in general, does not differ from the normal.

In the disease of Thomsen the muscular masses appear well developed. In some cases they reach such a volume as to lead to the belief that a true hypertrophy is present. This excessive development is met with both in the lower and the upper limbs, but it usually predominates in the latter. But the muscular power does not proceed, as at first sight might be supposed, *pari passu* with the augmentation of volume presented by the muscles. Some patients assert that they are unable to exert a force greater than that of persons who have a musculature of much less volume. The muscles, when contracted, appear hard and rigid to the touch, and they stand out beneath the skin.

Passive movements are, in some cases, executed with great facility; in others they become somewhat difficult from the rigidity which they produce in the muscles, and

the limbs present a slight resistance, similar to that of the cataleptic state.

Some circumstances favor, and others diminish, the intensity of the phenomenon of tonic muscular spasm. Certain emotional states, for example those produced by unexpected pleasing or painful news, by fright, or by the knowledge of being observed, augment the morbid state and render the muscular disturbances more evident. Thomsen states that the mere turning of his thought to the disease, the mere idea of having it, determines in him such an exaggeration of the morbid phenomena as to render freedom of movements absolutely impossible. Rough impressions produce the same effect; thus, if a patient in walking, by chance strikes a stone with the point of his foot, the whole limb is instantly struck with a spasmodic state, which in favorable circumstances may extend to the whole musculature, so as to deprive the body of its equilibrium and render inevitable a falling forward or on the side. Thus, too, in the period of incubation or the prodromic stage of an acute disease, and after prolonged bodily fatigue, an augmentation of the phenomena of muscular rigidity is noticed.

On the other hand a warm temperature, the frequent repetition of movements, and moderate bodily exercise, tend to diminish the morbid phenomena. In favorable circumstances it is found that the tonic contraction is also manifested in those muscles which, in general, seem to be struck by this special morbid state in a very slight degree.

We have deemed it useful to give a particularized description of the singular manner in which the muscles behave in Thomsen's disease, and to show clearly their character and the circumstances which favor or mitigate their intensity, because the phenomenon of tonic contraction and of the state of rigidity of the voluntary muscle forms, if not in all cases, certainly in the majority of them, the unique and exclusive morbid symptom of the affections.

Ordinarily the patients do not complain of special sensations in any part of the body, nor do they present any disturbance of either the general or specific sensibility. The cutaneous and tendinous reflexes are for the most part normal.

In the case cited by Vizioli, we find mentioned an exaggeration of the tendinous reflexes; the clonus of the foot was shown to exist some times, but at other times not, whilst that of the knee was always present.

In the majority of cases the intellect has not presented any disturbance. In the family of Dr. Thomsen, however, some members exhibited, at the same time, both the tonic spasm of the muscles and symptoms of mental enfeeblement.

All the functions of vegetative life are accomplished in a manner perfectly normal. In two cases of Seeligmüller and in the case of Bernhardt, curvatures in the lumbar vertebræ were observed.

The disease of Thomsen is not often met with; in the majority of the cases the appearance of the morbid phenomena dated from infancy or from early youth.

In a few instances the affection was developed between the ages of twenty and thirty years. From the observations yet collected, it is found that the male sex is affected by it in much greater proportion than the female. It appears that the attainment of puberty does not modify the course of the disease. Hereditary influence, in some cases, has been very evident. It is not rare that two or more individuals of the same family are affected with it. Thus the patient observed by Leyden had a brother who labored under it. Seeligmüller's patient had an elder sister affected with it. Two brothers of the young patient seen by Strumpel, also presented the phenomenon of tonic contraction of the voluntary muscles. The cases of the family of Dr. Thomsen are very interesting, as in them the disease was transmitted with identical characters, through fully five generations, in a considerable number of individuals (thirty-six). It is deserving of note that some

members of this family presented nervous disturbances, and some mental disturbances with the characters of degenerative psychoses. Dr. Thomsen had five sons, four of whom were affected with muscular rigidity. The history of these cases presents to us a truly classic example of a neuropathy of similar hereditary form in one family. In the cases described by Benedikt, Erb, Bernhardt, Peters, Petrone, Vizioli and Ballet, hereditary antecedents were wanting.

As to the rest, we know not what principal and special causes concur in the development of this disease. Only in one of the observations of Benedikt and in that of Peters do we find it stated that the morbid phenomena were manifested after fright.

The pathological anatomy of the affection is completely unknown. Ponfick, Petrone, and more recently Jacuisel and Gravitz, have made microscopic examinations of muscular pieces taken from the biceps of the arm and of the leg, and have found them perfectly sound. It is to be regretted that in these researches the study of the nervous terminations has been overlooked, as these might have proved of special interest, but above all for the pathogeny of the affection.

The diagnosis of the disease is not difficult. Whatever this morbid form may have in common with spinal affections, in which an irritative state predominates, the phenomenon of the muscular tension, or the muscular rigidity, in active and passive movements, clearly distinguishes it from them, first, in the fact that this phenomenon is quasi unique and isolate, and is not ordinarily accompanied by any other spinal symptom; and next, from the spinal character presented by the muscular rigidity, that is, by manifesting itself in the inception of the voluntary movements, and up to its complete disappearance consequent on their repetition. So, also, the spasmodic tension of the muscles, and the absence of any paralytic phenomenon whatever distinguish it from the pseudo-hypertrophic paralysis, in which the muscles present an enormous

volume, owing to the hyperplasia of the connective interstitial with accumulation of fat; and they are paralyzed.

The small number of observations yet collected on this singular morbid form and the entire want of anatomopathological data, have hitherto prevented the establishment of the nature of the affection; hence, almost all the authors who have been engaged in observing the disease have adopted for its indications a purely symptomatic designation, corresponding to the fundamental and constant phenomenon which forms the keynote of the affection. It is here proper to observe that the term tonic cramp or spasm of the voluntary muscles, first adopted by Thomsen and afterwards by many others, does not appear very exact, for it does not take into account one of the essential characters of the phenomenon: that of its transitoriness, and its manifestation at the moment of inception of a volitive act. The same remark might be made respecting the term muscular rigidity used first by Bernhardt.

Now, if we set about examining the hypotheses advanced in explanation of the essential nature of the affection, we shall find that they are aimed more especially at the solution of the question, whether it is of a neuropathic or a myopathic nature.

Bernhardt was the first who held that the affection resides in the voluntary muscular system, and that it depends on a hereditary or congenital predisposition. The same opinion has been embraced by Strumpel, who proposes to indicate the affection by the name *myotonia congenita*. It does not appear to us that the arguments are sufficiently convincing for adoption of the opinion that the point of origin of the disease should be found in the muscular system.

There are some cases in which the first morbid phenomena appear after the age of twenty years, consequently we cannot, for these at least, think of a congenital anomaly of the muscular system. Were this the true cause of the muscular rigidity, we should be unable to understand

the reason why the motor disorder should not be constantly manifested in the earliest age, when the muscles are commencing to be developed. The myopathic origin of the affection occurs to us all the less propable, when we find that the structure of the muscular fibres is intact, and that the degree of excitability of the muscles under the galvanic and Faradic current does not depart, quantitatively at least, from the normal.

Further, knowing as we do, what, and how great an influence the nervous centres exercise over the nutritive and functional activity of all the organs of the body and more especially on those of motion, we do not feel disposed to admit in our case a congenital anomaly or a mode of being, special to the muscles, by referring this fact to an abnormal innervation.

The majority of observers concur in believing in the nervous origin of the affection. Thomsen, for the first, thought the seat of the disease should be found in the cerebro-spinal system, and perhaps in the cerebrum itself, in that part from which volition proceeds, but is not capable of stimulating as required, the motor nerves. He further assigned to the disease a position in close affinity with the psychoses, basing his opinion especially on the fact, that in his own family some individuals were found affected with psychical alterations, and others with spasmodic disturbances in the muscles, and considering besides that certain psychical influences, such as emotions, the idea of being watched and that of having the disease, augmented, to a very high degree, the intensity of the morbid phenomena. Seeligmüller admits the probability of its being a congenital and hereditary affection of the lateral spinal cords. Erb feels inclined to admit its seat in the medulla spinalis, and Peters believes it is an acquired spinal affection. Petrone thinks it may be admitted, with certain foundation, that the cause of the muscular rigidity consists in an anomaly of unknown nature, of the nervous system of conductivity (from the origin of the nervous fibre in the cerebral cortical substance to its termination

in the muscular fibre, *placca del Rouget*). Vizioli, who among all these observers is the one who has best and with more particularity studied the question as to the seat of Thomsen's disease, basing his views on his dynamographic researches, has been led to the conclusion that the retardation of the execution of the acts commanded by the will "does not depend on the part of the muscle being rebellious or torpid in obedience, but on that of the motor impulses not succeeding so rapidly and energetically as they do in the normal state." The voluntary conductivity finds an obstacle when it is required to evolve itself through new paths, as in the passage of the hand from the position of extension to that of flexion. Vizioli recognizes the nervous nature of Thomsen's disease; indeed, he refers it to the category of the so-called neuroses of stability, and he places it in vicinity to catalepsy, as having with this disease the same character of tension of the voluntary muscles.

For our part, we think that the solution of the question, as to the disease of Thomsen, must be waited for from ulterior studies. Up to the present, as Erb observes, we cannot formulate an exact criterion as to the seat and nature of the affection. We are, however, inclined to assign to this morbid form a neuropathic, rather than a myopathic origin, and we find an argument very favorable to this supposition, in the analogy which obtains between the characteristic phenomena of the disease and the muscular phenomena of hysterical hypnosis.

It is known that in women affected with the grand hysteria, there is manifested, in the hypnotic state, that singular phenomenon which consists in the property which the muscles have of contracting under a direct excitation, and of maintaining the contraction for a more or less long time, and with a greater or less intensity, according to the duration and intensity of the stimuli. Hence, there may be provoked, by the most simple means, diseased manifestations of the functional activity of the muscles, from simple contraction or contracture, and from

the plastic flexibility proper to catalepsy to a state of true rigidity of the muscles. In a hysteric hypnotized woman, observed in the so-called lethargic period, every muscle of the body responds to the lightest excitations, contracting but not immediately relaxing. We have in Thomsen's disease a fact identical with this: in it the mechanical and electric stimuli applied over the nerves produce contraction in the muscles, which, instead of ceasing, as in ordinary conditions on the withdrawal of the stimulus, lasts for some seconds and slowly passes off. We recall in this connection the case observed by Moeli, in which the Faradic current provoked in the rectus abdominis a contraction that lasted thirty seconds.

Analogous observations have been made by Seeligmüller, Vizioli, Petrone, etc. We ought to note the fact that in the disease of Thomsen, as well as in hysterical hypnosis, the sensibility of the muscles to the electric current presents no real difference from that of the normal state, that is to say, the degree of muscular contractibility, properly so called, is not augmented.

In some hystericals it has been seen, as I have mentioned in another work, that in the waking state the same active, voluntary movements, especially if they accompany an intense force, may provoke a prolonged contraction of the muscles, a true spasm. There is observed, for example, a tonic contraction of the orbiculari of the palpebræ, from closure of the eyes; also of the masseters from forced, rapid closure of the mouth, and of the biceps, from flexion of the forearm on the arm, etc. I have many times had the opportunity of realizing analogous phenomena in the case of hysterical hypnosis which I studied conjointly with Professor Tamburini.

Well, now, let us bear in mind that one of the essential characters of the disease of Thomsen consists in the fact that whenever the muscles contract from a voluntary impulse, their relaxation is not immediate, but takes place some time after the volitive activity has ceased to act. In this case the volitive impulse provokes, as it does in

grand hysteria, a tonic contraction of the muscles. We may, therefore, hold that between the muscular phenomena of the disease of Thomsen and those which are observed in grand hysteria in the state of vigil or hypnosis, there obtains a certain analogy, if not in the intensity, at least in the quality of them. In both affections we have the fact that a prolonged contraction is produced, a tonic spasm of the muscles, different, however, as to its intensity and duration, under the influence of the voluntary impulse, or of the stimuli applied directly over the muscles and nerves. Hence, we are not indisposed to attribute the disturbance of motility, which constitutes the disease of Thomsen, to an exaggeration of the muscular tone, in the very same way as the various functional manifestations of the muscles, which are provoked in hysterical hypnosis, are dependent on exaggerated muscular tonicity. This fact has been shown by Prof. Tamburini and myself in our work on hypnotism: In this opinion we find ourselves in accord with the distinguished Dr. Vizioli, who alludes in his work to the fact of the exaggerated muscular tonicity in the disease of Thomsen.

As the tonicity of the muscles is a phenomenon of reflex nature, and of an essentially nervous origin, it follows as a consequence, that in the disease of Thomsen there should exist a special alteration in the centers of muscular innervation, which are spread along the cerebro-spinal axis, and because of this, that state of insensible, latent contraction of the muscles in repose, which constitutes the muscular tone, becomes more intense than normal.

Perhaps this exaggerated tonicity of the muscles becomes an obstacle in the initial moment of voluntary motor-impulse, and prevents this from being immediately transformed into motion, and after the motion has taken place it hinders instant relaxation of the muscles. By frequent repetitions of the movement the voluntary force succeeds more readily in overcoming that special state of the nervous centers, on which the muscular hypertonicity

depends, and in consequence the way to execution of the movements would be found more free and expeditious.

But whilst we have reasons for believing with greater probability in the neuropathic, rather than in the myopathic origin of the affection of Thomsen, we are, I repeat, still very far from being able to establish its nature. The decision, whether the disease has its seat exclusively in the brain, or in the medulla spinalis, or whether on the contrary we have in it an affection diffused over the brain and medulla spinalis, and whether admitting the nervous origin of the motor disorders, these depend on an anomaly of the development of the centers of innervation, or indeed, on an alteration of a purely functional or organic nature of the nervous elements (processes of sclerosis, degeneration, inflammation, etc.)—(this decision) represents to us a grand unknown, to which the future may bring a response, based on new facts which will be presented to physicians.

In the commencement of this article we remarked that the disease of Thomsen might be of practical interest, but above all to military physicians. The reason of this is clear: for as the affection is presented in young men of florid aspect and robust constitution, with well-developed muscles and perfect integrity of the sensorial functions, suspicions of simulated disease may arise. This actually happened to a son of Dr. Thomsen, who, having been called into the military service, suffered greatly because he was unable to perform his military exercises. He was suspected of simulation, and the poor fellow was long forced to remain under observance before the physicians became persuaded of the real existence of his malady. The patient observed by Seeligmüller, a recruit of twenty-two years old, utterly distracted the sub-officer charged with his military instruction, because he was unable to manage his arms with the promptitude and precision desired by his teacher. He said that he felt a certain rigidity and a state of tension in the arms and in his

legs, which prevented him from executing, with speed and precision, the movements intended by him. The patient of Peters was also a soldier.

The danger of believing in simulation becomes greater in those cases in which the recruits affected are raw and uncultivated, and naturally incapable of properly describing their real state. It therefore, behooves military physicians to devote their particular attention to this special morbid form, and to bear well in mind its symptoms, so that they may avoid the erroneous judgment of simulation.

As regards the treatment of the disease of Thomsen, we must say that all the therapeutic means hitherto used in the few cases known to us, have been ineffectual. Vizioli employed the hydrate of chloral, with the view of overcoming the spasmodic state of the muscles, but he obtained no satisfactory result. Rational, methodical gymnastics might be a very opportune means for combating the morbid phenomena, especially in the outset of the affection.

From our general study of this disease, we think we may formulate the following principal conclusions:

First. The characteristic phenomenon of the disease of Thomsen consists in a tonic spasm, not painful, of the muscles, and this is produced in the moment of inception of voluntary movements. In consequence of this, there intervenes between the voluntary impulse and the execution of the movements, a length of time that ordinarily oscillates between one second and ten.

Second. The tonic spasm is produced exclusively in the voluntary muscles, whether in those of the limbs or of the trunk and the face. The rectal and vesical sphincters show no disturbance.

Third. The contraction of the voluntary muscles does not yield immediately to the volitive activity, but is prolonged somewhat longer than the normal. This is especially verified when the muscles accomplish abrupt, rapid or exaggerated movements, or are put in action by

means of electric or mechanical stimuli, applied directly over them, or over the nerves which ramify in them. Sometimes passive movements provoke a prolonged contraction of the muscles acted on.

Fourth. Repetition of the voluntary movement causes the entire cessation of the phenomenon of tonic spasm in those muscles which have executed them. Sensibility remains intact.

Fifth. There are reasons for holding with more probability that the disease of Thomsen is of a neuropathic, rather than of a myopathic nature, and that it depends on an exaggerated activity of the nervous apparatus which produces muscular tone. This doctrine is founded principally on the fact that the muscular phenomena of the disease of Thomsen have much analogy to the muscular phenomena of hysterical hypnosis, the genesis of which is precisely explained by a functional hyperactivity of the nervous centres of muscular tonicity.

Mental Contagion in Inebriety—a Psychological Study.*

By T. D. CROTHERS, M. D., Hartford, Conn.

Superintendent Walnut Lodge.

THE psychological student of to-day finds no support of the theory that many cases of inebriety begin from a so-called stage of vice. This term gives no information of the obscure beginnings of this disorder. The reign of law and the established order of events in the world are found to exist in all the phenomena of the brain and nervous system, and the highest province of science is to search out the facts, no matter what the explanations or conclusions may be.

The progress of psychological study demands the putting aside many theories and ideas of inebriety, because they are contradicted by the facts, as noticed by all observers.

It is impossible to form any accurate conception of the nature and character of inebriety, except from a full knowledge of the history of the case, stretching back to infancy and beyond; including hereditary and all the complex conditions of growth and surroundings.

No passing view of any single section of the long procession of life will reveal anything of the origin or history of the march. Every inebriate comes out of the past the result of forces and conditions, which have made him what he is, and goes down into the future giving out and taking on impressions that both fashion and change himself, and influence the surroundings. He is a more positive factor in the world than the insane, the epileptic or the paralytic.

As in physical contagion, which depends on favoring

* Read before the American Association for the Cure of Inebriates, at the fifteenth annual meeting, in Brooklyn, N. Y., May 21 and 22, 1884.

conditions of surrounding for its receptivity and growth, so inebriety often depends on the mental contagion which not only produces the disease, but the condition most favorable for its development.

The neurotic condition from which inebriety most commonly springs is more susceptible to these subtle forces, and in many cases they are as clearly factors in the causation, as traumatism and disease.

By mental contagion I wish to describe a certain influence (largely unknown) of mind over mind, resulting in pathological changes of the nerve centers, followed by inebriety. As this is the first study in this direction, nothing more than some outlines can be given.

The object will be to show that many of these obscure cases of inebriety are from the direct operation of psychical forces, cases that are so readily explained by the moralist from a theoretical stand-point, but to the general physician are mysteries.

Like the astronomer who turns his glass for the first time into a hazy fog bank of the skies, and finds it a vast ocean of worlds and suns that move on with majestic order and regularity, so this large army of apparent reckless, wicked inebriates, who are supposed to represent the vice and moral lapses of the human heart, when seen by the eye of science, all dissolve into separate atoms, controlled by heredity and environment, and each one following a definite line of march in obedience to physical laws and forces. From a grouping of a number of these obscure cases of inebriety, some very interesting facts appear. First, the presence of mental contagion as a direct causation in which a previously temperate man becomes an inebriate through the influence and contagion of another.

This contagion which infects a certain number of cases will be found to come from different classes. In describing these classes, the mental and physical condition of persons who are made inebriates by them will be apparent.

It may be stated that the inebriates who come from

mental contagion have a peculiar, susceptible-nerve organization, either inherited or acquired, and in many cases are lacking in vigor and health. Hence these forces of mind over mind are more potent, and find a ready soil for their growth and development.

The first class of inebriates who are positive sources of contagion to others, may be termed the impulsive-irregular inebriates.

Persons whose drinking varies from great extremes at times to a regular moderate use daily, who may abstain for a time and seem to have more or less control over themselves, and are noted for their positive emotional nature, and large domineering egotism with emphatic manners. These men are found in politics and centers of power, and are frequently wealthy, and often occupy important positions as professional men and leaders.

Often they are full of delusions and on the borders of mania when using alcohol, showing great brain and muscular activity. They are the heroes of apparent power, who compel adoration and admiration in the bar-room, at the club and dinner party.

Such men always gather round them a class of less positive minds, who are attracted at first from curiosity or for some selfish interest, and sooner or later become copies and reflexes. These contagious inebriates are frequently apparent types of health, and ambitious, active men of the world, but when closely studied exhibit manias of expansive, extravagant nature, that are repressed by a very slight current of events. As brokers or merchants they are centers of every new movement, with boundless confidence and hope. As professional men they are agitators and innovators. As politicians they are working on new lines and by new methods. Such men have a short career, and disappear either in hospitals, as chronic cases, or from death by intercurrent disease.

The class of persons who are made inebriates by the contagion from this form of inebriety are equally distinct.

They represent the ambitious poor, and the wealthy idler of society; often men of some genius and character, but always of weak, emotional natures. As poor ambitious boys and men, their ideals of wealth and power are changeable and guided by no fixed conceptions of the means of attaining these ends. Hence they are attracted by every current of influence which seems to promise this object. If it was stated that some end was accomplished by the excessive use of alcohol, under certain circumstances, they would be the crowd of imitators and experimenters who would attempt it at once.

Possessing unstable nerve organizations they become followers and imitators of every human embodiment of power and energy, driven by circumstances to apparently better their condition or enjoy more of life.

As wealthy idlers they are attracted by the dash and stir of the surroundings of these contagious inebriates, and, like others, are soon imitators and followers. Imbibing all their delusions with the vague notions of increased pleasure and happiness, they are devotees of the most abject character.

All these cases become inebriates from the mental contagion of a positive emphatic brain force, which forcibly projects itself upon their unstable brain organism, and retains itself through a vague delusion that is steadily increasing. The victim drinks to intoxication, and from this point pathological changes begin, and grow rapidly from the mental as well as physical influences about him.

This may be called the contagion of the nervous and emotional nature, where the motives and conduct of one are imbibed and incorporated by the other, simply taking on diseased impulses and foreign lines of conduct by a sensitive organization susceptible to these influences.

The second class of inebriates who are sources of contagion, and infect a certain number of persons about them with a similar disease, are the regular and so-called moderate drinkers.

Persons who, from some peculiar constitutional resisting

power, are able, for a long time, to use alcohol regularly, producing in themselves a mild exhilarating effect without going farther, and generally able to conceal all excessive use and continue about the same apparently for years. They are the ideal drinkers, who are held up as examples in many ways in every community.

Often they occupy places of influence and power with wealth, and are emphatic in denouncing inebriety in others, and generally condemn temperance effort.

They are the champions of the moderate use of spirits, and appear at club houses, dinners, and on all social occasions, drinking moderately, and often exhibiting intellectual brilliancy and power supposed to come from alcohol. Studied closely, they are seen to be as clearly inebriates as any other class, only the delusions of the brain and organic degenerations are masked and concealed.

The delusion of health and strength are held tenaciously and urged with emphatic earnestness, forcing conviction in less observant minds, that it is a reality.

As leaders of society they are noted as using wine and spirits freely, and yet never to be intoxicated. These men scatter a positive contagion by their examples and arguments. They seem unmistakable examples of the value of alcohol in moderate doses, and the possibility of attaining this end in all cases. They infect the previously temperate, overworked business or professional men, who adopt their ways of living and become at once inebriates.

The contagion of their inebriety makes inebriates of the physically weak, and those who are living irregular lives and suffering from neurotic troubles of various kinds,—those who are ambitious to be thought strong and to win the favor of these men, and drink as they do by the contagion of example. They infect a class of men who possess weak, unstable judgment, but are able to follow any line of action which breaks in and changes their everyday life. Such men cannot be temperate in the company of moderate drinkers, and they cannot drink moderately, hence are inebriates very soon.

The mental contagion appeals to the reason, and is enforced by the power of example, and the more prominent the man the more positive his contagious influence.

These two classes occupy a very prominent position in all large business centers, and their influence in actually building up and producing inebriates is a positive demonstrable factor that can be seen and understood.

A third class, from mental contagion, less prominent and more obscure, are noted in many cases.

They are the inebriates who grow out of personal intimacies of like characters and organizations. Persons who form attachments, adopt the views and motives of others, imbibing all their delusions, theories and notions of conduct in life. They are the conscious and unconscious imitators of each other, and are controlled by the thoughts and events which enter into each other's lives. Such intimacies are seen among students, clerks, business and professional men, and grow out of numerous complex unknown conditions. These men frequently possess a clinging emotional disposition, which is governed by the tides and events of each other's lives. They seem bound up in this way and rise, and fall with the person whom they are attached to.

Some illustrative cases will make this class better understood. Two temperate business men who had been intimately associated for twenty years, both became inebriates in this way:

One had an attack of pleurisy, with a long tedious convalescence, for which alcohol was given freely. The other, who was a constant attendant at the bedside, soon began to use spirits for some supposed debility, and both of them drank to great excess, generally together.

Two farmers had been very intimate for years and perfectly temperate. One went to the Far West, and was away for over a year, and returned a drinking man. The other, who was a pronounced temperance man, soon became an inebriate in the company of his friend. After drinking for two years with more or less severity, he moved away and reformed, and was temperate for a long

time, until his inebriate friend came in his company again ; then he relapsed. They both separated and became temperate ; then they came together and relapsed. Finally, one died, and the other is a temperance man to-day.

The third case was a more striking illustration :

Two railroad officials who had been brought up together, and were temperate, healthy men, and very intimate in all their associations. Both became inebriates. One became an inebriate from the loss of a trusted fund in a mining venture, which produced the most intense sorrow and depression of spirits. This was shared in by his friend, and they both became intoxicated. For the next two years, whenever they came together at intervals for a few weeks, both became intoxicated, and both were perfectly temperate when separate. The moment they came together old mental and physical depressions seemed to start up with great intensity, and the craving for spirits could not be resisted. One of the men traveled in Europe with a drinking party for several months, a total abstainer, and was separated from his friend over a year and never drank. On one occasion they were separated for two years and never used spirits, but both were intoxicated within two hours after meeting.

This form of mental contagion is seen in many lesser grades and conditions of life. An illustration of the first and second forms of mental contagion which I have mentioned, may be stated as follows :

A noted business man became an inebriate dating from a railroad accident, with concussion of the brain. He became an impulsive irregular drinker, entered into politics, was very energetic and prominent in the primaries. He gathered about him a large number of persons who had been previously temperate, but who drank with him, and all became chronic incurables. For many years he was the ruling spirit of a club, and a large circle of inebriates, attached to him by his personal magnetism and supposed power, all became imitators and inebriates.

This was an example of the first class of mental contagions from the egotistical, emphatic, impulsive inebriate. The following illustrates the second class :

A manufacturer of large influence, after some severe

illness, became a regular and moderate drinker. He defended his position with skill and earnestness, drinking at his own table and in public, and never seeming worse for it. His example and specious reasoning drew into his circle a large number of persons who eventually became inebriates. Nearly all his clerks and workmen followed his teachings, and all efforts to secure sober men in his employ, and keep the inebriates out, failed. Men who came into his intimate circle of acquaintance as assistants in business, nearly all suffered from inebriety, and were turned out after a time.

Here another form of mental contagion prevailed, which appealed to the reason and ignored all experience. Illustrations are very numerous of both these classes. They are simply diseased men propagating their diseased impulses on others, who are enfeebled by various causes, and peculiarly susceptible to these states of degeneration.

The neurotic enfeebled man, the strained, overworked, aspiring clerk or workman, are as readily infected by these contagions as if they were the poisonous germs of typhoid or small-pox.

Favoring conditions of soil for the nurture and growth of these diseased states are springing up in every community, and all that is needed is the exciting cause to explode into full inebriety.

As long as inebriety is considered a moral disorder, and punished as such, these forces will exist and infect every community.

The rush of civilization prepares the ground by throwing up vast numbers of neurotic worn-out men and women, and superstitious ignorance permits these infectious inebriates to go up and down the community, irrespective of all consequences or results. The following may represent some of the facts which come out prominently from any general study of inebriety.

1. The term vice, to explain obscure cases of inebriety in the early stages, is without support from any clinical study and history of cases.

2. Inebriety is often propagated from one to another

by mental contagion, given the enfeebled, unstable nerve force, in contact with the contagious inebriate, and the result, inebriety, is a certainty.

3. The groupings of these different contagious inebriates are the work of the future. The laws and forces which govern their origin and growth await discovery.

4. This paper, in a mere outline, points out the fact that inebriety is communicated by contagion, and that here, as elsewhere (no matter what the obscurity may be), the same eternal order of events and reign of law exists. The inebriate is no accident or chance result, but follows a line of causes as fixed as the planets.

The Property of Alcohol which Allures the Neurotic to Drink.

By T. L. WRIGHT, M. D., Bellefontaine, O.

IT has been the opinion of men for decades and centuries, and for aught I know, "from the beginning," that the primary and most obtrusive exhibition of the alcoholic influence affords an adequate solution of the motive which actuates the inebriate, when he invokes intoxication. It has been supposed that the stimulation of the passions, the exaggeration of the ideas, the domination and enthronement of sensuality, represent the incitements which provoke to drunkenness. It has been the conspicuous sentiment of mankind, with but few exceptions, that these incentives to inebriation were the outcome of depravity of mind and lust of flesh, which were wholly within the dominion of the will, and the capacity for restraint. The conclusion, thence, has been, almost universal, that the practice of alcoholic inebriety, in view of even its more manifest, and superficial, and circumscribed evils, is an audacious, and detestable display of the most revolting characteristics, with which the mind, and body, and soul of any human being can be imbued.

Against such sentiments, Dr. Rush, and perhaps a few others, have, in the past, made some protest. Yet the general opinion as to the moral nature of the drunkard has remained up to a very recent period, unchanged.

Latterly—within perhaps half a dozen years—there has been a questioning of the truth of the previous doctrines of mankind upon this subject. Depravity may be punished and restrained through fear; and sensuality may be rebuked, and its exhibition deterred in various ways. But it is found that punishment is of no practical avail in

abolishing intemperance; and rebukes and shame are ineffectual in diminishing drunkenness.

It is a curious and an instructive sight which greets the eye, as recent changes in the world's opinion of inebriety, come under review. At first, protests from careful minds were offered. The old notions as to the culpability of inebriety were cautiously examined. Several inquirers began to hint that, alcohol was sought after and demanded,—not for stimulation, not for exaggeration, not for ravening lust, *but for repose, for quiet, for rest.*

Here was a revolution indeed; a complete upsetting of all the antiquated ideas on the subject, and a substitution of new and rational principles. And this revolution too, was fundamental, not superficial. It permeated all the questions and responsibilities allied to intemperance; and it placed the inebriate and his surroundings—the drunkard and the general public—in new relationships altogether. The writer of this, adopting the hints and teachings of such men as Drs. Parrish, Crothers and Hughes, has for several years advocated the doctrine that the inebriate is, as a rule, a constitutional neurotic; and that his inebriety, when turned towards alcohol, was so directed in search of an escape from a morbid excitement, not an entrance into one.

Under such views, the whole subject becomes clothed with new thoughts and new principles. The primal cause of intemperance is no longer sought exclusively within the organization of the drunkard himself. The unavoidable impressions resulting in a neurotic constitution, and in inebriety, pertain, very often, to the great and controlling agencies which pervade the universe. Sometimes, it is true, a neurotic predisposition is founded originally by wounds and physical accidents. But anything which has power to strongly impress and warp the constitution, may produce a parallel result. Thus heat and cold, and the electrical conditions may superinduce inebriety. The occult powers operating in the development of the various morbid states which affect the organization of man-

kind, may work in a similar manner. Disturbances in the equilibrium of the magnetic medium, such as are not uncommon from agitations in the sun, may unquestionably prove profoundly effective in impressing the nervous constitution of man. In short, the primary causes of inebriety may quite frequently be referred to the operation of those great forces of nature which, while they preside over the growth and health of the body, do at the same time, determine its decay and modification.

From these general observations many conclusions are legitimately derived. The originating forces resulting in the neurotic temperament, being oftentimes situated exterior to the human body, the responsibility for drunkenness, as well as the point of reformation, must also, not infrequently, be placed exterior to the human organization and beyond the operation of the human will. It is, therefore, an error held by many, that a few years of enforced abstinence from alcoholic indulgence, will eradicate intemperance from the earth. For wounds, accidents, diseases and the innumerable sources of the inebriate predisposition would remain in active force; and were it possible to remove every drunkard out of existence, they would soon fill the world again with countless inebriates.

To refrain from alcoholic indulgence is obviously, not always within the voluntary power of the neurotic inebriate. One or two illustrations of this fact, however, may not be out of place. Every man of mature years, has seen instances similar to those following:

Major W—., forty years old, a printer, had passed through the civil war with credit as a soldier. He was a man of more than average intelligence. Periodically he was a hard drinker; furious with drunkenness for days, and then sober and remorseful for weeks. He made every promise and every effort to abstain permanently from liquor. He was engaged to be married, under the condition that he would control his besetting propensity, for a given time. Still he would drink and spree,—always remorseful thereafter, and pledging himself anew. At last realizing the futility of his endeavors, despairing and

ashamed—when sober and sorrowful—he walked out to a lonely spot in the darkness of night, and casting himself before an advancing train of freight cars, he met his fate.

Another instance:

W. L.—, was also a soldier during the late war. These poor inebriates are often soldiers who have borne the shocks and hardships, and diseases and wounds of war. Their nervous powers have been unsettled and thrown permanently out of equipoise. This man was a spasmodic drunkard. Becoming a government clerk in Washington, he was peculiarly subjected to temptation. He repeatedly tried to reform. He would sign the pledge, and solemnly promise himself and friends to quit drinking. At length, after an unavailing warfare against a constitutional predisposition, extending over a period of more than twenty years, at the end of a debauch, when all about him thought he would soon return to duty, he drew his razor across his throat, and so died.

In such cases as these, when the supreme moment comes, wherein self-respect and the opinion of the world, demand decisive action, we see, not reformation, but suicide.

The discussion of the anæsthetic powers of alcohol, has opened to view an entirely new field for inquiry. Indeed, in relation to the principles which are associated with the alcoholic temperament, the consideration of anæsthesia, is like entering upon a new world. Eminent men are daily assuming the study and discussion of the anæsthesia of alcohol, as it presents itself in its manifold modifications. The recent paper by Prof. Palmer, in the *Journal of Inebriety*, upon alcohol as a *paralyzing** agent, is a good disquisition upon one of the many phases of the subject.

The relentless unrest of the constitutional neurotic; the ever-acting erethism of the weakened and poorly-nourished nervous system; the agonizing appeal for repose which goes forth from the neuræsthenic—ever thinking,

*To be strictly accurate, the property of alcohol as a *paralyzant* was at first pointed out by Dr. T. W. Poole, of Ontario, in a book published by him in 1879. Dr. C. H. Hughes has also several times called attention to the same point.

and with no power to rest or change;—these are some of the conditions hurrying the mind to insanity, which turn to anæsthesia and to alcohol for help. They seize upon strong drink as their best and only friend.

It is a great step towards unveiling the truth, to recognize the fact, that anæsthesia is indeed that property of alcohol which is paramount in importance. And it is a substantial advancement to discover that the soothing and lethal property of alcohol, is that which so imperiously demands the homage and worship of the helpless neurotic. This vindicates to some extent, the manliness even of disease, for it shows that it is not always the riot of lust, or the satisfaction of inordinate and maniacal stimulation, which incites the inebriate, when he seeks intoxication.

Lesion of The Motor Area of the Brain from Contre-Coup.

By J. H. GREENE, M. D., Dubuque, Iowa.

THE field of cerebral localization has been so prolific in the past few years, and observations not alone in symptomatology, but the post-mortem examinations so exact, that no interest is elicited in such cases, unless they represent the labor of those speaking *ex cathedra*, or that they possess unusual points of interest. Believing the following case to present some unique features, I shall report it, disarming criticism by a frank avowal of my inability to discuss the case profoundly, possessing neither special knowledge in this department nor time and opportunities for extensive research. The subject of the following clinical history was a stout, healthy man, of Irish descent, right-handed, aged thirty years, unmarried; occupation, watchman on a river boat, of irregular habits, with no obtainable evidence of previous illness or disease. He was first seen by me on the night of February 20th, 1882. Nothing was known at the time of the causation of his injury, though it was afterward rumored that he fell quite a considerable distance on the night of the 19th. He was brought to the house on the morning of the 20th by two men, who disappeared as soon as his presence was made known. He walked into the house, and with some assistance, up stairs, giving evidence of pain. He apparently resented all inquiry, and as he was always remarkably reticent, and was thought to be profoundly intoxicated, he was left to himself. Just previous to my being sent for he had what were called "Choking spells." Nothing could be elicited from him, which was thought by myself and his friends to be due to obstinacy and the effect of prolonged dissipation. He endeavored to strike me during examination. He refused

to obey any request. I found a bruised cut three inches above the right auditory meatus, extending posteriorly three and one-half inches. There was much tumefaction. There were two broken ribs, the fractures situated posteriorly on right side. He had arisen from bed at times to pass water, giving expressions of pain. On the morning of the twenty-first his condition was apparently unchanged. He refused to talk, but this excited no comment, as it was one of his peculiarities. On the afternoon of the twenty-first he had a convulsion, and I was sent for. I found him apparently conscious, with no paralysis, and with no apparent change in his condition, save a pulse of 68, temp. 101. On the twenty-second he had another, and in obedience to instruction, it was noted that it was limited to the right arm and right side of face. It was not followed by paralysis or any marked degree of coma. The wound was torn open and a careful examination made. No injury to the skull could be detected. Pulse 64, temp. 101. He continued to have convulsions during the day at irregular intervals, some of which I observed. They began in the right side of the face and right arm, with conjugate deviation of eyes to right. No change in pupils noted. Axis of right eye seemed directed slightly outward. The convulsions, after repeated attacks, extended to right leg, and afterward became more general. His right hand and arm presented a congested appearance. Surface temperature one degree lower on right palm. Has said nothing. Intellection very slow. Appears dazed. Cannot protrude tongue, but after repeated urging and with assistance, opens mouth. Obeys certain requests. but only after much urging can he be induced to respond. Takes dynamometer in hand after much effort to make him understand, but no evidence is obtained. Friends know by his actions and sounds when he desires to obey the calls of nature. No essential change in his condition on the twenty-third. Pulse 64, temp. 100 5-10. Surface temperature one degree lower on right palm. February 24th, convulsions as before. Intellection very slow.

Cannot talk or protrude tongue. Takes pencil after much apparent endeavor to comprehend, but gives it back. Pulse 59, temp. 99 5-10. February 25th, had four convulsions during night, condition about the same. Takes pencil after urging; looks at it in a dazed manner, but does not attempt to write. Pulse 80, temp. 98 5-10. February 26th, resting nicely. Has had no convulsions in thirty-six hours. Intellection slightly improved, as evidenced by responses to requests being performed without so much hesitation. Congestion of right hand and arm gone. Surface temperature, which has continued one degree lower on right palm, is now one degree higher than that of left. Pulse 76, temp. 99 5-10. February 27th, is improving, no convulsions. Attempts to speak, but utters unmeaning sounds. Is apparently irritated at his non-effectual efforts. Is said to have uttered words. Surface temperature one degree higher on right palm. Pulse 80, temp. 99.

February 28th, had two slight convulsions in the morning. Is more intelligent. In response to question, as he was restless and appeared to be fighting last night, indicates by nod that he has hallucinations. Indicates in same manner that he remembers events occurring before injury, but it is questionable how much can be relied upon. Surface temperature one degree lower on right palm. Pulse 84, temp. 101. No ascertainable cause for increased temperature.

March 1st, no more convulsions. For the first time puts out tongue in response to request. Cannot indicate correctly watch, knife or pencil, when shown and name given. Says "Yes" to everything. Is very irritable during examination. Gets up to have head dressed when requested so to do. Attempts to write his name. (Specimen number one.) Appears to comprehend his errors to some degree, and appears highly incensed thereby, putting away pencil and paper and refusing to write more. Repeats words indistinctly after me, but cannot again repeat them without my pronouncing them. Uses dynamometer.



Johns OR be like
Johns OR be like
Mar 1st 82

John O'Brien

Mar 2-82 -

I don't know him -

Johns O'Brien
Johns O'Brien.
Mar 3-82

Mar 4
Johns O'Brien.

John O'Brien
O'Brien.
Mar 6-82

John O'Brien
John O'Brien
So funny I can't write
there's too many letters
Mar 7th

John O'Brien
Mar 21-82

Readings of right and left hand nearly equal. Pulse and temperature normal.

March 2nd, cerebration slow but improving. Puts out tongue when asked. Cannot pronounce his own or sister's name, but indicates by nod and smile that he knows them. Can correctly indicate by sign my watch, knife and other things shown him. Has made frequent attempts to express himself, and is very angry at his failures. After much mumbling with disjointed words, attempts to express that a walk will do him good, and is much pleased when at last is understood. (Specimen of hand writing number two.) Says thickly with shake of head, "Know how." When asked if he don't know how, assents, but will talk no more, nor submit to further examination.

March 3rd, patient much improved. Has shown much interest in things around him. Made sign for paper, and has studied it intently, but it is found that it is as liable to be upside down as otherwise. Is said to have used words in connection. Attempts to write his name, but is angry when he cannot. (Specimen number three.) Resists all further attempts at communication. (Specimen number four,) March 4th.

March 6th, has improved greatly. Talks but little, but understands without difficulty. Makes sign for beer standing near. When given him offers glass to me. It is noticed that he substitutes words. Says "Shoots" for his shoes. Walks about house without assistance. (Specimen number five.)

March 6th, improving daily. Talks intelligently, but occasionally hesitates and substitutes words. Cannot remember anything of events at time of injury or during sickness. Shows disinclination to talk about it. Attempts to write his name,—apparently interests him. (Specimen number six.) He says he knows what he desires to write. Says, "It's funny I can't write, there are too many letters." He evidently cannot at will use the term chair. Always says "Stool." Still calls his shoes "Shoots." Speaks somewhat thickly.

March 21st, talks intelligently, but is very reticent as relates to everything connected with his injury. Upon second attempt writes his name correctly, as seen in specimen number seven. Discharged. He soon after resumed his position, and I am afraid his old habits. His friends say he is changed in his disposition and customs. Is more irritable. Has grown slovenly and very indifferent to the usages of society, but it is questionable whether this is more than the natural result of his long-continued dissipated habits. They think he occasionally substitutes words, and that he is more hesitating in his speech at times, but beyond this they see no difference in his intelligence. I believe that in this case there was a contusion of the brain in the region of the left anterior lobe, the result of contre-coup. Before discussing the phenomena presented in this case, I would invite attention to the opinions of the later writers in reference to encephalic contre-coup lesions. Until very recently the term contre-coup has been usually applied to certain fractures of the cranium. But, however, with the advances made in exact observations in the department of cranial and encephalic injuries, and with the criticism of the doctrines of "concussion" of the brain and the substitution therefor of contusions and other lesions capable of more or less exact demonstration, the term has been extended to a well defined class of cases coming legitimately within its scope. Please consider the encephalon, its structure and relations to the cranium, and its consequent capabilities of receiving injuries in this manner. Page, in his recent work on "Spinal Injuries," thus describes it:*

The cerebral mass, a large soft, solid, surrounded by envelopes or membranes, fitting closely to, and filling up the crevices and grooves in the skull which is its protection and covering—an organ so built and placed that it must be liable to commotion from any blow of sufficient force upon its osseous case.

That the brain may receive severe injuries of this kind has not, in time past, escaped observation. Thus Trou-

* "Spinal Injuries," p. 28.

seau, in his "Clinical Medicine," records the following case, reported by M. Peters:*

A drunken cavalry soldier fell from his horse on the back of his head, and fractured his skull. * * * The most remarkable fact was that though the man had fallen on the back of his head, as was shown by the bruising of the soft parts and the starred fracture of the occiput, the brain was not injured at that part, whilst its anterior lobes were in a pulpy condition, through a most violent contusion, evidently caused by the knocking of the cerebral mass against the anterior portion of the cranial vault.

However, the frequency of this mode of encephalic injury has not been until recently recognized, nor has it attained as prominent a place as would seem its due. Thus Agnew, in his recent work on Surgery, does not allude to the term except in connection with fractures of the skull, and then deprecates its use. Other modern authorities, however, give great prominence to contusions or laceration of the brain from *contre-coup*. Thus Hewitt, in "Holmes' System of Surgery," says: †

Bruising of the brain substance may take place at the spot where the skull was struck, or the bruise may be in a part of the brain far away from the original seat of the injury. The one then is a direct contusion, the other a contusion by *contre-coup* of the brain substance. * * *

Contusion of the brain is, however, rarely limited to the region where the blow is struck, except in cases where the bone has been driven down. In fissure of the skull it happens much more frequently that the bruised part of the brain is far away and directly opposite to the seat of the blow. In severe injuries both kinds of contusion, direct, and by *contre-coup*, are sometimes found in the same brain.

Again, in speaking of cerebral abscess, he says: ‡

But cerebral abscesses sometimes form on the side of the brain opposite to the part of the head that is struck, in consequence of injury by *contre-coup*.

"Erichsen's Surgery," Edition, 1878, says: ||

The substance of the brain may be contused or lacerated by blows upon the head. This is most common at or under the seat of injury, or it

* Trousseau, Vol. II., p. 265.

† "Holmes' System of Surgery," Am. Ed., Vol. I., p. 647.

‡ *Ibidem*, p. 669.

|| "Erichsen's Surgery" Edition, 1878, Vol. I., p. 519.

may occur as the result of contre-coup at an opposite point in the same, or even in the opposite cerebral hemisphere. Being struck on the right side of the head, the patient may suffer from contusion of the opposite part of the left hemisphere, or *vice versa*, or a blow on the occiput may occasion laceration of the anterior part of both lateral lobes. In this injury of the cerebral substance we have many of the symptoms that are characteristic of cerebral irritation, but in addition to them there is occasionally more or less coma, in consequence of extravasation of blood, or there may be paralysis, facial or hemiplegic. In other circumstances, or possibly associated with these conditions there may be convulsive movements more or less epileptiform in character. This may be confined to the face, it may extend to the paralyzed limbs, or may occupy both sides of the body. The prognosis in these cases is serious, but by no means necessarily fatal. In fact, in the majority of instances, recovery ensues. *Injury to the brain may be occasioned in various ways. The simplest form is that perhaps, which is not unfrequently met with in undepressed fracture of the skull, and sometimes happens without fracture, from simple concussion or commotion of the head; laceration of the cerebral substance, occurring under the seat of injury, or more frequently at a distant or opposite point, by a kind of contre-coup. This laceration of the brain by contre-coup is by no means of unfrequent occurrence. I have seen many striking instances of it, and have found it to be one of the commonest causes of death in simple fracture of the skull. Laceration of the brain by contre-coup is attended by much extravasation of blood, and after death the brain substance is found mixed up with coagula, and forming a soft pulpy bloody mass. In most instances that I have seen the anterior lobes have been those contused, lacerated and disorganized. This accident may occur without any fracture of the skull or external signs of serious injury, and usually results from falls upon the back or side of the head, often from an inconsiderable height, as when a person slips suddenly in frosty weather and strikes his head on the pavement, the anterior portions of the hemispheres of the brain or the parts opposite to the stroke will then be found in the condition just described.

This evidence is quite sufficient to establish the frequency of contre-coup lesions of the brain, but I will cite two more of our later authorities. John A. Liddell says: †

Whenever contusion of the brain is produced, the lesion of the brain substance is usually found either underneath the scalp wound, *i. e.*, directly underneath the external point of impact, or on exactly the opposite side of the encephalon. The latter often occurs, and is truly said to be caused by the contre-coup. * * * * It is of some practical importance to know that contusions of the brain from contre-coup are very frequently met with in cases where the injury has been caused by falling on the head. * * * * If I were to judge from my own experience I should say that in a large majority of the instances where contusion of the brain

* "Erichsen's Surgery" Edition, Vol. I., p. 548.

† Liddell, *American Journal of Medical Science*, July, 1883.

is produced by falling on the head, it is caused by the counter stroke, and presents itself on the side of the head opposite to that which receives the blow.

He cites two cases, with autopsy, occurring in his own practice. Page, in classifying concussion injuries of the brain, says:*

Cases where the early symptoms of concussion proper are of longer duration, and the later—pain, irritability, etc—are slow to pass away; and where there may not be, although undoubtedly there very often are, definite structural lesions of the brain substance at a point remote, it may be from the part struck, lesions by *contre-coup*, which of themselves may give rise to no symptoms.

He also cites a supposed case of recovery from *contre-coup* lesion.† It will be noticed that Liddell and Hewitt express the opinion that the injury to the encephalon is directly opposite the impact of the impinging force.

Having premised thus much in reference to a question which has a practical bearing upon the diagnosis, we may consider some of the interesting features of this case. A man falls from a height: he sustains an injury on the right posterior aspect of the skull. Two days later, if not before, he develops convulsions limited to the right side of the face and right arm, finally becoming more general, but not followed by paralysis. Intellect is much impaired, but gradually improves. Is aphasic. No rise of temperature or change of pulse occurs which might not arise independent of cerebral lesion, and they speedily resume their normal standard. What has occurred in the brain? Have we not here an injury capable of more or less accurate diagnosis, not only as relates to its nature, but its location? We may best reach the diagnosis by exclusion.

Leaving out of consideration the term "concussion" as too indefinite, we may exclude fracture of the skull. There is an absence of the ordinary signs of compression from extravasation. It is scarcely credible that extravasation of blood alone could be so limited as to produce

* "Injuries of the Spine," p. 26.

† Page, "Injuries of the Spine," foot-note, p. 23.

the localized phenomena observed. There is an absence of the ordinary signs of meningitis or encephalitis, and the conclusion we reach is that there must have been a localized injury, probably a contusion of the cerebral convolutions in the region of the anterior lobe of the brain, from contre-coup. I would recall the observations of Liddell and Hewitt, who state that the lesion is either directly underneath the scalp wound or at a point directly opposite from the counter stroke. Consider the situation of the scalp wound, three and one-half inches above the auditory meatus, extending posteriorly three inches. Quain's "Anatomy" says: *

The bifurcation of the fissure of Sylvius corresponds to a point one inch and a quarter behind and a quarter of an inch above the level of the external angular process; from this point the anterior limb of the fissure ascends almost vertically for nearly one inch, while the posterior limb runs backwards and a little upwards for a distance of about three inches, and terminates beneath the parietal eminence. The upper end of the furrow of Rolando is placed about half an inch behind a point midway between the foot of the nose and the external occipital protuberance; its lower end is close to the posterior limb and about an inch behind the bifurcation of the fissure of Sylvius.

Does not this evidence clearly point to the direct transmission of the force of the blow to the vicinity of the island of Reil, the lower frontal and ascending frontal and parietal convolutions of the left side. If we accept the modern doctrines of cerebral localization, the convulsions of the right side of the face and right arm, and the ataxic and amnesic aphasia point to lesions of these parts. Nearly twenty years ago Hughlings Jackson pointed out that convulsive movements of one side had their origin in the cortical matter of the opposite side. Richet says: †

A lesion of the cortex cerebri may produce paralysis or convulsion, according as the lesion is destructive or irritative. * * * The convulsive centers coincide absolutely with the motor centers.

Commencing with the labors of Ferrier, Fritsch, Hitzig, Charcot and Pitres, together with many subsequent observers, it has come to be accepted that the so-called

* Quain's "Anatomy," Edition 1882, Vol. I., p. 668

† Richet's "Histology and Physiology of the Cerebral Convulsions," p. 90.

motor zone embraces the para-central lobule, the ascending frontal and parietal, and the foot of the frontal convolutions. These apparently stand in intimate relation to the movement of certain muscular groups on opposite sides of the body. These so-called motor zones are not apparently subject to exact limitation. At least not in the present condition of science. Richet says:*

Absolute inflexible localization of the motor zones is all but impossible.

Concerning the practical bearings:

It is of no special importance to know if there is a center for the ear and exactly how many millimeters it is distant from the center for the pupil. That which is important is to know if there certainly are centers for certain determined movements.

Charcot says:†

The anterior lobe deserves particular notice, and may be called the department of the giant pyramidal cells, or the motor cells *par excellence*. This department embraces the entire ascending frontal convolution, the superior extremity of the ascending parietal convolution, together with a part * * * under the name of para-central lobule, and which is situated upon the internal face of the hemisphere, at the extremity of the ascending convolutions.

The following are the conclusions of Charcot and Pitres:‡

The cortex cerebri is not functionally homogeneous; only one part is concerned in the regular exercise of voluntary motion. That part which may be called the cortical motor zone includes the para-central lobule, the frontal and parietal ascending convolutions, and perhaps also the foot of the frontal convolutions.

No cortical lesions, whatever their extent, situated outside the motor zone, affect the power of motion.

On the other hand, destructive lesions, even very limited, which affect either directly or indirectly the motor zone, necessarily entail disturbance of voluntary motion.

In reference to the different parts of this zone which stand in relation to certain sets of muscles, a larger number of exact observations are needed to determine the question, as one will discover speedily if he consult different authors, or study reports of autopsies bearing on

* Richet's "Histology and Physiology of the Cerebral Convolutions," p. 88.

† Charcot's "Localization in Diseases of the Brain," p. 23.

‡ Richet's "Histology and Physiology of the Cerebral Convolution," p. 93.

these points. The following are among the results obtained by some of the most careful observers.

Charcot and Pitres reach the following conclusions:*

The cortical motor centers for the opposite limbs are situated in the para-central lobule and in the upper two-thirds of the ascending convolutions; and that centers for facial movements are situated in the lower third of the ascending convolutions in the neighborhood of the fissure of Sylvius. It is probable that the center for isolated movements of the upper extremities is located in the middle third of the ascending frontal convolution.

In the April number of *THE ALIENIST AND NEUROLOGIST*, Tamburini gives the history of a case in which he located a lesion which was remarkably confirmed by autopsy, and as he therein gives the results of later researches, I will quote from the record of the autopsy:

In fact the lesion of the ascending frontal convolution, which was least in its upper part (the center for the movements of the limbs—arms and legs), greater in the middle part (the center for the movements of the hand), and in the inferior part (the center for the movements of the face), gave the reason for the hemi-paresis of the whole of the right side, more conspicuous in the arm and face. The extensive lesion of the third frontal convolution (the center for the motor memory of language) explained the amnesic and ataxic aphasia; finally, the lesion in the foot of the middle (second) frontal, just in front of the center for the movements of the hand, might explain the agraphia and serve at the same time to confirm the idea that in this point the center for the movements in writing has its seat.

In the case occurring under my observation it is probable from the supposed direction of the force that the main injury was to the lower parts of the anterior lobe, though the whole lobe may have been more or less contused. I infer this from the fact that the convulsions were at first limited to the face, the "choking spells" mentioned by friends, gradually involving the centers for the arm and leg. This may be explained in two ways. First: by the irritation caused by necessary exudates in process of repair. As perhaps corroborative of this view, I would cite the experiments of Viel, who used injections of nitrate of silver: †

* Richet's "Histology and Physiology of the Cerebral Convulsions," p. 94.

† Richet's "Histology and Physiology of the Cerebral Convulsions," p. 96.

Says Viel:

At the onset there are only the varied symptoms of ataxia. * * *
When inflammation supervenes the attacks become clearly epileptiform.

It will be seen that the convulsive phenomena began about the supposed time of inflammatory stage of repair. Second: and more likely perhaps, on the hypothesis of excessive functional discharge of gray matter extending to other centers, as put forward by Hughlings Jackson.* * * * Fritsch and Hitzig note this fact in confirmation of the latter view: †

These convulsions at first confined themselves to the muscles responding to the cerebral region excited, then became more general, and extended so as at length to become truly epileptiform.

A query as to the mental condition of my patient in the earlier stages affords some interesting questions. Although it might seem that he possessed the use of centers presiding over volition, yet I could not resist the impression that the greater part of the time the higher functional centers were practically in abeyance, and the most of his actions were automatic. He was perfectly quiet when undisturbed, unless prompted by the calls of nature or some external stimulus. Much effort was required to obtain any desired action, as though the impaired nerve centers were barely capable of registering impressions or transforming them into motor impulses. He would, after much coaching, take an object in his hand, but no sign of intelligence in the act was perceptible. Hammond has shown that a decapitated frog will swim around objects after touching them, and I would regard the earlier movements of my patient as of a similar reflex nature.

His mental condition is, perhaps, better understood through the aphasic phenomena, and the gradual evolution, so to speak, of the faculty of language.‡ Richet says:

Aphasia is not a phase of motor paralysis. The muscles of the tongue, larynx and velum palati retain their power of contraction, and their

* Reynold's "System of Medicine," Vol. I., p. 281.

† Richet's "Histology and Physiology of the Cerebral Convulsions," p. 95.

‡ Richet's "Histology and Physiology of the Cerebral Convulsion," p. 107.

functions are unaltered. The trouble is a loss of ideo-motor co-ordination. There is neither dementia nor paralysis. The defect is neither of intellection nor motion, but of the bond which unites the two, it being the effort of intellection which induces motion. Meynart was the first to describe the lesion of aphasia as a fracture of the psycho-motor centers. The term psycho-motor seems excellently applied to aphasia. It is not a motor center, like the ventricle of the gray substance (fourth), which is the motor center of respiration, nor is it yet a psycho-motor center, since there is motor paralysis. It is a psycho-motor center.

At first it is questionable whether my patient had any ideation. At a later stage he was unable to associate his ideas with the proper thing. He said "Yes" to each object shown—amnesic aphasia. At a still later stage he was unable to connect the word with the idea. He had lost the memory of language, though he could associate the word with the idea when it was pointed out to him. Still later he was able to properly clothe his ideas with words, but imperfectly and with hesitation—ataxic aphasia, verbal paralysis of Tamburini. These phenomena indicated to my mind that at first the centers concerned in ideation, either directly or by inhibition, had lost their function. As they resumed this gradually they were in such a disordered condition as not to be able to co-ordinate with each other; and finally these centers, for a long time, could not establish their proper relations with the centers presiding over the muscular apparatus governing vocal expression. As to the seat of the centers of speech there is some question, but it is generally conceded that an injury to the foot of the third frontal convolution or of the island of Reil usually accompanies its disorders, and there is good ground for believing that some of its varied forms, ataxic or amnesic, oftentimes indicate approximately the seat of the lesion. Thus, Hammond says:*

The gray matter presides over the idea of language, and hence, over the memory of words. When it only is involved there is no hemiplegia, and there is no difficulty of articulation. The trouble is altogether as regards the memory of words. The corpus striatum contains the fibers which come from the anterior column of the spinal cord, and is besides, connected with the hemisphere. A lesion, therefore, of this ganglion or other part of the motor tract causes paralysis of motion on the opposite

* Hammond, "Diseases of the Nervous System," p. 217.

side of the body. The cases I have detailed show, without exception, that the power of co-ordinating the muscles of speech is directly associated with this hemiplegia. A lesion, therefore, followed by hemiplegia and ataxic aphasia indicates the motor tract as its seat.

That the derangement of the motor centers may not be so disordered as to give rise to perceptible paralysis is often observed, and is seen in my case, where the tongue did not deviate to right or left; nor was there evidence of other paralysis, yet his speech was thick and hesitating, probably from improper co-ordination of cortical centers, as it is improbable that the lesion could involve the motor tract without perceptible paralysis.

Tamburini, in *THE ALIENIST AND NEUROLOGIST* for April, 1884, already quoted, in speaking of amnesic and ataxic aphasia, when co-existing, says:

Now, this form of aphasia, which is most frequently met with, is at present, by universal consent, held to be dependent on lesion of the third frontal convolution, especially of the left side, and precisely in the foot of this convolution and the adjacent part of the ascending frontal convolution, which is more especially the motor center for the muscles that serve in phonetic expression.

As to the ataxic agraphia or disgraphia in this case, at no time—not even at the first attempt—did it amount to an inability to form letters or the semblance of a word. It was unfortunate that his peculiarities stood in the way of more perfect investigation, as he usually grew angry at the first attempt, and would refuse to write more. In relation to the situation of the hypothetical center for co-ordination of movements in writing, Tamburini says:

Now, though nothing is yet known with certainty regarding the region of the cortex, which should be the center for the motions in writing, yet this much may be asserted: First, that the center of co-ordination of written words, though intimately connected with that of spoken words, since both forms of expression are frequently affected together, should have a distinct seat for itself (Marce Kussmaul), because it is not rare to meet with the lesion isolate; Second, that the cases observed by Exner render it very probable that as the co-ordinating center of speech (the foot of the third frontal) is found in immediate contiguity with that for the muscles (facial, lingual, etc.), which act in the expression of words (the inferior portion of the ascending frontal), so also the co-ordinating center of writing should be found in immediate contiguity with that for the movements of the hand, which is the executive organ of writing, and

hence, as this center is situate in the middle part of the ascending frontal convolution, the center for writing may be found in the foot of the middle (second) frontal convolution, which is immediately continuous with the ascending frontal.

After a survey of such literature as is at my command, I have been able to find but one case of aphasia from supposed contre-coup lesion. It is reported by D. V. Dean, in *THE ALIENIST AND NEUROLOGIST* for April, 1882. It was caused by a fall, striking the right temple on a curbstone. When helped up the patient could not speak, but was able to walk and wash his own face. He developed a slight paralysis of the right side on the second day. He left the hospital against advice, one month from admission, and six weeks from the time of injury, had nearly recovered.

PARETIC DEMENTIA.*

IS IT A PSYCHOSIS, A NEURO-PSYCHOSIS OR A COMPLICATION
OF THE PSYCHOSES?

By JAS. G. KIERNAN, M. D., Chicago, Ills.

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Things small as nothing, for request's sake only,
He makes important; possessed he is with greatness.
He speaks not to himself but with a pride
That quarrels at self-breadth. Imagined worth
Holds in his blood such swoll'n and hot disease
That 'twixt his mental and active parts
Kingdom'd Achilles in promotion rages
And batters down himself. What should I say?
He is so plaguy proud that the death tokens of it
Cry "No recovery."

—*Troilus and Cressida*, Act II., Scene 3d.

SHEPPARD† and J. Claye Shaw are of the opinion that Shakespere "intended in this passage to attribute to the son of Peleus a state of mental derangement with which his experienced eye had brought him into contact but which no leech of his time had, to our knowledge, shaped into a distinct and morbid entity." Whether such be the case or not it cannot be denied that the Elizabethan dramatists were keen psychologists, and delighted in the exhibition of morbid mental phenomena on the stage.‡ Shakespere, in *Hamlet*, has shown such a power in this respect that Sheppard and Shaw cannot be accused of too great extravagance in ascribing to him the powers they do. The earliest medical authority, in whose writings distinct

* In this and a succeeding series of articles it is proposed to pass in review the history, symptomatology, aetiology and pathology of this disease, with a view of determining its nosological position.

† Lectures on Madness.

‡ Ben Jonson even brings an examination for insanity on the stage in his "Silent Woman."

reference to the disease is traceable, is Willis,* who has given an astonishingly clear description, all things considered. In the course of the next century the disease again makes its appearance in medical literature. Haslam,† who was an alienist standing in many respects far ahead of his time, called attention to the same phenomena on which Willis had laid stress. Perfect‡ appears to have, at about the same time, noticed and described some of the symptoms. Esquirol|| was among the first to call attention, in a decided way, to the fact that certain types of insanity were attacked by paralysis, and to Haslam he owed the hint which led to systematic observations. Georget§ followed soon after with fresh observations. The first to hint at the affection's being a distinct entity was Bayle.¶ Very soon after his observations were supplemented by the discoveries of Calmeil,** which tended to establish the disease in much the same position as it occupies to-day.

The various opinions regarding this affection may be summarized as follows :

First, that the disease is a complication of the different forms of insanity ; that the paralytic symptoms are epiphenomena grafted on the original disease, and are, in fact, the means through which insanity terminates fatally.

That, on the contrary, the disease is a species distinct from all other forms of mental disease.

That the disease is not insanity complicated by paralysis but a paralysis complicated by insanity, or, as Krafft-Ebing

* "Observati in pluribus, quod, cum cerebro primum indisposito, mentis hebetudine, et oblivione, et deinde stupiditate et morosei afficerentur, postea in paralysis (quod etiam prædicere solebam) inciderebant, * * * propterea oppilativa, prout loca obstructa mogis, aut minus anpta fuerunt aut paralysis universalis, aut hemiplegia, aut membrorum resolutiones quedam partiales accidebant. * * * Particulæ oppilativæ a cerebro delapsæ enque medullam oblongatam protractæ, nervos quarundam facies partem musculis destinatos subeunt, enque ipsis spirituum vias obstruendo, lingue paralysis, modo his aut illis, oculorum, palpebrarum, labiorum, alearumque partium mucoculis resolutionem patiunt."—*De Anima Brutorum*, cap. ix, p. 281.

† Observations on Madness.

‡ Annals of Insanity. Mickle seems to be in error about Perfect's total non-recognition of the disease.

|| Maladies Mentales.

§ De la Folie.

¶ Maladies du Cerveau.

** De la Paralyse chez les Aliénés.

puts it, a neurosis with psychical symptoms, these last being essential features. It has been claimed that cases occur entirely without mental symptoms. This is a natural sequence to the doctrine of duality.

That there exist several forms and a pseudo form.

The affection is variously divided into stages. The division proposed by Mickle* is best adapted for clinical purposes: *First*, a stage of mental alteration; *Second*, a stage of mental alienation; *Third*, a stage of mental disorder or failure; *Fourth*, a stage of mental and physical prostration.

PRODROMIC STAGE.—This is included in the first, and, as Legrand du Saulle remarks,† is the “medico-legal period.” The mental phenomena of this period are at first the most striking, the physical phenomena serving chiefly to confirm the diagnosis.

The earliest symptom in this disease is a slight change of character. As Spitzka‡ has said:

It is a mistake to believe that paretic dementia, at its onset, always declare itself by marked and unmistakable signs. Even the most experienced alienist may be in doubt, and be eventually guided in concluding as to its existence or non-existence rather by the general complexion of the case than by the presence or absence of any absolutely pathognomonic sign. Usually the first subjective symptoms are related by the patient; and, if not related by him, are constantly before his mind, but kept concealed either from *amour propre* or a desire not to alarm his family. It must be borne in mind that the more intelligent the patient the more likely is he to know or to surmise the serious significance of the premonitory indications of mental failure. While a common day-laborer may pass unconsciously through the initial period of the disease, manifesting its development by amnesia and bursts of temper, or if he make any complaint to a physician, will base it on peculiar *visceral* sensations, a business man will recognize and admit (perhaps with some hesitation) that his powers of *attention* and *concentration* are failing, that he no longer entertains the same affection for his family as before, and that he *forgets* the simplest facts. The ignorant hod-carrier turns up in the dispensary with the complaint that there is an “animal in his belly,” that his “heart is turned to stone,” that his “semen is drawn from him in some mysterious way,” or that his bowels have become occluded. The business man fears that he is going to *lose his mind*. In two cases patients, whose attention

* Op. Cit.

† Gazette des Hôpitaux, Sept. 11, 1883.

‡ Æsculapian, March, 1884.

had been directed to the testimony given in cases where the existence of this disease was in question, had made the diagnosis of their disorder correctly. Simon* relates the case of a medical student, who, during the progress of his disease, asserted that his brain was atrophying, and pointed out on his head, the spots under which the atrophy was the most intense. It may be regarded as a mere coincidence that after death marked atrophy was found at the very place pointed out by the patient during life, but the case goes to show how great a difference the educational status of the subject makes with regard to the subjective interpretation of his symptoms, and the likelihood of his consulting a physician in the early phases of his disorder. The fact that in the later phases of the disease this difference between educated and uneducated paretics is gradually obliterated, finds an easy explanation in the dementia, which terminates the mental symptoms in both classes of patients, and reduces both to nearly the same intellectual level.

Granger says that†

In his experience the premonitory symptoms consist in a change of character, which gradually gives anxiety to friends, but does not make them consider disease of the brain as a cause for this change, and therefore, they do not consult a physician. Sometimes there is depression, gloomy fears, failure of memory, and perhaps seclusive habits. Sometimes the patient early consults a physician.

There may occur at the outset of the affection, as in many other psychoses, a period of depression succeeded in many cases by a decided exaltation. A condition in which it would seem as if the patient were slightly intoxicated. He may appear supremely content. At this time, and in these very cases, immoralities are very apt to make their appearance.

In my experience these patients commit theft in a peculiarly open and stupid manner. Legrand du Saulle‡ Sankey|| and Austin§ have observed cases in which *theft was the first obvious evidence.*

According to Spitzka:¶

In this stage thefts are very apt to occur, in some cases with a quasi criminal intent, in others from mere forgetfulness. Thus a patient will pick up an article to look at it, and then pocket it in his abstraction.
* * * * At other times, useless as well as valuable articles are stolen in a stupid and random way.

* Gehirnerweichung der Irren.

† Buffalo Medical and Surgical Journal, July, 1883.

‡ Gazette des Hôpitaux, Sept., 1883.

|| Lectures on Mental Disease.

§ General Paralysis.

¶ Insanity; Its Classification, Diagnosis and Treatment.

Hammond* is of the opinion that

A weakening of the principles of morality, which the individual may previously have held, is also often among the prodromatic symptoms of the disease. * * * * He pilfers whatever he can lay his hands on, and without adapting the means of precaution, which the common thief would use to prevent discovery. Moreover the articles which he steals are not, in general, of any use to him, and are thrown aside as soon as he has them in his possession. Many distressing instances of this class of patients, hitherto highly respectable, being arrested for petty thefts have been reported, and several such have come under my own observation. In one of these, the patient, an eminent lawyer, who had at one time been on the bench, was detected in stealing engravings from a picture dealer. He was walking out of the shop with the prints rolled up under his arm, and had got out of the door before it was discovered he had stolen, instead of having bought the pictures.

A. E. Macdonald† says that at the outset of the disease petty thefts are likely to occur.

Granger‡ says :

Among the earlier symptoms is perversion of the moral sense. Petty thefts occur, not infrequently, early in the disease. A case came under my observation of a clerk who stole the dinner pails of working men connected with the establishment.

Baillarger|| reports three cases in which the patients (all women) were detected and arrested for petty thefts. Lélut§ has reported two very similar cases. Parot,¶ Billod,** Darde,†† Sauze,‡‡ Wilkie,||| Burman§§ Maudsley¶¶ and Tarbe¹ have reported twenty-five similar cases of theft perpetrated at this stage of the disease.

Brierre de Boismont² has had under observation the case of a public functionary, whose duty it was to attend at auctions, and who before being suspected of mental disease, repeatedly abstracted articles. When detected,

* Treatise on Insanity.

† American Journal of Insanity, April, 1877.

‡ Buffalo Medical and Surgical Journal, July, 1883.

§ Annales Medico-Psychologiques, 1853, T. V., p. 479.

¶ Annales Medico-Psychologiques, 1853, T. I.

** Annales Medico-Psychologiques, 1853, T. V., p. 481.

‡‡ Annales Medico-Psychologiques, 1860.

§§ Du deliré des Acts dans la Paralyse Générale.

||| Annales Medico-Psychologiques, 1831.

|||| Journal of Mental Science, July, 1873 and July, 1874.

§§§ Responsibility in Mental Disease.

¶¶ Annales Medico Psychologiques, 1874.

¹ Annales d'Hygiene Publique, 1860

² Thèse de Paris, 1833.

he excused this practice on the ground of its being a custom among such functionaries as himself.

Simon* has had under observation the case of a fisherman, who being detected ransacking his neighbor's nets, excused himself on the ground that his oars had become entangled with the nets, and that he had taken the fish out intending to replace them.

Laségue† has had under observation a patient who stole a tool which a workman had placed near him, and of which he could not make the slightest use.

Voisin‡ reports the case of a man who took the valise of a traveler, and walked off with it before the latter's face.

Villemin|| had under observation an officer who took from a grocer's counter, a loaf of sugar, and put the same very tranquilly under his arm.

Magnan§ has reported the case of a man who, seeing a barrel of wine before a wine shop, asked two policemen to help him roll it off, and these last were by his good-humored way, induced to assist him in what they did not know to be a theft.

T. Fletcher McFarland¶ states that at this stage petty thefts are common; if the patient be an officer in momentary trust, errors in his accounts leading to suspicions of embezzlement may occur.

Mickle** has observed that several of his patients, non-commissioned officers, while in this stage, appropriated or failed to account for moneys passing through their hands, whereupon courts-martial and degradation to the ranks precipitated the course of the intellectual and moral disorder, of which the primary defalcation had been merely the outward expression.

I am of opinion that such conduct as in the fol-

* *Annales Medico-Psychologiques*, July, 1874.

† *Die Gehirnerweichung der Irren*.

‡ *Paralysie Générale des Aliénés*.

|| *Annales Medico-Psychologiques*, July, 1874.

§ *Journal de Médecine et de Chirurgie*, 1866.

¶ *Peoria Medical Monthly*, July, 1883.

** *Op. Cit.*

following cases, recently reported from New York,* is due to amnesia :

A cashier of a Poughkeepsie bank was suddenly noticed to be very extravagant; this led to investigation, and a defalcation was found. On examining the cashier's house, notes, drafts and money were found scattered over it, hidden in out-of-the-way places; in some cases evidently for several years. The man was ultimately found to be a parietic, and sent to a hospital for the insane.

In the second case, a teller of a Troy bank was insane, from this psychosis, for several years before the trustees knew it. Meanwhile the cashier had been able, by reason of the teller's infirmity, to rob the bank and bring it to the verge of suspension.

Legrand du Saulle† has observed the case of a cashier who suddenly became addicted to visiting places of ill-repute, and neglected his accounts, and embezzled money, displaying soon after evidences of the disease.

At this period, as Granger‡ says :

If the patient be a moral man, violations of decency, debauchery, or even open immorality, may occur; or, if he is a man of loose habits, he becomes even more sensual.

Eroticism,|| varying from a tendency to enter into improper marriages up to the wildest lasciviousness, as in cases reported by Guislain,§ may make its appearance. Moreau (de Tours)¶ says that the sentiment of love in its ideal sense is very often the first symptom of this affection, the genital excitement appearing later. The first tendency is often noticed in hitherto fanatically orthodox Jews who suddenly contract marriages with Christians. In a case cited by Legrand du Saulle,** a man suddenly married a prostitute and legitimized, by acknowledgment according to French law, her two children, dying soon after in an asylum. This sexual excitement may manifest itself by

* Gaillard's Medical Journal, Oct. 1882.

† Gazette des Hôpitaux, Sept. 11, 1884.

‡ Op. Cit.

|| Detroit Lancet, May, 1884.

§ *Leçons Orales sur les Phrenopathies.*

¶ *Maladies Mentales.*

** Op. Cit.

indecent exposure of person. I have observed the case* of a hitherto respectable physician who suddenly indecently exposed his person. Fined for this, he immediately exposed it on leaving the court-room, and the fine was doubled, but he again repeated the offense. In consequence of this he was committed to prison, and on his release came to Chicago, where he was found to be a parietic dement, dying in the Cook County Hospital for the Insane.

Sheppard† states that he has observed the case of a clergyman of exemplary character who came to London, put up at a first-class hotel, and commenced his lively career by bringing in at night three women of the town. His indignation was greatly aroused when the landlady refused to let them pass beyond the hall.

Austin‡ has observed that the patient

Impelled onward by his spirits, and clad in the reason-proof panoply of self-sufficiency, is at once too confident and too confiding. A married man who has hitherto observed the decencies of life, openly keeps a mistress; a heretofore prudent and sagacious tradesman is on a sudden nearly entrapped into a glaringly disreputable marriage.

Brierre de Boismont|| has had under observation the case of an honorable merchant who suddenly became addicted to licentiousness, which was the first noticeable symptom of the disease.

Hammond§ is of opinion that these patients are very "apt to commit obscene acts under circumstances which are almost certain to lead to detection."

Spitzka¶ has noticed that

Indecent exposure of the person may also be made in some cases from satirical motives. * * * * The once faithful husband begins amours with the servant girls before his wife and children, or goes to balls and shows himself in public with notorious courtesans.

Blandford** states that

* Op. Cit.

† Lectures on Madness

‡ General Paralysis.

§ Annales d'Hygiene Publique, 1860.

¶ Treatise on Insanity.

** Insanity; Its Classification, Diagnosis and Treatment.

•• Insanity and its Treatment.

A decorous father of a family walks about half naked, or takes liberties with the maid-servants.

Mickle* expresses the opinion that among the symptoms to be observed at this period are salacity, or an "open and unconcerned self-exposure."

Voisin† says that

These patients become sexually insatiable, to the astonishment of their wives, who at length become alarmed at these extraordinary manifestations. In a case which came under my observation a man attempted to force his wife to sexual intercourse on every possible occasion.

Russell‡ is of opinion that lewdness and erotic symptoms are very early manifested in this affection.

A. E. Macdonald|| has found that wives and mistresses tell extraordinary stories of the salacity of these patients.

Legrand du Saulle§ states that almost every week a victim of this disease is arrested in Paris for indecent exposure of person.

Tendencies to arson are not uncommon at this stage. Thus Legrand du Saulle has had under observation the case of a workman who suddenly set fire to a hotel without having any motive therefor. In many reported instances of seemingly motiveless incendiarism this psychosis has ultimately become demonstrable. This tendency to arson may arise from hallucinations of the sense of smell, or from an exaltation of this sense which occurs sometimes in this stage; from simple destructive impulse; from a desire to destroy a house in order to build a better; or, finally, from a desire to cheat fire insurance companies, which is as much a product of this disease as any of its other immoral symptoms. These patients are peculiarly pliable instruments in the hands of designing people. Chorinski, a patient of this type, was induced by his paramour to poison his wife; and Benhardi, another victim of this psychosis, was induced by Orsini to engage in the plot against the life of Napoleon III.

* Op. Cit.

† Paralyse Générale.

‡ Boston Medical and Surgical Journal, Vol. CIII.

|| American Journal of Insanity, April, 1877.

§ Gazette des Hôpitaux, September 18, 1883.

Luys* says the patient eagerly scans the price current, and goes hither and thither as if interested in some great design, and embarks in dubious enterprises, readily becoming a prey to designing scamps.

T. Fletcher McFarland† says that these patients are very apt to become the victims of the human vampires who prey on society.

While homicidal attempts do not frequently occur independently of the persuasion of designing people, or impulse, still such cases are on record. Le Grand du Saulle‡ has had under observation the case of a man who claimed legitimate grounds of complaint against a physician. Arming himself with a cane and a poniard, he asked two policemen for the address of this physician, stating that he wanted to kill him.

It will be obvious that, as was first said by Guislain,§ and subsequently by Mickle,|| this disease is to be feared when sudden unforeseen moral falls occur in those hitherto without reproach.

From the sanguine nature engendered by the disease, wild speculations are exceedingly frequent at this stage as well as extravagant purchases.

In a case cited by Sankey,¶ a man whose mental condition had been hitherto unsuspected, suddenly rose in a meeting of the stockholders of a concern on the point of bankruptcy, and offered to purchase all the stock.

One of Meynert's patients, a hair-dresser, invested all his fortune in a certain shade of gray hair.

Spitzka** says that

While generally depressed, such a patient may sign his name with a flourish indicative of exaltation, and may, although on the verge of bankruptcy, according to his apprehensions, seize on some project—in itself reasonable enough—whose hopefulness is in striking contrast with the general emotional state.

* *Maladies Mentales.*

† *Peoria Medical Monthly*, July, 1883.

‡ *Gazette des Hôpitaux.*

§ *Legons Orales sur les Phrenopathies*, Sept. 11, 1884

|| *Op. Cit.*

¶ *Lectures on Mental Diseases.*

** *Æsculapian*, Vol. I.

Hammond* states that one of his patients bought up all the dogs he could find. Another undertook the task of buying all the jewelry of the largest jewelry store in New York, and only stopped when the proprietor, becoming alarmed, refused to sell him any more.

One of Luy's† patients bought a library of two thousand richly bound books for his two-year-old child. Another bought fifty umbrellas and fifty boxes, and hid them in his bed-room.

Austin‡ has observed that the patient seems to see everything through a captivating medium, and commits extravagancies.

As Bucknill and Tuke remark, when persons begin to omit words or spell badly, these are, in many instances, early signs of this affection.

PHYSICAL SYMPTOMS.—At this period physical symptoms are so slight as to escape the eye of all but the trained observer. Fibrillary twitchings in the tongue, and spasmodic isolated movements of muscles about the eyes, lips, tongue and face occur. There may result from this cause, hesitancy and embarrassment in speech. This embarrassment may evince itself by a hesitancy over one syllable, while the second bursts out explosively. These symptoms are all more or less masked by the emotional exaltation of the patient. As Mickle has pointed out, involuntary spasmodic twitching of the lips, face, eyelids or occipito-frontalis muscle may occur even in a state of voluntary rest. The tongue may be protruded in a sudden, jerky and momentary manner, and when protruded, fine irregular contractions of it are noticeable. Some disturbance of gait is exceptionally noticeable, and the fine co-ordinations concerned in writing, drawing, etc., often suffer at this time. Verga|| has pointed out that severe cephalalgia is far from infrequent. Various neuralgiæ are

* Gaillard's Medical Journal, Vol. 1, 1889.

† *Maladies Mentales.*

‡ *General Paralysis of the Insane.*

|| *Archivio Italiano per la Malattie Nervose*, 1871.

often complained of. Mickle* states that visceral neuralgiæ are to be found at this stage. Spitzka† calls attention in this connection to the fact, that emotional disturbances as they are called, and which are frequent accompaniments of the initial period, are, when present, *positive* indications of the disease. He does not know of a record of any case carefully observed in the initial period, in which these disturbances were not present. The patients feel the *physical* indications of crying. They may even have the flow of tears,—nay, the contortions of the face, the convulsive action of the respiratory muscles, and the after-sensations in the throat, of weeping, *without any real emotion*. The patient may actually be pursuing rather a pleasant train of thought, as his peculiar symptom overtakes him. It is rarely known for this extreme phase of emotional automatism to be present in the initial stage. Usually the patient states that the "bitter feeling" of a choking emotion rises in his throat, although he does not feel correspondingly sad at the time, and that he is able to fight it down. I have often observed the patient during such a state, his conjunctiva reddening, as before crying, but few or no tears following, the patient making a successful effort to master the emotion. The corresponding antithetical emotional automatism, that of laughter, is much less common than the one described. The patient here displays a vacant smile, while reciting the worst features of his malady. Transitory disturbances of other functions of the pons and medulla are also found, such as slight dysphagia, unpleasant sensations in the throat and disturbance of the salivary secretions. Perhaps the gastro-intestinal disturbances common to the early stage may be due to the early involvement of the vagus nucleus. Gaping, yawning and obstinate singultus have been noted by him.

De Crozant‡ was of opinion that an almost complete cutaneous anæsthesia, of temporary duration, preceded the motor affections, and was coincident with the onset of the

* Op. Cit.

† Esculapian, Vol 1.

‡ Annales Médico-Psychologiques, Tome IX, 1846.

disease, while, as has been shown by Guislain,* this condition is in no respect pathognomonic of this disease, still it is often present from the very earliest stages. Voisin† and Burlureaux‡ have observed hemianæsthesia at this time. Color-blindness may be the earliest noticeable symptom. Persons engaged in occupations requiring ability to form combinations of color, may, in the first stage, give evidence of color-blindness. Two purchasing clerks in the employ of a large dry goods firm, who afterward became demonstrably paretic, lost their positions through the sudden development of color-blindness. Batty Tuke|| and Boye§ have observed similar cases.

Concerning the sense of sight, generally speaking, it should be remembered that optic nerve atrophy may occur precedent to demonstrable psychic symptoms of this disease. It was claimed by Phillips¶ that the pupils at this period were contracted, but, as has been shown by the experience of most observers, there is no regularity about the condition of the pupil.

Voisin** says, concerning the sense of smell, that its diminution is a sign of the greatest importance in the prodromic period. Hammond†† is satisfied that the loss or diminution of the sense of smell on one or both sides is of much diagnostic value. Goldsmith‡‡ says:

Hallucination or impaired function of the senses is very rare as an early symptom, hallucination having been noticed but once and impaired vision but once. The diminution in the sense of smell, which Voisin thinks very frequent in the early stages, was not noticed in any of my cases.

It is probable that the statements of Voisin and Goldsmith are both much too positive, since Voisin generalized on too few cases, and Goldsmith generalized on

* *Legons Orales sur les Phrenopathies.*

† *Op. Cit.*

‡ Cited by Voisin.

|| Cited by Mickle.

§ *Thèse de Paris, 1871.*

¶ *Austin's General Paralysis of the Insane.*

** *Paralyse Générale.*

†† *Treatise on Insanity.*

‡‡ *Archives of Medicine, August, 1883.*

imperfect observations not made by himself nor by alienists.

As Verga* has pointed out, heat in head, epistaxis syncope, somnolence of a morbid type, are common prodromic phenomena. Spitzka† says in this connection:

But the most important evidences are those which, attributable to the brain axis as their seat, may be designated as the *vaso-motor* signs of parietic dementia. Disturbances of the general circulation are not here referred to, for these are not constant in the first period of the disorder, but to those signs which indicate disturbance of the cerebral circulation itself. Those cases in which the *vaso-motor* catastrophe declares itself in the shape of an apoplectic attack are rare. The feature which enables the physician, in the vast majority of instances, to determine that the attack is not an ordinary apoplectic attack, is the rapid recovery (within a few hours, days or weeks) from such severe symptoms as hemiplegia, aphasia, or coma. More frequently epileptiform seizures are found. These are only exceptionally of the character of the *grand mal*. More commonly they resemble an attack of *petit mal*, and there is every connecting link between the momentary total loss of consciousness and mere fits of abstraction. It is almost a criterion of parietic dementia that such attacks, with or without a congestive rush of blood to the carotid district, occur after meals, after unusual mental exertion, and are accompanied by a tendency to go to sleep.

This disease presents at its outset no such easy diagnostic problem as might be inferred from the flippancy with which its diagnosis is discussed. This is the stage at which recovery is possible and in which conduct disastrous to honor and property is likely to occur.

FIRST STAGE OF THE DISEASE PROPER—The next stage is simply an exaggeration of the preceding. The mental disturbance present in it increases, and delusions now present themselves. It would readily be supposed, from the statements so frequently made in the journals, that this disease presented grandiose delusions and exaltation only. This tendency to ignore very patent symptoms is the more striking as Bayle,‡ Georget|| and Calmeil§ had from the first pointed out that symptoms of depression were

* Archivio per la Malattie Nervose, 1871.

† Esculaplan, March, 1884.

‡ Op. Cit.

|| Op. Cit.

§ Op. Cit.

present in this disease. Baillarger* pointed out, in perhaps too absolute a manner, that depression of the prodromic period ended in hypochondriasic symptoms, which were peculiarly distinctive. Forbes Winslow† says that this is "occasionally found in the early stages associated with severe depression of mind." Falret‡ states that this disease may present depression and hypochondriasis. Heming|| had observed cases in which melancholic delusions were present. Mendel§ expresses the opinion that hypochondriacal and melancholic states are not exceptionally infrequent in this disease. Schüle¶ is of opinion that many cases present hypochondriasic and melancholiac symptoms and delusions. Krafft-Ebing** states that in many cases depressive and hypochondriacal delusions, are present. Kräpelin†† is of opinion that cases of this disease manifesting depressive and hypochondriacal conditions are by no means rare.

Dr. W. D. Granger‡‡ has found that

Sometimes the history is that of a mental condition resembling melancholia, and they may even commit suicide. There are still present the exaggerated ideas of the paretic, and relate wholly to himself. A melancholic patient of the Buffalo Hospital for the Insane thinks he is the devil, and has become so from his great wickedness. Sometimes they are cross, irritable and sullen, and treat all who approach them with haughty disdain.

Dr. E. C. Spitzka||| has noticed that

While depressive delusions are among the rarer episodes of the fully developed disease they are common enough at its earlier stages, * * * and, to some extent, are developed in the earlier phases of the disease in most patients.

Legrand du Saulle§§ has observed that

Sometimes, and much less infrequently than is generally supposed,

* Thèse de Paris, 1853.

† *Obscure Diseases, Etc.*

‡ *Recherches sur la Folie Paralytique.*

|| *Die Psychosen.*

§ *Progressive Paralyse der Irren.*

¶ *Handbuch.*

** *Lehrbuch.*

†† *Compendium.*

‡‡ *Buffalo Medical and Surgical Journal, July, 1883.*

||| *Insanity; its Classification, Diagnosis and Treatment.*

§§ *Gazette d-s Hôpitaux, Sept. 11, 1883.*

there occurs depression, and this, later on, develops into the hypochondriacal type.

Laségue* states that

The first moral modification is, much more frequently than is generally stated, depression. The patient is sombre and preoccupied without being able to assign a cause for his preoccupation.

Lunier† is of opinion that depression, hypochondriasis and their results, occur as well as conditions of exaltation.

In my experience, while delusions of persecution and depression are not the rule in the fully developed and pure cases of the disease, they may present themselves, and are then as wild, vague and absurd as the expansive delusions.

S. V. Clevenger‡ expresses very similar opinions. Camuset,|| states that if patients be

Observed with care it will be found that most of them do not have delusive tendencies in the sense of *grandeur*, but that they have depressed delusive tendencies, or none at all.

Goldsmith§ is of opinion that

Among the mental symptoms the marked exhilaration, with delusions of wealth and greatness, is present in less than a fourth of the cases. Simple failure of mental capacity and activity and mental depression are the more frequent first mental changes.

Voisin¶ and Burlureaux** state that this disease very often is accompanied with depression, delusion and hypochondriacal symptoms. Mickle†† says:

To read the descriptions of some authors, one would suppose that symptoms such as these were the almost constant and abiding mental symptoms. This, however, is rarely the case, even in the expansive form. More often these symptoms alternate with hypochondriacal feelings and ideas; or with a whining, moaning expression of peevishness and distress; or with childish and unnecessary fears and terrors; or with a sullen, irritable state of feeling; or finally, with a condition of simple dullness, stupidity and confusion.

Austin‡‡ states that this affection

* Thèse de Paris, 1853.

† *Annales Médico-Psychologiques*, 1849.

‡ *Chicago Medical Journal and Examiner*, May, 1884.

|| *Annales Médico-Psychologiques*, July, 1883.

§ *Archives of Medicine*, August, 1881.

¶ *Paralyse Generale*.

** *De la Melancholie dans ses Rapports avec Paralyse Generale*.

†† *General Paralysis*.

‡‡ *Op Cit.*

May be mistaken for mere melancholia. * * * * The manifestations of depression are probably as numerous, though scarcely as obtrusive, as those of exaltation.

Marce* called attention to the fact that depression, which occurred early in the disease, often persisted until the mental deterioration was well-marked. Luys† is of opinion that

Historians of this disease have too frequently disregarded the hypochondriacal and depressive features of this disease, which are as characteristic as any others.

Linaz‡ states that every variety of depression may be present in this affection. Materne|| has called special attention to a certain class of victims of this disease, who have depressive delusions about being very little. Chégu§ expresses the opinion that many cases of this disease reported as being secondary to melancholia, are really cases which present symptoms of depression. Bristowe¶ expresses the opinion that the melancholic type is not so frequent as the grandiose, and is in marked contrast with it. It may present the form of simple melancholia or may assume a hypochondriacal type. Jelly** is of opinion that early in this psychosis melancholia may make its appearance, which is distinguished from ordinary melancholia by the greater mental weakness displayed by the patient.

Hammond†† states that he is satisfied that the melancholia type is much more common than is generally supposed. J. T. Whittaker‡‡ says that particular stress is usually laid on grandiose delusions as diagnostic of general paralysis in the insane. The importance of this symptom is generally exaggerated, the opposite condition—melancholy and depression—being very frequent. But as grandiose delusions are so pronounced when present, and more

* *Traite Pratique du Maladies Ment.*

† *Maladies Mentales.*

‡ *Thèse de Paris, 1857.*

|| *Thèse de Paris, 1869.*

§ *Thèse de Paris, 1869.*

¶ *Practice of Medicine.*

** *Boston Medical and Surgical Journal, Vol. CX.*

†† *Treatise on Insanity.*

‡‡ *Cincinnati Lancet and Clinic, Vol. VIII., New Series.*

pressive, they are, therefore, considered the most prominent feature.

B. F. Herr* is of opinion that depression is far from exceptionally present in this disease. Billod† is of opinion that depression and hypochondriasis are not infrequent phenomena in this disease. Moreau (de Tours)‡ states that hypochondriasis and depression are relatively frequent and characteristic phenomena in this disease.

* Transactions Pennsylvania State Medical Society, 1882.

† Des Maladies Mentales.

‡ Bulletin de L'Academie Imperiale de Medecine, 1860-67.

Report on a Case of Acute Mania.

TREATMENT IN THE ACUTE STAGE BY EXERCISE AND FEEDING.—RECOVERY.

By ALEX. NELLIS, JR., M. D., Willard, New York.

THE following case of acute mania is not thus fully reported to show the course of the disease through its several stages, as there were no unusual characteristics, but more particularly to illustrate the care and treatment of such cases in asylums, and to show the influence of active muscular exercise in allaying the restlessness that generally marks cases of mania :

A. W—, admitted to the asylum Feb. 22, 1884, was a strong, athletic farmer, of temperate habits. This, his first attack of insanity, was developed about ten days previous, during a religious revival. Since that time, he has taken his food, and slept, indifferently; has had active aural hallucinations, and claimed to be the Savior; is incoherent in conversation, noisy, demonstrative and violent, at times; and it was necessary for several attendants to remain with him, as he had assaulted his physician, and threatened to kill his wife and child. When it became impossible to longer care for him at home, he was committed to the asylum. He violently resisted, but was overcome, and bound by several men, who placed him in a sleigh, and held him down during the drive of fifteen miles to the asylum. On admission, he heard voices constantly; was exceedingly apprehensive of being killed, and when questioned, answered in monosyllables. Physical condition: pulse seventy-two and of good strength; tongue much furred, and bowels costive. He partook freely of food at supper, and was quiet, feeling tired from his long struggle on the way to the asylum. At eight o'clock P. M. he was given a warm bath at 99°, placed in bed, and given a draught containing forty grains of bromide of sodium, and one grain of extract of Indian hemp. At nine o'clock P. M. he became much disturbed, left his bed,

was noisy and demonstrative, and threatened violence to his imagined persecutors. He showed no resistance when two attendants entered his room, and soon returned to his bed, voluntarily, and became quiet. At eleven o'clock P. M. the night attendant found him lying on the floor of his bed-room, listening to voices in the basement, and induced him to return to bed without resistance.

Feb. 23. He was reported as having slept for several hours after midnight. At the rising hour, he was greatly agitated, and threw himself upon the floor, refusing to dress; four attendants assisted him to dress, after which he entered the dining-room adjoining the ward; he ate insufficient breakfast. His mental disturbance increased soon afterward, when six attendants, in the presence of the physician, removed him to a more refractory ward, where his hands were restrained with wristlets and a belt. One thirty-second of a grain of hyoscyamin (Merck's) was administered, hypodermatically. He showed much apprehensiveness, and complained of persons threatening to kill him; talked incessantly, and said he was under mesmeric influence; was more passive in about twenty minutes, when the restraint was removed; he ate freely and sufficiently, of his dinner. His strength being good in the afternoon, it was determined to give him an abundance of exercise in the open air, and nutritious food. He was sent out in charge of three attendants, to walk a distance of three miles, and when he returned, drank a pint of milk, and said he felt first-rate. He was in good condition, and was sent out during the afternoon in charge of three other attendants, and walked three miles farther, six in all. After entering the ward, he drank another pint of milk; was quietly disposed, and said he felt better for the exercise; he ate the usual supper with additional milk; the same potion was given him at bedtime, as on the previous night.

Feb. 24. Reported as having slept well last night; could not send him out for a walk, to-day, on account of the inclemency of the weather; remained in a quiet and comfortable condition during the day, and slept much while seated in the ward; took sufficient nourishment.

Feb. 25. Slept fairly well last night, but showed much mental confusion after rising, and talked incoherently to all who gave him attention, but manifested no violence; ate his breakfast, drinking freely of milk. Thirty grains of bromide of sodium, three times daily, was prescribed. He

was sent out in charge of three attendants during the morning, walked a distance of six miles, and drank two pints of milk on his return; his strength was good, he felt comfortable, and ate freely at dinner; conversed incoherently; in charge of three attendants he walked three miles farther in the P. M., and on his return drank a pint of milk. These and all succeeding walks were directed by the physician, who also observed his condition closely. His excitement had nearly passed off, he seemed to be more rational, ate his usual allowance at supper, besides two eggs, a pint of milk and some beef tea, and was disposed to retire early to bed.

Feb. 26. Slept last night, and ate his breakfast freely. It was directed that he be given two eggs and a pint of milk between meals; very apprehensive, and walks and talks constantly; demanded his release in a threatening manner. In the P. M. he was sent out with three attendants, and walked a distance of six miles. His strength was well supported, and all restlessness had subsided. Continued the bromide of sodium and hemp potion at bedtime.

Feb. 27. The night attendant called at his room several times last night, and found him sleeping. He ate his usual breakfast, but was boisterous for about an hour, asking questions in rapid succession. He was induced to go out for a walk with two attendants, and remained about three hours, during which he walked nine miles. His strength was well maintained; he drank freely of a custard of eggs and milk, and remained passive the remainder of the day.

Feb. 28. Slept very well last night; soon after rising, became much agitated, and continued so till noon; gave expression to many delusions, and still apprehensive of being harmed; partook plentifully of nourishment; quiet and pleasant in manner in the P. M.; the weather was too inclement to send him out to walk.

Feb. 29. Did not sleep much last night, which was probably due, in part, to the omission of exercise in the open air, yesterday; much confused, but not demonstrative; was given nine eggs and several pints of milk during the day; refused to walk in the open air.

Mar. 1. Rather restless last night; arose in a quiet mood, and ate sufficiently of eggs, milk and beef tea; sent out in charge of three attendants in the A. M., and after walking a distance of three miles, was given two eggs and a pint of milk; his strength kept up well.

Mar. 3. Slept well last night; arose in much mental confusion, and became boisterous after reading an account of his insanity in a local newspaper, given him by another patient; complained much of hearing strange voices threatening to kill him; exceedingly loquacious, but refused to walk out; was given six eggs and four pints of milk.

Mar. 4. Slept poorly last night; shows much incoherence in conversation; took six eggs and four pints of milk, but could not be induced to walk out; disposed to be perverse.

Mar. 6. The night attendant reported him as being more restless last night. He arose excited and demonstrative; talked in a loud tone of voice, made threatening gestures, resisted care of attendants, assaulted his physician, positively refused to go out, and made violent threats when urged to do so. Prescribed one thirty-second of a grain of hyoscyamin (Merck's), with thirty grains of bromide of sodium, three times daily.

Mar. 7. Slept fairly well last night. After rising in the morning, was more noisy and demonstrative than at any time since admission; still declines to walk in the open air; took the usual number of eggs and pints of milk. His hands were restrained with wristlets and a belt for one hour, to prevent violence, and when restraint was removed, he was more passive.

Mar. 11. Has slept very well during the last few nights, but still declines to walk out; is much confused and somewhat demonstrative; was given the usual number of eggs and quantity of milk during the morning. At the usual hour for retiring, he manifested much perverseness; would not undress, and removed his bedding from his bed-room to the ward, and laid himself upon it. This was reported to his physician, who went at once to the ward, and in the presence of four attendants, requested him to have his bedding returned to his room, and to undress and go to bed. This he consented to without resistance; refused all nourishment at supper time.

Mar. 13. Slept but little last night, and broke several panes of window glass in his room; also broke some glass in the ward during the day; refused sufficient nourishment; greatly confused; the weather was not suitable for walking out.

Mar. 14. Sleeps poorly; makes violent demonstrations if opposed; disposed to remove and destroy his clothing, and was found in a room, in a nude state; administration

of the hyoscyamin discontinued; takes insufficient nourishment, fails in strength, and is not in condition for exercise outside.

Mar. 17. The acuteness of his disease has passed off, and he shows mental and physical depression; is not taking enough nourishment to sustain his strength; discontinued all medicine but thirty grains of bromide of sodium at bedtime.

Mar. 19. Rests well at night; confused and melancholy to-day, and threw himself head foremost on the floor, producing a slight bruise of the scalp; declines to take much nourishment.

Mar. 22. Slept last night, and took only a small quantity of food; manifests much mental pain. It is necessary to resort to forced alimentation, to support him; feeding is done by the physician, assisted by four attendants, and consists in administering liquid food by means of a common bulb syringe, attached to a soft rubber nasal tube; in this way he was given three eggs and two pints of milk, with but little resistance.

Mar. 24. Reported as having slept last night; very melancholy, and weeps easily; gave him three eggs, two pints of milk, beef tea and one ounce of whisky in the morning, through the nasal tube, and he took nourishment voluntarily in the afternoon.

Mar. 25. Slept some last night; given same amount of nourishment as yesterday, per nasal tube; depressed and wants to die, and while being bathed he attempted to hold his head under water; was closely observed by an attendant, to prevent suicide; one attendant, at least, is always present when patients bathe; refused all nourishment in the afternoon.

Mar. 26. Slept last night; still necessary to administer nourishment to him to keep up his strength, and he seldom resists; much depressed.

Mar. 31. Removed to a quiet ward; refused to take sufficient nourishment voluntarily, and administered it through nasal tube; sleeps well at night.

April 10. Still melancholy; can be induced to take only two pints of milk daily, and strength fails; complained of constipation, which was relieved after administering an enema. Reported as having slept well, latterly, at night.

April 15th. He shows considerable physical prostration; is permitted to remain in bed, and eats a fair amount of food.

April 17th. Will administer to him twice daily, through the nasal tube, two ounces of whisky, four eggs, two pints of milk, and a drachm of a tonic laxative.*

April 26. He has gained flesh and strength, and is permitted to sit out in the sunshine, attended; answers questions in monosyllables, and in a low tone of voice; observes his surroundings, but takes no interest in them; he is convalescing, and it was directed that he be kept out in the open air as much as possible, and that his walk be gradually extended from day to day. Still unwilling to eat, and is given nourishment twice daily, as usual. He says it is wrong to eat, that he is fed too much, and weighs 250 lbs.

May 6. Will not eat, and is given the usual eggs, milk, whisky and tonic; enjoys walking about the grounds, and is gaining both mentally and physically. Very anxious to return home; no suicidal tendencies observed.

May 12. Still refuses to eat, and will not enter the dining-room. He requires an increase of nourishment, and is given, per nasal tube, one ounce of whisky, four eggs, two pints of milk and one drachm of the tonic thrice daily. When requested to eat, he invariably answers, "I can't." He is probably influenced by delusions; sleeps well at night, and continues his exercise about the asylum grounds. Was visited by his wife, with whom he conversed freely; after her departure, he talked and laughed much; he had been depressed since March 17th.

May 19. Persistently refuses to eat, and is fed by his physician morning, noon and night, the same as one week ago; makes no resistance or complaint, and his manner is quite indifferent; improving mentally and physically; converses coherently.

May 29. Shows decided improvement, and asked for books and newspapers, which he seemed to read with much interest; is cheerful, and says he feels well and wants to go home.

May 30. His physician was called away from the asylum, and he promised to eat; did so; first nourishment he has taken of his own accord since April 17th; interests himself in his surroundings, assists the attendants in the work of the ward, and is happy.

June 17. Has eaten well since May 30th; weighs 165

* Take Strychniæ Sulph., gr. iss.; Ferri Sulph., drachm. iss.; Magnesii Sulph., drachm. ix.; Acid. Sulph., dil., fl. drachm. iss.; Syrup Simp., fl. oz. iss.; Aquæ, fl. oz. ivss. M.

lbs.; confined to bed with a perineal abscess, and somewhat depressed.

June 21. Eats and sleeps well, and has recovered from the abscess; disposed to do some light work on the lawn, directed by an attendant. Has nearly recovered his usual mental and physical vigor.

July 1. Left for his home without consent, and, as his convalescence seemed almost complete, he was permitted to remain.

Sept. 15. Since going home he has been apparently well, and as competent to manage his business as before his sickness.

During the acuteness of his disease, the weather was too inclement, at times, to allow him sufficient exercise out of doors, without great risk from exposure. Had the weather been favorable, he could have remained out during the day, and probably his abnormal mental and muscular energy would have been subdued more rapidly, and the duration of his attack shortened. The amount of nourishment given might be considered unusual, but experience shows that such cases require about three times the quantity necessary to sustain the normal condition of health. From two to three pints of liquid food could be introduced into his stomach, at once, without causing any discomfort, and digestion and assimilation always seemed active.

Perhaps the number of attendants employed in caring for this case, when out for exercise, may seem unnecessary, but had the patient's maniacal paroxysms been observed, in all probability the precautions taken would be considered proper. These attendants fully understood that they had charge of a sick man.

During his asylum treatment, mechanical restraint was used for about one hour and a half, and this could possibly have been avoided had the physician been less apprehensive that he would do violence during the two paroxysms in which he was restrained. He received no injury other than a slight bruise on his scalp, inflicted by himself when extremely depressed.

For the purpose of having a more complete clinical history, in the early stage, a pulse and temperature record was commenced, but the observations proved so annoying to the patient, and increased his apprehensiveness to such an extent, that it was discontinued.

The reporter wishes to state, that the treatment by exercise and feeding was suggested by reading Dr. Clouston's late book, "Mental Diseases," and by conversing with those who have observed the treatment in the Royal Edinburgh Asylum, and that it was not his intention to state definite conclusions from the record of a single case.

In conclusion, it is hoped that the report may have some interest for the general practitioner, if not for the alienist or neurologist.

Clinical Lectures on Dipsomania.*

DELIVERED AT THE ASYLUM OF ST. ANNE.

By M. V. MAGNAN.

LECTURE I.—HISTORY—ETIOLOGY.

SUMMARY.—Hufeland, Salvatori, Bruhl-Cramer, Erdman and Esquirol call dipsomania a distinct malady—a monomania. The description of the attack alone is not enough—a complete history of the patient's disorder is necessary. Dipsomania then becomes a group of symptoms, occurring as phases of hereditary insanity. Causes other than heredity have only a secondary influence. The attack of dipsomania is an attack of melancholia in outline.

CASE I.—Melancholia. Repeated attacks of dipsomania; alcoholic delirium. After the attack, loathing of alcoholic drinks.

GENTLEMEN:—Hufeland was the first writer to use the word dipsomania to denote an irresistible impulse to drink intoxicating liquors to excess; and M. Foville, in his admirable contribution to the "Dictionnaire de Médecine et de Chirurgie Pratiques," calls attention to this origin of the term. In 1817 Salvatori, an Italian physician, practising in Moscow, described a disease which he termed oinomania. Two years later a German physician, Bruhl-Cramer, also a Russian practitioner, published at Berlin, a monograph, entitled "Ueber die Trunksucht" (On the Mania for Strong Drink), in which he treats not of drunkenness as a habit or vice, or of mental disturbance resulting from the habitual and excessive use of spirits, but deals with an overmastering and paroxysmal craving for drink. In the preface to this work, Hufeland proposes to consider the affection analogous with nymphomania.

If, however, we retain this term we shall presently see

* Translated by Henry R. Stedman, M. D., Boston, Mass.

the impossibility of using it in the extended sense which this author allows it. Several years later (in 1825) Dr. Erdman, basing his conclusions on a collection of cases also made in Russia, described the attack of dipsomania most accurately. Marcé also, who has devoted himself to the study of its prodromal phases, borrows from the latter article the singular case of a Russian laborer, who, though ordinarily sober, would fall to drinking brandy steadily for several days following certain periods of depression. Carpenter, Esquirol, Magnus-Hus, Forbes Winslow, Morel, Trélat, Marcé, Griesinger, Foville, Delasiauve and several others, have also described the disease, but from different stand-points, and are utterly at variance regarding its nosology.

For ourselves, let us say it once for all, we shall not consider dipsomania in the light of a morbid entity—a distinct disease, but as a syndrome or group of symptoms of a highly important nature and deserving special study.

This irresistible craving for drink recurs at irregular intervals, in the form of paroxysms, bearing a certain resemblance to short attacks of impulsive melancholia. This morbid propensity to drink has its counterparts in many other syndromes, such as the impulse to commit theft or to set fires, the dread of dust, pins or broken glass, the fear of spaces, distress in seeking a word, perversion of the sexual instinct, etc., defects which hold the same place in the mental scale as do vices of conformation in physical disorders. For the clinical observer their presence alone decides the question in favor of hereditary predisposition. They form the retinue, so to speak, of hereditary insanity.

ETIOLOGY.—The chief factor in the etiology of dipsomania is heredity. We shall find all the patients we are to see, predisposed to insanity through their ancestors. Still we must admit that occasional causes have a certain effect upon the attack; but this is a secondary influence, which only affects the manifestation itself, and has not

such an important bearing upon the morbid origin of the trouble as one is tempted to claim for it.

Some authors, Bruhl-Cramer, Erdman and Magnus-Hus, instead of seeing in the impulse to drink an episode, a phase, a manifestation of a deeper constitutional condition, believe that impulses only occur in persons who have been addicted to alcoholic excesses for protracted periods, and therefore this manifestation means to them only an aggravated result of drunkenness.

This opinion, together with that which would make of dipsomania a separate disease, cannot stand against a complete study of the facts.

Esquirol,* who calls dipsomania a distinct disease, and sees in it a single symptom only, viz., the craving for drink, reports seven cases, without alluding to their family history. He takes up the cases at the point where the monomania of drunkenness—the irresistible desire for drink—manifests itself, and describes the attack without concerning himself with the phenomena which have preceded or followed it—without taking into account hereditary conditions. It is a detached page in the history of the patient's disease which cannot be understood if studied by itself.

However much we may admire our illustrious master we cannot help regretting such an oversight. No matter how valuable his observations may be, as a description of symptoms, they teach us nothing of the nature and origin of the morbid condition. We must of necessity therefore, turn back to the antecedent history of these patients, and we shall then find that they have shown peculiarities of character at various periods of life before being driven to drink. These eccentricities are indications of a more deeply seated mental disorder than would appear if we confined ourselves solely to the observation of isolated symptoms.

Indeed, by a fragmentary examination of the case of any insane person, no matter who, it would be easy to find several distinct monomanias.

* *Traité des Maladies Mentales*, Tome II., p. 72.

Other authors have confounded the symptoms of dipsomania with the causes which lead to its functional gastric troubles; for example, such as dyspepsia, which have been regarded as causes of the impulse to drink, should, on the contrary, be considered, as in fact they are, a consequence of the disease of which they form in the end a constituent part. It is the same with certain peculiar indefinite states which we are too ready to call hysterical, and which are in reality but natural peculiarities habitual with dipsomaniacs. The same may be said of the depression and gloominess which, far from being a cause of the attack, is only its first manifestation.

Menstruation and the menopause have also been given a prominent place in the etiology of dipsomania. Without overestimating the importance of the menses in this disease, we must admit that they exert some influence, although it is manifested almost solely in connection with the attack, tending as they do to encourage its return. This will be more readily appreciated when we consider the nervous disturbances experienced by women during the catamenia. In a case I am about to show you, it will be readily seen that although menstruation exercises a certain influence upon the periodicity of the attacks, it is going too far to assume that it is the cause of the malady itself. We will question her now, as her case will serve as a rough sketch to guide you in following the various characteristic manifestations we are about to study.

Mary D——, forty-five years of age to-day, has been melancholy since the death of her husband four years ago. Occasionally, and especially during the last eighteen months, she has been seized with an insatiable desire to drink, each of these attacks being preceded by a feeling of profound depression, discouragement and helplessness. She complains of a sense of constriction at the stomach and throat, which recurs whenever the impulse to drink comes on. At first she forced herself to overcome this craving, and would upbraid herself for it, but finally, unable to resist it any longer, she ran to a dram shop, bought some liquor,

secretly concealed it about her, and on reaching home shut herself up in her chamber and drank it.

After a time her despondency increased and alcoholic phenomena manifested themselves. She lost sleep and experienced painful hallucinations. She saw grimacing faces, death's heads with rolling eyes, and butterflies of every hue fluttering about her. She also heard voices threatening and abusing her, and felt prickings on her skin, which she attributed to vermin.

The symptoms soon subsided, and the patient remained for two or three months perfectly sober, without a thought of drinking, and (a most instructive fact) the odor of any kind of liquor would nauseate her. She could scarcely drink ordinary red wine. When any allusion is made to her excesses she disclaims any fondness for drink. She becomes intoxicated against her will. To quote her words, "It is not an appetite,—I drink in spite of myself."

At the menstrual periods she grows irritable and impressionable, and has flushes of heat in the head. Moreover, when the desire to drink makes itself felt, under these conditions the craving is more pressing, and she is less able to resist it. Such is the influence of the menses in her case, and it is precisely in this manner that their action is manifested in other patients when it is exercised at all.

It is interesting to note this development of dipsomania in a patient who has long been a victim of melancholia, and also to see alcoholic phenomena occurring after repeated drinking spells; but we shall see other examples of this.

In this case it has been impossible to obtain any family history. This is especially unfortunate, as it is to hereditary predisposition that we look, generally speaking, for the cause of impulses to drink. We shall find abundant proof of this in the course of our investigations. Of eight cases which I shall show you two have a double converging heredity, and five a simple heredity. The history of the other case is defective.

M. Foville, in the above-named article, after considering dipsomania as a particular form of partial mania, changes

his opinion farther on regarding its importance in classification, and wisely we think, concludes that it is not a separate affection. He says, in fact:

Therefore, instead of considering it (dipsomania) as a genuine monomania, as Esquirol and Marcé have done, it seems to me more correct to regard it, in common with several modern writers, chiefly Morel, Griesinger, Skae, Forbes Winslow and Trélat, as a symptom belonging to a general disease.

Facts will come to our notice, as we advance, which will make it impossible for us to entertain any other view. Moreover, monomania in general, a classification introduced by Esquirol, to include "those mental disorders which are characterized by a partial lesion of the intellect, the emotions or the will," is fast losing supporters. Falret the elder, raises doubts as to its existence, and declares that it is a doctrine founded on wrong philosophic principles, on superficial and imperfect clinical observation, and on faulty interpretation of morbid phenomena.

For my part, I have completely discarded the doctrine of the monomanias, generally speaking. While admitting that impulses may be the most salient features in certain forms of insanity, I can only concede to them a secondary and symptomatic value, believing as I do that the mental condition in the midst of which the impulsive act shows itself should be regarded as the essence of the malady. Nevertheless, in justice to the famous advocates of the monomanias, it must be admitted that the impulse becomes, in some cases, so prominent and overmastering, and consumes and enslaves the patient's energies so completely, that the disorder acquires an appearance of individuality which lends weight to this theory. Be this as it may, the patients whose cases we are to examine will show in the clearest manner that, although the desire for drink may be the most prominent feature of dipsomania, it does not of itself alone constitute the disease. It embraces a group of symptoms which form an episode, so to speak, of a deeper mental state, dependent on hereditary conditions.

I shall presently show you a woman whose history is particularly interesting, and who first came under our

observation as a suicidal melancholiac. Then, after an attack of exaltation and another of nymphomania, we found her under the influence of drinking impulses, which shortly afterwards became complicated with homicidal propensities. Here also we see only different manifestations of a common pathological origin. In this case an attack of dipsomania occurred while she was under our observation. Not a step in the attack was wanting. Despondency, discouragement, a feeling of helplessness, fatigue, insomnia, anorexia, precordial distress, a burning sensation in the throat, and finally, intense and irresistible craving for drink. Happily for the patient, however, she was protected from the impulse by being prevented from gratifying its demands. Consequently, the attack was shorter and less painful, and was not followed by the profound remorse which usually results from such excesses. This paroxysm, not being attended, you observe, with its usual terminal feature—excessive drinking—may be looked upon as a rough sketch of a short attack of melancholia.

[Lecture Second will appear in the next number.]

[Advance Reprint from the *Medico-Legal Journal*, for December, 1884.]

Madness and Crime.*

By CLARK BELL, ESQ.,

President of the Medico-Legal Society.

THE legal tests of responsibility of the insane, as applied under the English law, and in the American States, have given rise to great discussion, which must interest and arouse every thoughtful legislator, in the inquiry now forced upon the public mind, which is intensified by the cases of Gouldstone and Cole in Great Britain, and of Guiteau, and similar cases here.

The medical profession may be said to substantially agree as a body, that in homicides by the insane, a knowledge of the character of the act committed, and of its being in violation of law, is not a safe and reliable test of the responsibility of the perpetrator. Indeed, medical men substantially concur that the insane, who are confessedly responsible for their acts, are, as a rule, able—not only to discriminate between right and wrong—but to comprehend, and know, that their act is in violation of law, and frequently understand its full nature and character and the legal consequences.

The legal profession has been trained to accept legal decisions, precedents, and the settled authorities, in a long line of cases, and to inquire and understand what the law really is, rather than to investigate its justice, its philosophy, or the reasons and principles upon which it is based.

The inquiry, to the legal and judicial mind, is, What is the *lex scripta*? and so far as the judiciary are concerned, they are undoubtedly bound by it, and have no discretion but to enforce by their decisions its provi-

* Read before the Medico-Legal Society of New York, September 24, 1884.

sions, as settled by the courts, in the current of decisions.

Both professions, and the public, are now face to face with an acknowledged vice, in the existing laws of all English-speaking countries, as to the true tests of legal responsibility in cases of insanity.

We should investigate this question with courage, without prejudice, and in the light which science has brought to the solution of much that was misunderstood and unknown, when the judges gave their answers in the celebrated case of McNaughten, in 1843, to the questions propounded by the House of Lords after the acquittal of

E R R A T U M .

On page 698, twelfth line, read "*irresponsibility*" for "responsibility."

lated the dogma, that knowledge of right and wrong, and ability to discriminate between right and wrong, with sufficient power of intellect to enable the accused to know and understand the nature and consequences of the act at law, was the true test of responsibility in such cases.

The most careful, conscientious, discreet and humane alienists, now tell us that the insane do know that the act is wrong, often fully understand its nature and consequences, and, as a rule, can discriminate between right and wrong, in acts, which they commit under the force of insane delusions, which they are not able to resist, and which affect and oftentimes control their action, and they insist that these truths must be considered in determining criminal responsibility in all these cases.

The thoughtful men of the bar must acknowledge this to be a fact. They must concede that the rule of law, as interpreted by the English and American courts in many cases, is misleading and faulty, and that the whole subject demands the careful revision of the law-makers, and that at an early day.

The case of Gouldstone, who was tried and convicted at the September Term of the Central Criminal Court of London, 1883, before Mr. Justice Day, for the murder of his five children, illustrates fully the state of the present law in Great Britain, and the need of a speedy change in legal procedure in such cases.

That Gouldstone was insane can not be doubted, and that fact has been found since the conviction, upon a formal inquiry directed to be made by Sir William Harcourt, the English Home Secretary, by Dr. Orange and Dr. Clarke, eminent alienists, who reported him to be insane, upon which report he was reprieved by the government.

Gouldstone drowned three of the children in the cistern, and broke the skulls of the remaining two with a hammer. He said to his wife: "All the children are dead now. I shall be hung and you will be single." When the policeman arrested him, he said: "I have done it. Now I am happy and ready for the rope." On his way to the station he said to the officer: "I thought of buying a revolver to do it with, but altered my mind, as I thought it would make too much noise.

"I thought it was getting too hot, with five kids within three and a half years, and I thought it was time to put a stop to it."

Mr. Poland, for the Crown, claimed, and truthfully, that Gouldstone knew thoroughly well what he was about, that he was fully conscious at the time that he was committing a crime against the law of the land, that he knew the nature and quality of the act he was committing, and that it was a crime, and he claimed that Gouldstone was responsible under the law for the act.

The prisoner's father swore that the prisoner's mother was deranged, and had been for years; had attempted suicide twice; that about eight weeks before the trial she had threatened to take her own life; that her sister was also deranged; that William Gouldstone, his second cousin, died in a mad-house, and that his father's sister wore a strait jacket for some years.

Charles Gouldstone, cousin of prisoner's father, deposed that his son had been confined in a lunatic asylum sixteen months, since 1880.

Dr. Sunderland, who attended prisoner's mother and her sister, described the form of insanity under which both suffered as despondency, or melancholia.

Dr. Geo. H. Savage, an eminent English alienist, principal physician at Bethlehem Hospital for the Insane, who had examined the prisoner, pronounced him of unsound mind at the time the act was committed.

Dr. Savage's evidence as to his conclusions, based upon the evidence of insanity on paternal and maternal side, was excluded by the court, holding that a doctor was entitled to give his medical evidence, but not to draw a conclusion, which was the province of the jury.

Dr. Savage swore that insanity, if proved on maternal side, created a tendency to insanity in the prisoner, which would be greatly increased if insanity was proved even in a remote degree on paternal side, citing the case of the last patient at Bethlehem Hospital who died—a woman who had killed her whole family. Dr. Savage, on cross-examination, swore that he had examined the prisoner only about a quarter or half an hour; that the prisoner's conversation did not indicate insanity; that he could not certify him to be a lunatic from what he had seen; and that Gouldstone spoke rationally as to the crime and understood its penalty.

That when he had said he thought the prisoner of unsound mind he based his opinion upon his examination and from what he heard in court, that he thought the prisoner knew the penalty of what he was doing at the time, and that he had killed the children, knowing the penalty for so doing was death.

Judge Day charged the jury: "That the matter of law was for the court, and the jury were bound to take its instructions with regard to the law, in doing which they would be incurring no responsibility upon themselves.

"That as a matter of law if the prisoner, at the time

he killed the children, knew the nature and quality of the act he was committing, and knew that he was doing wrong, then he was guilty of willful murder.

“That the only question for them to determine was whether the prisoner knew the nature and quality of the act he was committing, and whether he knew it was wrong and in violation of law.”

The judge, under the act of Parliament passed August, 1883, charged the jury: “That if they found the prisoner was insane at the time he committed the act, they would have to return a special verdict that he committed the act, but was insane at the time.

“If, on the other hand, they found that he knew the nature and quality of the act when he killed his children, and that he was not of unsound mind, they must find him guilty, and the new act of Parliament would not affect their verdict.”

The verdict was “Guilty of willful murder.”

This case excited great interest in England. Dr. Savage, in response to public assaults, published the following cards:

TO THE EDITOR OF THE *Times*:

SIR.—I feel it my duty to write shortly about the case of William Gouldstone, the murderer of his five children. Justice demands further investigation of the case. The facts are plain. A young man of twenty-six, who had been a well-behaved and industrious man, odd in some of his ways, is seized with a fear of impending ruin to himself and family, and kills them to send them to heaven. The act is an insane one, and I think little more should have been needed to prove it to be such; but it was proved that his mother and aunt both suffered from precisely similar fears of ruin, and though the judge ridiculed the importance of a second cousin on his father's side being insane, I would repeat emphatically that there being an insane taint which could have been shown to exist in several second cousins and others on the father's side, was of great importance. A great deal was made of my statement that I could not certify to his insanity from my personal interview of fifteen to thirty minutes. It does not follow that the man may not have been insane at the time the act was committed.

There is a feeling abroad that a man if insane and irresponsible is always so, whereas the most insane people often are collected enough during the greater part of their lives. The poor man Gouldstone is, to my mind, a typical case of insanity, associated with insane parentage. He had done his work, which was purely mechanical, well, but he had no power to

resist, and the act he perpetrated depended on an insane feeling of misery. I have no doubt he would have sooner or later developed delusions.

The medical officer to the House of Detention told me he considered him to be suffering from melancholia.

I trust this prisoner will not be allowed to be hanged. I may say that I am not one who is in the habit of defending criminals on the plea of insanity.

I am, yours truly,

GEO. H. SAVAGE, M. D.,
Physician Bethlehem Hospital.

September 15, 1883.

TO THE EDITOR OF THE *Daily Telegraph*:

SIR,—I feel bound to take notice of the letters written to you by "One of the Jury" in this case, as there seems to be great danger that the prisoner will suffer through misunderstanding of my opinion. The skillful cross-examination of Mr. Poland gave me no opportunity of representing my own opinion on the man's sanity. I was forced to own that in a short interview, from the facts seen by myself, I could not have signed a certificate of insanity. I doubt not but that if I had expressed a willingness to sign one that the haste of the proceeding would have been used as an argument against its value.

I did say, however, that, taking my examination with the history of the man and the crime, I had no doubt that he was of unsound mind. The judge opposed strongly attempts to get my opinion, believing the common sense of the jury to be the best judge of sanity. This is all very well if the facts are explained by one understanding their value, and not otherwise. That the patient knew he had killed his children, and that he knew he might be hanged, I could not deny, but knowledge of this kind does not exclude insanity.

I have patients of the most insanely dangerous class here who have said the same things which Gouldstone said, and who know as much as he does. Yet they are mad. William Gouldstone ought not to suffer without a careful, independent investigation of his history and the history of his crime, one not confined to an examination of twenty minutes or half an hour.

I am, yours truly,

GEO. H. SAVAGE.

Bethlehem Hospital, Sept. 17.

The foreman of the jury published a card in the *Daily Telegraph*, in which he stated: "The judge presiding at the Gouldstone trial told us (the jury) that the law regarding insanity was this:

"That if a person was proved to be of sound mind up to the time of committing a certain deed; *if he knew the nature of that deed and the penalty it involved*; and if after this he still appeared of sound mind, we are bound,

according to the law, to say such a person was not insane." The report of the trial I take from the *Times*, and it is doubtless more exact as to the charge of the judge than the statement of the foreman of the jury in his published card.

Mr. William Tallack, of the London Howard Association, published a card in the *Times*, from which we make the following extract:

TO THE EDITOR OF THE *Times*:

* * * * *
 SIR,—There is one department of the law, that affecting homicidal crime, where a peculiar obscurity, or rather conflict, exists, at least in many instances; where the letter of the law, though plain, is in clear collision with the consensus of the best scientific medical observation also, and therefore with equity and justice. The case of the Walthamstow murderer, now under sentence of death, affords an illustration. It was unmistakable, from the evidence at the trial, and, indeed, from the prisoner's own admission, that he well knew the nature of the act he was committing. Hence, too, that act is, plainly and legally, "willful murder." But, from the testimony of the physician of Bethlehem Hospital and others, it is similarly obvious that, notwithstanding this, the condition of the man's mind was, to say the least of it, very abnormal and doubtful.

And in so far as this may be the case, it is appropriate to bear in mind the very important resolution unanimously adopted at the annual meeting of the Association of Medical Officers of Asylums and Hospitals for the Insane, held at the Royal College of Physicians, London, on July 14, 1864, as follows:

"That so much of the legal test of the mental condition of an alleged criminal lunatic as renders him a responsible agent, because he knows the difference between right and wrong, is inconsistent with the fact, well-known to every member of this meeting, that the power of distinguishing between right and wrong exists very frequently among those who are undoubtedly insane, and is often associated with dangerous and uncontrollable delusions."

Such a resolution as the above by such a body is a virtual condemnation of the law by the responsible official exponents of modern medical science. And this, taken in connection with a series of Home Office precedents for interposition, constitutes a valid reason for expecting the Home Secretary, in such a case as the present one, to seriously reconsider the sentence.

* * * * *
 Yours truly,

WILLIAM TALLACK.

Howard Association, London, Sept. 17.

Dr. N. Wood, St. Luke's Hospital, published a card in the *Times*, from which I make the following extract:

TO THE EDITOR OF THE *Times* :

* * * * *

SIR,—In any other case than murder an irrational act is accepted as ground at least for suspicion that the mind of the perpetrator is disordered; but in cases of murder no account is taken of the unreason of the act. The fact that a man of good character, under the influence of a cause, or causes, held to be utterly inadequate by persons of sound mind, suddenly commits an act inconsistent with all his previous history, is in any other event than the perpetration of murder regarded as a very serious symptom, arousing the most anxious fears on the part of his friends, especially if he has insane relations; but the law ignores all this, and asserts that a man is responsible for his actions if he knows the nature and quality of the act he commits, and that it is forbidden by law. This standard of responsibility is directly opposed to the established judgment of every person who has had any experience of the disordered mind. I sympathize with Dr. Savage as to his sense of duty as a recognized authority in such a matter, impelling him to make a public appeal for some further investigation of the circumstances. I agree with him that the act of William Gouldstone, taking into account the whole history, was an insane act, and none the less so because on every other subject his conduct and conversation was rational.

I am, Sir, your obedient servant,

W. WOOD, M. D.,
Physician to St. Luke's Hospital.

No. 99 Harley Street, Sept. 17.

Dr. Savage publishes in the January number, 1884, of the *Journal of Mental Science*, of which he is one of the editors, over his own name, a review of the case, from which I make the following quotations:

I would, then, sum up the case in this way. A man with strong direct inheritance of insanity is reduced by bad feeding, pain and worry, to a condition of misery that was diseased. It was melancholia out of relation to its causes and its end. The whole thing was—as is general in mental disorder—a morbid development, not a devilish afflatus.

As to my examination in court, I can only say that the skill of the prosecuting counsel and the ruling of the judge made my opinion appear to be that the prisoner was responsible. I could only say "Yes" when asked if the man knew he had killed—I objected to the term "murdered"—his children, and again I could only say "Yes" when asked if he knew the punishment he had incurred. It would have been folly, as well as false, for me to have said otherwise.

But I distinctly added that I believed him to be insane at the time the act was committed. One most important point was made out of the fact that I said that I could not certify from facts observed by myself in my interview of from twenty minutes to half an hour.

I have been blamed for this, but I would defend myself by saying that counsel strictly bound me down to answer simply and solely as to facts observed by myself. Some say that, as a physician, I was bound to take

the history and the antecedent facts as part of the facts observed. This I must demur to, as in the signing of a certificate the facts observed by myself must be quite independent of information gained from others. I own this is often a foolish necessity of the law, but at present it exists. I did add that with the history and from the facts I believed him to be insane, but I was told by the judge that this was not for me, but for the jury to decide. And the judge's ruling quite outweighed my opinion.

Surely the jury have a right to be instructed by experts as well as by lawyers. Insanity and its various forms are not less difficult to understand than forms of law.

It would have been better that there should have been a contest of medical opinion, so that the jury should have heard the points for and against the insanity, rather than they should be wholly uninformed. It may seem strange that medical opinions should differ as they are seen to do in contested trials; but I for one do not see in this difference of opinion untruth or dishonor. Medical knowledge is as yet not infinite, and there are at least two sides to a shield.

I would suggest that, in any criminal case in which the medical officer of the House of Detention states any doubt about the sanity of a prisoner, the trial should not take place till several months' observation have transpired; thus a great deal of heart-burning would be saved, and some lunatics would not be tried as criminals.

Lastly, as to the test of sanity.

I fear the want of any exact knowledge of the causes of insanity must for very long leave us without any definition of the condition.

The lawyer will say, "Let common sense decide who are responsible, and what is to be meant by responsibility."

I know the most important safeguards are needed by society, so that the weak should be kept from becoming wicked; but at the same time I must protest against persons being punished for what they cannot help.

First, I would do away with all definitions of responsibility, and let each case be tried on its own merits. For just as a man is sane or insane in relation to his past history and to his surroundings, and not according to any standard that can be set up, so a man is responsible or not for his acts, according as they are the natural outcome of his uncurbed passions or are due to diseased conditions.

I grant that harm has been done in several ways by the medical expert, in too often and too indiscriminately dragging in such rare explanations as insane impulses alone.

Again, insanity is generally looked upon as like other acute diseases, which can be as readily diagnosed as fevers or heart disease.

It will not be understood in its criminal relationship till it is looked upon merely as the morbid life-growth from the diseased germ. The whole life has tended to irregularity, and in many, direct insane inheritance must be admitted to play a chief part in its production.

The subject is unsatisfactory, as may at once be seen from the different ways it is viewed by the public.

The suicide is always considered to be insane.

The testator, again, is practically considered sane, but it may be shown that he was insane without incurring odium.

But if a criminal is defended as insane, his defender runs a great chance of being looked at as criminal also.

Finally, are we to be bound by any definitions in giving our opinion? I should say "No." We have got rid of "delusions" as a necessary part of insanity. It is now, moreover, admitted that a "knowledge of right and wrong" is not necessary, and the question of loss of self-control and impulses is so delicate a one as to make it dangerous for an expert to attach much weight to it in giving evidence.

I am free to admit the fault lies in great part in our defective knowledge, but is also partly due to the habits of the law in exacting definitions from medical witnesses.

We can no more define insanity than we can by definition give an impression of a rainbow or a landscape.

GEO. H. SAVAGE.

THE CASE OF JAMES COLE.—He was indicted for the murder of his own child, aged three years and eight months, in August, 1883. The trial was held in the Central Criminal Court of London, October 18th, 1883, before Mr. Justice Denman.

I give the following account of that trial, taken from the *Journal of Mental Science*, for January, 1884:

James Cole, thirty-seven, laborer, was indicted for the willful murder of Thomas Cole.

In August he was living with his wife at Croydon. Their two children, Richard, aged fourteen, and Thomas, three years eight months, also lived with them. Prisoner had been out of work for some time. On the evening of the 18th he took the child Thomas by the legs and knocked its head against the floor and walls. As the prisoner ran away he said to a man he met—"I have murdered my child."

It was elicited from the boy Richard that upon the night in question, the prisoner complained that his wife had hidden people under the floor and in the cupboard, to try to poison him. He was jealous of his wife, but no ground for this suspicion appeared.

The plea of insanity was set up.

The surgeon and chief warden of Clerkenwell House of Detention gave evidence that the prisoner had displayed no symptoms of insanity, but had conducted himself in accordance with the prison regulations. On one occasion he became violent, but it was stated that it did not arise from unsoundness of mind.

For the defense, a brother of the prisoner was examined, and stated that some members of the family had been subject to fits.

Dr. Jackson, an alderman of Croydon, said he was quite certain that he was a typical lunatic, with dangerous delusions. In cross-examination, witness said the prisoner seemed to understand the questions put to him, and gave perfectly rational answers. He told him that he thought he was

being poisoned, that his wife had set men on to him, and that he used to shriek out and wake up at night, thinking that people were murdering him. The prisoner acknowledged that he drank occasionally, and that he had been many times in prison for violence. The prisoner said he found a little drink made him lose his senses. The prisoner knew perfectly well that he was on his trial for murder. When asked how he could have treated his child so cruelly, he made no answer. In re-examination, Dr. Jackson said he believed the prisoner was in such a state of mind that no parish doctor ought to allow him to be at large, as he was dangerous.

Mr. Geoghegan, in defense, agreed that there had been no motive for the commission of the crime, but that there were strong antecedent probabilities that the prisoner was so unsound in his mind at the time that he did not know the nature and quality of the act he was committing.

Mr. Poland said that the prisoner's belief that attempts had been made to poison him would not be sufficient for any medical man to certify that he was insane, and thus necessitate his confinement in an asylum. It was for the jury to say whether the prisoner was a violent drunken man or an insane person fit for Broadmoor.

Mr. Justice Denman said it was an appalling case. As to the plea of insanity, the law as laid down by the House of Lords was, that every man was supposed to be responsible for his acts until the contrary was proved, and it must be shown that he was suffering from such a state of mental disease as not to know the nature and quality of the act he was committing, or that it was wrong. The judge referred to the new Act regarding the treatment of persons alleged to be insane, and said that he observed that last session a learned colleague expressed dissatisfaction with the new enactment, in which, however, he was not inclined to disagree, the new Act not altering the law as to insanity as it previously stood, but only making a difference as to the formal verdict.

The jury found the prisoner *Guilty*.

The Judge, in sentencing the prisoner to death, said the learned counsel had attempted to make out that he was not responsible. The attempt had failed, and he must express his own opinion that, according to the law of England, it had rightly failed. "Although it was, I think, established in evidence that you had been suffering from delusions, I cannot entertain a doubt that on the occasion on which you violently caused the death of your child, you knew you were doing wrong, and knew that you acted contrary to the law of this country, and that you did it under the influence of passion, which had got possession of your mind from want of sufficient control, the result being that the poor child came by a sudden and savage death.

The Home Secretary, Sir Wm. Harcourt, ordered a medical examination also in the case of Cole, and Dr. Orange and Dr. Glover, who conducted it, pronounced him unquestionably insane, and he was relieved.

Dr. D. Hack Tuke, in a forcible criticism of both these cases of Gouldstone and Cole, in the January num-

ber of 1884, of the *Journal of Mental Science*, of which he is editor, says, over his own name:

It would be difficult indeed to conceive any circumstances more calculated to bring English Criminal Law into contempt than the result of the trials of Gouldstone and Cole for wilful murder. Our only consolation is that such pitiful exhibitions of the working of our present judicial machinery, in cases in which the plea of insanity was set up, may lead to some practical reform therein. Had any commentary been desired on the necessity of carrying out the resolution* passed at the recent Annual Meeting of our Association, under the presidency of Dr. Orange, and again at the October meeting of the Metropolitan Branch of the British Medical Association, such commentary, written in letters of blood, has indeed been supplied by the occurrence of these two trials in rapid succession.

The great object of this resolution is to secure a full and deliberate examination of the accused before, instead of after his trial, by competent medical men. In the cases of Gouldstone and Cole the result to them, it is true, would have been the same, but with how much greater propriety, dignity and economy! We should have been spared the spectacle of judges solemnly condemning to death, and clearly indicating it to be their opinion that it was a just death, men who were lunatics. * * * Had the deliberate examination we urge been made in the case of Gouldstone, instead of one of some twenty minutes at the eleventh hour (the deed was committed at least five months before), the man's mental condition could have been carefully tested without haste; and in the case of Cole, the same course would have exposed his insane condition for years previously, and all the facts bearing upon it would have been procured at leisure. Important in such a case, also, is the circumstance that his wife could not give evidence in court, while her intimate knowledge of his history would have been of highest value to a medical commission. Again, the law requires a man in such instances to prove himself a lunatic; but is this not a mockery of justice? How can a poor prisoner afford to pay? Counsel may, indeed, be assigned to defend the prisoner too poor to pay, but this is at the last moment, and what possible chance has he of doing justice to his client? None; for it is then too late to make a skilled inquiry into, and study of the facts of most value in the determination of the prisoner's insanity. The effect of this resolution would be to prevent a repetition of circumstances that make the

* "That prisoners suspected of being mentally deranged should be examined by competent medical men as soon after the commission of the crime with which they are charged as possible, and that the examination should be provided for by the Treasury, in a manner similar to that in which counsel for the prosecution is provided. It is suggested that the examiners should be the medical officer of the prison, the medical officer of the County Asylum or Hospital for the Insane in the neighborhood, and a medical practitioner of standing in the town where the prison is situated; that the three medical men shall, *after consulting together*, draw up a *joint* report, to be given to the prosecuting counsel, the cost being borne by the public purse, inasmuch as it is useless to tell an insane man that the burden of proving himself insane lies upon himself." (See *Journal of Mental Science*, Oct., 1883, p. 451).

Interference of the Home Secretary imperative; for, we repeat, it cannot be other than prejudicial to the respect that we should always wish to see entertained for courts of law, to go on continually convicting and sentencing lunatics to the gallows, and then relieving them—a game which may be all very well for cats and mice, but is scarcely worthy of being engaged in by those who uphold and those who break the law.

Nor are these trials less remarkable as commentaries upon the proper mode of understanding and interpreting the legal test of insanity to which, truth to say, we are almost weary of referring. As those who have read Mr. Justice Stephen's work on Criminal Law, reviewed in this Journal in July last, are well aware, he reads between the lines of the *dicta* of the judges of 1843, and charms his psychological readers with the conclusion that the knowledge of right and wrong does not merely refer to the law of the land, but involves the question whether the accused was able to judge of the moral character of the act at the time he committed it, not merely in an abstract sense, but for himself, under the special circumstances of his own delusion or loss of control.

So liberal a construction of the test seemed to open the way to a sort of compromise between medical and legal opinions. Now, what from this point of view is so noteworthy, is that neither of the judges who presided over these trials (Mr. Justice Day and Mr. Justice Denman) appear to have had the faintest idea of such an interpretation of the terms. On the contrary, they obviously understood them in the baldest, most literal manner possible, but not otherwise, we are bound to say, than we supposed that they would understand them. Thus, Mr. Justice Denman, in addressing Cole, told him he could not doubt that he knew he was doing wrong. "You knew," he added, by way of explanation, "that you acted contrary to the law of this country." Whatever loss of control there might be was due to "passion." His lordship did not, with Sir James Stephen, say that any one would fall within the description of not knowing he was doing wrong "who was deprived by disease affecting the mind of the power of passing a rational judgment on the moral character of the act which he meant to do." ("Criminal Law," Vol. II., p. 163.) Nor did he tell the jury that the law, when properly construed, allows that "*a man who, by reason of mental disease, is prevented from controlling his own conduct, is not responsible for what he does*" (p. 167); nor yet that if a man's succession of insane thoughts is so rapid as to confuse him and render him unequal to the effort of calm sustained thought, "*he cannot be said to know, or have a capacity of knowing, that the act which he proposes to do is wrong*" (Op. cit.) That such is, after all, the proper way of understanding the *dicta* of the judges was equally foreign to the mind of Mr. Justice Day. The judges succeeded also in conveying to the juries the impression that they must take the meaning of the terms in question in the sense in which they have been hitherto understood. All we have to say on this aspect of the matter is, that either official sanction must be given to the interpretation of Mr. Justice Stephen, or the words themselves must be so altered as to make their meaning plain to jurymen, and not only to them but to the judges themselves. The difficulty, however, presents itself that, not only do most judges lay down the law in the old-fashioned sense, but they do not

conceal their sympathy with this interpretation, and they would regard it as a subterfuge were a medical witness to reply "Yes," in the sense attached to the words by Sir James Stephen, to the question "Did the prisoner know that he was doing wrong?" In Gouldstone's case, for instance, Dr. Savage felt that to do so would be an evasion of the real meaning attached by the court to the expression, and unworthy of a scientific witness.

Another point to which one of these cases forcibly calls attention, is the neglect of the obvious symptoms of insanity in a man from whom homicidal acts might have at any time been expected. From what has transpired during and since his trial, we find that Cole was in good work up to 1877, and attentive to his wife and children; and that he fell out of work, left home to seek it, and was found by the police, who took him to the Croydon workhouse infirmary as a wandering lunatic. When his wife went to see him he looked ill and strange, and did not know her; he thought she was dead, and that he was there for killing her. Unfortunately, instead of being placed under proper medical treatment in an asylum, he was allowed to go home in a few weeks' time, and frightened his wife by his mad actions, nailing down the windows, etc., and placing a large knife under his pillow. The insane suspicions which marked his case then have never left him, and the wife had to earn a living by caning chairs, which he would sometimes smash to pieces, the reason assigned being that she was electrifying him. At night he was sleepless, and would walk the room, hearing imaginary noises, and declaring that strange men were concealed in the house. A medical man saw him in 1879, and said he was dangerous, that everything must be kept out of his way, and that he couldn't understand why he had been allowed to go home from the workhouse instead of being sent to an asylum. So he went on fancying when in the house that his wife was trying to poison him, and when out of it that people were watching him in the street, and even assaulting them on this ground. His wife expected that he would commit some violent act, and that she would probably be the victim, but she does not appear to have thought he would injure their child, of whom he was very fond. The poor woman applied to the magistrates, but they comforted her by telling her that they could do nothing till he had committed some act. They referred her, however, to the relieving officer, and in consequence, the parish doctor examined Cole, and gave her a certificate on which he was removed to the infirmary. Here was a second opportunity for doing something, taking care of a lunatic, and averting a dreadful catastrophe. But in vain. He was sent out in two days as mad as ever, and his wife, in mortal fear, called in the doctor, and he attended him at home. Soon after the man killed his child. All the day he had been walking about the house with a hammer and chisel, following his wife, who eventually managed to take them from him and conceal them. The wife at last went for a policeman, and when at the gate heard a noise in the house which induced her to return, when she found he had done the deed for which he was tried, and which we maintain might and ought to have been prevented by placing him in an asylum long before. This is the moral of the story. We have no desire to ignore the fact that Cole was an intemperate man. But we

are satisfied that he was a sober man up to the time that he became insane in 1877, and that his giving way to drink was one of the symptoms of his madness, although doubtless a further aggravation of it. But while it may be impossible to gauge with precision his moral responsibility in relation to the intensity and continuance of his mental disorder, proof is not wanting that he had been sober for at least a week before the fatal act was committed. In a word, this was not the result of drink, but the outcome of a long, lasting state of delusional insanity. Had he joined the Blue Ribbon Army for months before, his delusions and their logical development in violence would have been the same. Add to this, that in consequence of his inability to earn a livelihood through his mental infirmity, he was wretchedly poor, and his brain was consequently ill-nourished, and rendered more and more a prey to suspicion.

The conclusion, then, to which we earnestly call attention, in the interests alike of the law, of life, and of the lunatic, is the necessity of reforming the mode of Legal Procedure in ascertaining the Mental Condition of Prisoners.

D. HACK TUKE.

THE CASE OF GUTEAU.—We are far enough removed from the excitement of that awful tragedy, which resulted in the death of the President of the United States, to agree (now that he has been executed and the post-mortem examination of his brain has been made and submitted to the scientific world, imperfect as that examination was, when it could have been made most thorough in every respect and in minutest detail), that there at least existed a question as to his sanity and responsibility which should have been submitted to the most critical medical examination and tests in the power of our government to have made, by the best medical men in this country, outside and independent of the trial itself.

Provisions are made under the law of this State for examination into the mental condition of any person charged with crime, before the trial, or even after the indictment, which, if it results in finding the accused insane, avoids the necessity of a trial upon the indictment when found.

The Code of Criminal Procedure of New York also provides for a proceeding to examine cases where insanity is alleged to have occurred after conviction, as follows:

SEC. 496. If after a defendant has been sentenced to the punishment of death, there is reasonable ground to believe that he has become insane,

the Sheriff of the county in which the conviction took place, with the concurrence of a Justice of the Supreme Court or the County Judge of the county, who may make an order to that effect, must impanel a jury of twelve persons of that county qualified to serve as jurors in a court of record, to examine the question of the sanity of the defendant.

The Sheriff must give at least seven days' notice of the time and place of the meeting of the jury to the District Attorney of the county. § 108 of the Code of Civil Procedure regulates the impaneling of such a jury and the proceedings, upon the inquisition, so far as it is applicable.

§ 497. District Attorney must attend and may produce witnesses by subpoena.

§ 498. The inquisition must be signed by jurors or Sheriff. If it is found by the inquisition that the defendant is insane, the Sheriff must suspend execution of the warrant until he receives the warrant of the Governor directing that the defendant be executed.

§ 499. The Sheriff must transmit inquisition to Governor, who, as soon as defendant is restored to sanity, must issue a warrant for execution, pursuant to sentence, unless commuted or pardoned, and may meanwhile dispose of defendant. (Code Criminal Procedure, Title x., Chap. 1.)

If such a provision exists in the District of Columbia, where the homicide occurred, it was a remarkable fact that it was not invoked by either the counsel for the people or the prisoner; nor was such a suggestion acted upon by the Government after the conviction and sentence, although pressed by some of the leading alienists of the country, as well as by citizens of every class throughout the land, as due to the self-respect of the Government and people.

The next generation will be unable to understand why such an examination was not held, nor be able to appreciate the peculiarly delicate relation of the executive and his legal advisers to that trial, nor the almost universal clamor for the execution of Guiteau, which made such an inquisition apparently impracticable, if not practically impossible at that time.

The charge of the judge in the case of Guiteau fairly stated the law, not quite as strong and broad as the English judges in the cases of Gouldstone and Cole, but substantially within the recognized rule, as it is now laid down in most of the American States.

No one can pretend for one moment to deny, that Guiteau fully understood the nature and quality of his act; nor that he was able to discriminate between right

and wrong in regard thereto, and that he fully understood that it was a crime at law, and well knew the penalty which the law imposed.

If the legal test established by the English judges in 1843, or as laid down by Judges Day and Denman in cases of Gouldstone and Cole were to apply, the jury in in Guiteau's case must, of course, convict.

In no case of insanity of the character of melancholia or with suicidal tendencies, where the disease is not readily detected, nor in any case of obscure character, is it possible ever to claim that the insane prisoner does not both know and fully understand that the act is wrong as human standards are measured, and it must generally be conceded that he also well understands the nature and quality of the act and its penalty under the law.

How far is this a reliable test of responsibility? Have we not come now to the point where the legal gentlemen can unite with medical men, and call a halt upon the justice or propriety of this remaining longer the law of such cases?

Dr. Hack Tuke quotes that eminent name, Sir James Fitz-James Stephen, in his recent masterly work on criminal law; in which he speaks both as a jurist, and as a student and expounder of the principles of English law.

Sir James has recently been called to the English bench. As a judge he must administer the law as he finds it. He must sustain the current and continue in the line of the English decisions. A judge is not a law-maker. He is an expounder and interpreter of the law, and Sir James is far more valuable as an author and writer in his admirable treatise, than he is as a judge in his judicial decisions. Sir James treats of this interesting subject in Vol. II., Chapter xix., entitled "Relation of Madness to Crime," and his views are well worthy our serious consideration from what has been called the legal position involved in this discussion.

The learned writer gives a digest of the English law as to insanity from his stand-point as follows:

No act is a crime if the person who does it is at the time when it is done, prevented [either by defective mental power or] by any disease affecting his mind—

- (a) From knowing the nature and quality of his act, or
- (b) From knowing that the act is wrong [or
- (c) From controlling his own conduct, unless the absence of the power of control has been produced by his own default].

But an act may be a crime although the mind of the person who does it is affected by disease, if such disease does not, in fact, produce upon his mind one or other of the effects above-mentioned in reference to that act.

He comments upon the answers of the judges in the McNaughten case, and holds that their authority is questionable, though he has followed them as a judge, and concedes "*that when they are carefully considered they leave untouched the most difficult questions connected with the subject, and lay down propositions liable to be misunderstood;*" but he claims that they should be construed "*in a way that would satisfactorily dispose of all cases whatever.*"

He reduces the doubtful points to the single question, "*Is madness to be regarded solely as a case of innocent ignorance or mistake, or is it also to be regarded as a disease, which may affect the emotions and the will in such a manner that the sufferer ought not to be punished for the acts which it causes him to do?*"

Again, Sir James claims that yielding the point that the answer of judges must be accepted, though of doubtful authority, "*the law allows that a man who by reason of mental disease is prevented from controlling his own conduct, is not responsible for what he does.*"

I have not space within the limits of such a paper to give this chapter, which is worthy of reprint, entire, but I give a few extracts which I regard very important in the pending discussion.

The position of Sir James Fitz-James Stephen may be defined or stated as follows:

The different legal authorities upon the subject have been right in holding that the mere existence of madness ought not to give excuse for

crime, unless it produces, in fact, one or the other of certain consequences.

I also think that the principle which they have laid down will be found, when properly understood, to cover any case which ought to be covered by it.

But the terms in which it is expressed are too narrow, when taken in their most obvious and literal sense, and when the circumstances under which the principle was laid down are forgotten. Vol. II., Chapter xix., p. 125.

He says, p. 130:—"What are sanity and insanity?"

The answer is that sanity exists when the brain and the nervous system are in such a condition that the mental functions of feeling and emotion and willing can be performed in their regular and usual manner. In-sanity means a state in which one or more of the above-named mental functions is performed in an abnormal manner, or not performed at all, by reason of some disease of the brain or nervous system.

In commenting on the answers of the judges in the *McNaughton* case, says:

I am of the opinion that even if the answers given by the judges in *McNaughten's* case are regarded as a binding declaration of the law of England, that law as it stands is, that a man, who by reason of mental disease, is prevented from controlling his own conduct, is not responsible for what he does.

I also think that the existence of any insane delusion, impulse or other state which is commonly produced by madness, is a fact relevant to the question, whether or not he can control his conduct, and as such may be proved, and ought to be left to the jury (p. 169).

He continues:

The proposition, then, which I have to maintain and explain is that, if it is not, it ought to be the law of England that no act is a crime if the person who does it is, at the time when it is done, prevented, either by defective mental power, or by any disease affecting his mind, from controlling his own conduct, unless the absence of the power to control has been produced by his own default. * * * * *

No doubt there are cases in which madness interferes with the power of self-control, and so leaves the sufferer at the mercy of any temptation to which he may be exposed; and if this can be shown to be the case, I think the sufferer ought to be excused (p. 168—70).

The difficulty is in properly defining the words "knew" and "wrong." No narrow or forced construction should be given these words, but the wide and broad signification which Sir James puts as follows:

Knowledge and power are the constituent elements of all voluntary action, and if either is seriously impaired the other is disabled. It is as

true that a man who cannot control himself, does not know the nature of his acts, as that a man who does not know the nature of his acts is incapable of self-control (p. 171).

Regarding the matter as one for the Legislature, I do not think that it is expedient a person unable to control his conduct should be the subject of legal punishment.

The fear of punishment can never prevent a man from contracting disease of the brain or prevent that disease from weakening his power of controlling his own action in the sense explained; and whatever the law may declare, I suppose it will not be doubted that a man whose power of controlling his conduct is destroyed by disease, would not be regarded as morally blamable for his acts (p. 171).

Sir James justifies the punishment of madmen in certain cases:

Little or no loss is inflicted on either the madman himself or on the community by his execution.

It is indeed more difficult to say why a dangerous and incurable madman should not be painlessly put to death, as a measure of humanity, than to show why a man who, being both mad and wicked, deliberately commits a crime, as murder, should be executed as a murderer (p. 178).

I may observe that the principle that madmen ought, in some cases, to be punished, is proved by the practice of lunatic asylums (p. 181), and cites Dr. Maudsley (see "Responsibility," p. 129).

I cite further:

The question, "What are the mental elements of responsibility?" is and must be a legal question. I believe that by the existing law of England these elements (so far as madness is concerned) are knowledge that an act is wrong and power to abstain from doing it; and I think it is the province of judges to declare and explain this to the jury.

I think it is the province of medical men to state, for the information of the court, such facts as experience has taught them, bearing upon the question, whether any form of madness affects, and in what manner, and to what extent it affects either of these elements of responsibility, and I see no reason why, under the law as it stands, this division of labor should not be carried out (p. 183).

In 1874 Mr. Russell Gurny's bill, introduced before the English Parliament, proposing amendments of the law relating to homicide, contained a clause recognizing the loss of self-control, the result of disease, as one of the causes of exemption from responsibility in these cases—and while the bill did not become a law it led to the appointment of a committee before whom Sir James Stephen was called to testify, who claimed that the law should plainly state and

define responsibility, and provide exactly where it rested and where it did not.

This evidence of Sir James created a great sensation, and the committee took the evidence of the Lord Chief Justice (Cockburn), which, in the light of this discussion, I may be pardoned for quoting.

He said :

As the law, as expounded by the judges in the House of Lords, now stands, it is only when mental disease produces incapacity to distinguish between right and wrong, that immunity from the penal consequences of crime is admitted. The present bill introduces a new element, the absence of the power of self-control.

I concur most cordially in the proposed alteration of the law, having been always strongly of opinion that, as the pathology of insanity abundantly establishes, there are forms of mental disease in which, though the patient is quite aware that he is about to do wrong, the will becomes overpowered by the force of irresistible impulse; the power of self-control, when destroyed or suspended by mental disease, becomes, I think, an essential element of [ir]responsibility.

Sir James Stephen proposes that a jury should be allowed to return three verdicts—(1) Guilty; (2) Guilty, but the power of his self-control was diminished by insanity; (3) Not Guilty, on the ground of insanity.

This proposal, while a decided step forward, is liable to objections, which are most forcibly presented by Dr. Hack Tuke in his review of Sir James' book. (*Journal of Mental Science*, July, 1883, pp. 267, 268).

Dr. John C. Bucknill, in his admirable review of Sir James' book, criticises Sir James' definition of insanity as follows (*Medico-Legal Journal*, Vol. II., p. 190):

But this is a medical definition, covering the slightest deviation from mental health, arising from hysteria or alcohol, from bile or gout. It includes states of feeling, as sensation, which may not affect the mind. It includes abeyance of mental functions, which is not insanity; for, when the mental functions are not performed at all, there is no insanity.

It is clear from the context that this definition of insanity would include more than Mr. Justice Stephen could allow to be irresponsible; and no good is gained by thus analyzing the mind and detailing the results of the analysis, more or less complete, as functions which may be separately affected. I shall myself venture to make one more medico-legal definition of insanity. *Insanity is incapacitating weakness or derangement of mind caused by disease.* It seems to me to be practically useful and scientifically accurate to make a distinction between weakness and derangement of mind. It seems to me also that all insanity which is not

weakness will fairly come under the head of derangement in its widest sense; for morbid states of the emotions derange the play of mind. But the all-important term in the definition is, of course, the attribute which points to the want of power to do something. In criminal inquiries, it means incapability of abstaining from the criminal act. It means that condition of irresponsibility pointed to by Lord Bramwell, in Dove's trial—Could he help it? It means that which has been much insisted upon by medical writers and great legal authorities, the loss of self-control. Lord Chief Justice Cockburn and Justice Stephen have both expressed the strongest opinion that this state of mind caused by insanity ought to remove responsibility.

And I am also inclined to agree with Dr. Bucknill, that notwithstanding the written views of both Sir James and Chief Justice Cockburn, the law of England to-day, as administered, is, as laid down by the judges in the McNaughten case, although quite agreeing with Sir James that its strict enforcement would lead to monstrous consequences in many instances.

THE PROVISIONS OF THE NEW YORK PENAL CODE lay down the law as follows:

SEC. 17. A person is presumed to be responsible for his acts. The burden of proving that he is irresponsible is upon the accused person, except as otherwise presented in this code.

§ 20. An act done by a person who is an idiot, imbecile, lunatic, insane or of unsound mind, is not a crime.

A person cannot be tried, sentenced to any punishment, or punished for any crime while he is in a state of idiocy, imbecility, insanity or lunacy, so as to be incapable of understanding the proceedings or making his defense.

§ 21. A person is not excused from criminal liability, as an idiot, imbecile, lunatic or insane person, or of unsound mind, except upon proof that at the time of committing the alleged criminal act he was laboring under such a defect of reason, as either,

1. Not to know the nature of the quality of the act he was doing; or,
2. Not to know the act was wrong.

§ 22. No act committed by a person while in a state of voluntary intoxication shall be deemed less criminal by reason of his having been in such condition. But wherever the actual existence of any particular purpose, motive, or intent, is a necessary element to constitute a particular species or degree of crime, the jury may take into consideration the fact that the accused was intoxicated at the time in determining the purpose, motive, or intent, with which he committed the act.

§ 23. A morbid propensity to commit prohibited acts existing in the mind of a person who is not shown to have been incapable of knowing the wrongfulness of such acts, forms no defense to a prosecution therefor.

§ 3343, Chap. xxii., of Code of Civil Procedure (Subdivision 15),

defines lunacy as follows: "The words 'lunacy' and 'lunatic' embrace every description of unsoundness of mind, except 'idiocy.'

These two Sections, 20 and 21, must be construed together, as in some respects they apparently conflict.

The first part of Section 20 leaves lunacy undecided and undefined. The latter part would seem to define it to apply to the accused when in a state so as to be incapable of understanding the proceeding or making his defense; but Section 21 is a re-statement of the rule in the McNaughten case:

"Laboring under such a defect of reason as either not to know the nature or the quality of the act he was doing, or not to know that the act was wrong."

It is a source of profound regret that Mr. David Dudley Field and his *confrères* in framing and submitting the Penal Code, did not meet this issue, rather than to have re-stated their view of the existing English law.

The time has come when legislators must face this question upon its merits. The able and masterly manner in which Sir James discusses the question, the decisions in many of the American States recognizing a different test for responsibility, call for a settled law both in England and America, which would be in accord with the principles of justice and commensurate with the civilization of our age.

I think legislators, as well as judges, who administer the law in both countries, must feel that the time has come to carefully consider this question, and to state the law of responsibility in this class of cases so clearly, as to remove the very just criticisms everywhere made upon the dicta of some of the judges.

There is no doubt whatever that the uncertainty of verdicts, is largely due to the popular conviction of the injustice of the law as it now exists, and as it is frequently construed by the courts.

I am not unconscious of the fact that some judges have decided against what may be called the views of the English judges in the McNaughten case, as notably, Judge

Ladd, of New Hampshire, in the case of Jones (*State vs. Jones*, N. H., 388); Beardsly, in *People vs. Freeman* (H. Denio, 27), and Judge Brewster, of the Phila. Common Pleas, in 1868, who held that the true test lies in the word "power."

"Has the defendant in a criminal case the power to distinguish right from wrong, and the power to adhere to the right and avoid the wrong?" (Wharton and Stille, § 159).

Shaw, C. J., in *Commonwealth vs. Rogers* (Bennett and Heard, leading criminal cases, 2 Ed., pp. 96, 97).

Robertson, J., in the Kentucky Court of Appeals (Wharton and Stille, § 175).—There is a judicial tendency in many of our States, to hold an accused irresponsible who acts under an uncontrollable impulse based upon an insane delusion, even though he fully understands the nature and consequences of his act, and can discriminate between right and wrong, but the rule in this country and surely in England, is greatly affected and controlled by the action of the English judges in 1843.

By far the ablest assault upon the existing law, from the legal side, is that of the learned Sir James Stephen.

The admirable paper of Dr. John Charles Bucknill, read before this Society and appearing in the September number of the *Medico-Legal Journal*, is a masterly presentation of the subject.

It is a legislative and not a judicial question, and must receive public attention commensurate with its great importance in the administration of criminal jurisprudence.

CORRESPONDENCE.

LETTER OF CORRECTION.—TO THE EDITOR OF THE ALIENIST
AND NEUROLOGIST.

NEW YORK, Aug. 5th, 1884.

DEAR SIR:—The excellent article of Dr. Madigan contains one inaccuracy which I should like to see corrected in your valuable columns.

I never authorized any statement about a "relative of Dr. Noble Young's" studying under myself. From whatever source the information reached Dr. Madigan, it became much distorted in the transmission.

A relative of Dr. Noble Young's received some counsel and guidance from me, as to his medical studies, a year or two ago. Another relative, remonstrating with him on his ambiguous position (after Dr. Young's death), that is, studying under a physician who had accused "his maternal grandfather (Dr. Noble Young) of giving false evidence," I quietly relieved the young gentleman from his embarrassment.

Respectfully yours,
E. C. SPITZKA.

DR. C. H. HUGHES.

THE CONCLUSIONS OF MOREAU (DE TOURS) OBJECTED TO
BY A MEDICAL CORRESPONDENT.

HILLSBORO, ILLS., Aug. 6th, 1884.

DEAR SIR:—In the ALIENIST AND NEUROLOGIST, July, 1884, in an extract from a work on the "Aberration of the Genesic Sense," by Dr. P. Moreau, I wish to state my reasons for the protest I feel constrained to make to the conclusions arrived at by the author.

That his premises are false, if based upon the cases mentioned, I think that there can be no doubt.

That his conclusions, should they obtain the support of the profession, would add to the already increased number of outrages of this nature, I am fully convinced, for the reason that this plea could be entered in palliation for the offense committed, and the culprit go free, for you can

never convict if you can convince the jury that the criminal *acted of necessity* and *was not volitionally free*. But this should not prevent the free expression of our views.

It appears to me that the cases he cites to sustain his theory are not applicable. To prove my assertion, let us look into the acts and doings of a few of the persons mentioned by the author as afflicted with this peculiar aberration. Tiberius, in his earlier life, distinguished himself in various military commands; was in every way for a time an exemplary man; but, on attaining the empire, he soon gave himself up to unrestrained and brutal sensuality. Caligula received his surname from "caligar," a common shoe worn by the soldiers, and which he wore to ingratiate himself with them. By his popularity he succeeded to the throne. At first he governed well, preserved the liberties of the people, and had sufficient will-power to control (if he was so afflicted) his "aberration of the genestic sense." To show the craftiness of the man, we find that it was only after he was *firmly established* in his high office that he threw aside his disguise and proved himself to be a monster of cruelty, intemperance and sensuality. Surely these vices must have been innate (*but, while necessary, kept in control*), for his elevation to the high office of supreme ruler would not induce it. Nero murdered his mother and his wife. Tertullian, when speaking of his persecutions, says: "That our trouble began at such a source, we glory; for whoever has studied his nature knows well that nothing but what is good and great was ever condemned by Nero." Here there would seem to be an "aberration of *all sense*." Vitellius was a glutton of the most extraordinary capacity, as well as cruel and licentious. The other cases are but a repetition of those I have briefly reviewed.

That this condition of affairs should have existed in an age when ignorance and superstition, as well as brute force, reigned supreme, is but a natural consequence. That our present civilization is due to, and depends upon, the code of morals established by the Christian church, and which has been admired and followed by the brightest intellects for over 1800 years, must, I think, be admitted by all fair-minded men; for, were the penalties attached for the violation of the law, based on this code, removed, person and property would be at the mercy of those who could, quite as consistently, plead aberration of a special sense in palliation for the offense they committed, as those cited by our author. Certainly the evidence clearly proves that they

possessed the will-power to curb their unnatural desires, and adapt themselves to their surroundings; until they gained the confidence which would warrant them in giving their passions full sway without fear of the consequences. These were not acts of insanity; but the volitional freedom of intemperate, brutal and licentious men. In this, the nineteenth century, as in every other age, individual instances are numerous, where, under the temporary insanity induced by over-indulgence in intoxicating beverages, a man, otherwise with an exceptionally good moral character, has been guilty of such licentiousness as would put to shame the most debased of his fellow creatures. Upon the proper exercise of our volitional power depends the moral and intellectual safety of the world. With one in sovereign power, accountable only to his God, we can easily conceive how, under the influence produced by intemperance, if not naturally so inclined, these passions could gain such possession, by the abeyance of the will, that their indulgence would lead one to believe that it could only have been induced by the aberration of that special sense, when in fact it is due to the uncurbed animal passions which makes the devil's machinations so successful. When the sovereign is corrupt, intemperate and sensual, his court will be the same, for he will place in power those most congenial to himself; and, with such an example, is it to be wondered at that his subjects should follow the fashion, until we have (according to Dr. Moreau's theory) a nation partially insane? One step downward leads to the other, until the subject lies buried in the moral filth at the bottom, be he sovereign, or be he serf.

If this theory of the aberration of a special sense is correct, then we should not condemn defaulters, murderers, thieves, *et al.*, for surely the same plea would be as plausible in the one case as in the other—that they merely act as they are acted on; though most of them will admit that had they heeded that "monitory voice," that capacity, that force, that something *not matter* that warns us when we walk and rebukes us when we stray, they would not have fallen. The tendency among scientific men at the present day is to attribute every phenomenon of nature to laws and actions of matter, when some of them are undoubtedly induced by the actions and laws of something *not matter*—spirit—call it by whatever name you please. The evidence for this assertion can be adduced; and one among the greatest is, that among all races of men we find that they

acknowledge the existence of that inward spiritual speech which alone greets the marvel of creative love (man), and which prompts him to do good and shun evil, and out of the wreck of every earthly hope bids him trust in that unseen creative power, and believe in a home beyond the grave. No; with a belief in such a pernicious doctrine, this earth would soon be a pandemonium indeed.

Yours truly,

AMOS SAWYER.

TO PROF. C. H. HUGHES, M. D.,
St. Louis, Mo.

EDITORIAL.

[*The Editor is Responsible for all Unsigned Editorial Matter.*]

Something Sensible and Fair Concerning Asylums for the Insane in a Daily Newspaper.—So much unreasonable and unjust prejudice is usually displayed in the public press towards our public hospitals for the insane, with reference to alleged abuses of patients, that we take pleasure in recording the following evidence of a return to common sense on the subject, by the New York *Tribune*. It is not many years since an enterprising New York daily newspaper sent a reporter to reside as an insane person in one of the hospitals for the insane of that city. He went there for a sensational item, and he found it, of course, and with the usual reportorial ambition printed it in false and flaming colors. It did not matter that in consequence, as true a heart as ever beat for humanity was incapacitated by prostrating illness for a long time thereafter, from ministering there to those pitiable minds diseased, who needed his oversight and care! It did not matter that one of the most sensitive and refined of organisms among men was crushed by the foul blow. The sensation that sold the paper and the public, was found, and the paper went on its way prospering, while the superintendent went "nigh unto death" in his sorrowing over the injustice done him and his.

The reporter too went on his way rejoicing; but, strange Nemesis, within a twelvemonth or thereabout, the head of that paper (if we mistake not) received, with reason dethroned, the kindly ministrations to a mind diseased, from that same traduced and calumniated institution.

If the public press could only be persuaded that a reasonable amount of humanity still abides in the hearts of asylum superintendents and managers, and that generally they are as eager to find out and punish abuses as the average among the dear public, asylum wrongs might be sooner righted, and with the cordial co-operation of asylum officials.

Brutes and fiends in human form secure service in asylums under false pretenses and guises of humanity, and too much mechanical restraint exists in some hos-

pitals for the insane. This latter evil is due, in some instances, to untrustworthiness of nurses and attendants in certain parsimoniously managed institutions, where the best nurses cannot be secured; in some instances an inadequate corps of nurses for the number of patients necessitating the substitution of mechanical restraint for personal surveillance, and sometimes to improper appreciation of the importance of the least possible irritation to patients on the part of newly appointed, rather politically than professionally qualified, superintendents, without experience in the efficacy of the law of kindness in the successful management of the insane. But, as a rule, the medical staff of American hospitals for the insane, state, corporate and private, are humane and enlightened and worthy followers of Chiarugi, Pinel, Tuke and Conolly, who would not place hand upon a lunatic save in kindness, and who would not countenance harsh treatment of his helpless patients by others.

He that would place hand upon a lunatic, save in kindness, it were base flattery to call a coward. Such is the sentiment of the American physicians to the insane as we personally know them. Cruelty has but an exceptional place in American hospitals for the insane, and if the press of the country would proceed on this principle when abuses of patients are reported, the exact "whole truth and nothing but the truth," which the law demands, would be sought and elicited, the cause of humanity would then be advanced by every asylum investigation, and the real welfare of the insane and the peace of their friends would be promoted. But flaming and inflammatory sensationalism in the publication of asserted abuses in asylums, based on statements of patients and discharged nurses, proclaims more than the truth, breeds distrust towards institutions entitled to confidence, and ought to be discountenanced by the press. Following is the *Tribune* article:

A sensational story of abuses practiced upon the patients in the Utica Insane Asylum was published recently, the author being a person who had spent some time in the asylum as a patient. Reference to the institution shows that the narrative was a fiction, but one of a kind so common that the public ought to be put on their guard against them. The fact is that a large class of insane people labor under delusions to the effect that they are being persecuted, or pursued, or that there is a conspiracy to poison them, or that they are systematically drugged, or magnetized, or electrified; and nothing is commoner among these unfortunates than the idea that all who surround them are leagued against them. Insanity, in a

large proportion of cases, takes the form of morbid egotism. No doubt it often originates in a habit of introspective brooding. The ego thereby acquires exaggerated proportions, until presently the patient comes to think that all the world are concerned with his affairs. The morbid sense, too, seems to be extinct in many such instances, and the patient does not hesitate to invent the most amazing and calumnious stories about those who have, perhaps, been most beneficial to him. The circulation of what may be claimed generally as asylum stories is one of the most usual forms of this phase of insanity, and every alienist has had ample and often most unpleasant experience of it.

The public, naturally and properly sensitive where the insane are concerned, and quick to resent imputed abuses upon such helpless creatures, are apt to accept these asylum stories without allowance, and the result is sometimes much injustice toward very worthy and conscientious medical officers. Sometimes, no doubt, there are abuses in insane asylums, for it is extremely difficult to obtain the right kind of people for nurses and wardens in such institutions. The work needs infinite patience, a certain refinement, much experience, good judgment, and withal, physical strength. Such a combination is hard to find, and the more so since the pay is not particularly tempting. So black sheep occasionally find their way in and abuses follow. But, as a rule, it is always safe to mistrust charges against the management of an asylum which are preferred by a patient. If such an one has been discharged, the presumption is that he has had a relapse. If he is still an inmate, the stories may for the most part be set down to the account of the brain disease from which he is suffering. In any case asylum stories, proceeding either from patients or ex-patients, should be carefully tested before being received as worthy of credence.

The Abuse of Massage.—Dr. J. Leonard Corning, in his new book on "Brain Exhaustion," thus discusses this much over-ridden and abused therapeutical hobby:

As at first employed, the system of "massage" proved itself valuable in the treatment of certain defective systemic disorders, as well as in cases involving directly or indirectly more or less impairment of the motor apparatus. From a legitimate use, however, the practice of manipulating the muscles has degenerated into a therapeutic "hobby," so that at the present time the offices of the "*masseur*" or "*masseuse*" have been brought into requisition in every species of disorder from headache to prolapsus uteri. In cases of defective brain nutrition it has also been employed to a large extent in some quarters, as if over-nutrition of a muscular fiber could in any way help an already impoverished brain-cell; or as if diverting the insufficient blood-supply in a feeble subject, from an inadequately nourished brain to the muscles could in any way enhance the available vital units of the central nervous system! I do not, however, wish to intimate that in *some* cases, owing to circulatory or other insufficiencies, the amount of blood in the brain may not be abnormal and require special therapeutic attention. What I wish to protest against is the assumption that the particular development of the muscles can cure a defectively

nourished brain any more than an illegitimate diversion of the vital fluid to the nervous centers can conduce to the benefit of the muscular system. The assumption that a diversion of energy from an organ will conduce to the formation of tissue in that same organ is at direct variance with all that we know of the correlation of forces. Moreover, the results of practical experience are directly at variance with such an unphilosophical hypothesis. Some of the worst cases of brain exhaustion which have ever come under my observation were among those in whom the muscular system was artificially developed to a degree totally out of harmony with the capacity of the assimilating apparatus. I have frequently remarked that such individuals are remarkably small at the waist, while the chest capacity may be good, or even above the average. This combination of large "burning" power, with inadequate facilities for the preparation of "fuel," constitutes an unfortunate equipment on the part of the individual for maintaining his physiological integrity in the face of the attrition which the external world is constantly exercising against living organisms.

Morbid Fear Automatism.—In functional neurotrophica, especially when it is prodromal of an approaching insanity, groundless morbid fears are often exhibited, but the phenomenon of fear automatism, in which the person is struck with a sudden tremulousness and a feeling as if he was scared half to death, in midday, and without previous unconsciousness or exciting cause, and without being absolutely frightened, is a condition the editor has never before witnessed or seen described or named. But such a condition lately presented in a boy, who, apparently physically in good health, was a subject, a year or two ago, of somnambulism, having two years previously fallen upon his head from a ten-feet high building, on rocky ground; and having recently fallen from a lumber pile while at play, both times having been rendered so unconscious by the fall as to retain no remembrance of what had happened to him.

Bromide of potassium was freely given for several nights after the last accident, and the subsequent super-vention of head symptoms was averted by ethereal lotions and appropriate internal treatment. The only possible exciting cause for the last attack appears to have been a chill and fever the day previous.

End of Volume Fifth.—The present number completes the fifth volume of this JOURNAL. We hope its friends will make an effort between now and January proximo to greatly enlarge our subscription list. THE ALIENIST AND NEUROLOGIST has established its right to live among the family of medical journals. Five years in its

history have passed pleasantly and profitably to both its writers and readers. The editor would like a little more collaboratorial assistance from its many collaborators. It has required much more of the editor's personal attention than the practical professional demands upon his time have really allowed, without the risk of overwork. The editorial work has not always been up to the editor's ideal standard of what such work ought to be, and he has been delinquent in some instances because of absolute want of time for more perfect and painstaking labor. But under the circumstances he has done the best he could, while carrying the additional burden of a college lectureship and a private practice.

Pathology of Diabetes.—Dr. F. C. Curtis contributes a very thoughtful and observant article to the *Medical Annals* for September, on The Pathogeny of Diabetes Mellitus. His conclusions as to its etiology, especially these two propositions, have been confirmed in our observation, and these facts borne in mind will greatly aid the physician in prescribing a successful plan of treatment and in giving a more hopeful prognosis than is generally given. Diabetes mellitus is a symptomatic expression of cerebrospinal exhaustion sometimes, which may be only neurotrophic, the restoration of which is followed by the disappearance of the glycosuria. Two confirmatory cases have come under our observation during the past two years, without a sign of this symptom. One of them had marked melancholia, and both had psychical depression preceding the diabetes.

Our Newspapers.—According to Edwin Alden & Bro.'s (Cincinnati, O.) American Newspaper Catalogue for 1884, there are 14,867 newspapers and magazines published in the United States and the British Provinces. Total in the United States, 14,176; in the British Provinces, 691; divided as follows: Dailies, 1,357; Tri-Weeklies, 71; Semi-Weeklies, 168; Sundays, 295; Weeklies, 10,975; Bi-Weeklies, 39; Monthlies, 2,502; Bi-Monthlies, 26; Quarterlies, 83; showing an increase over the publications of 1883 of 1,594. The greatest increase has been among the weekly newspapers of a political character (?) while it has been least among the class publications. The book is very handsomely gotten up and contains some 850 pages, printed on heavy book paper, elegantly bound in cloth. It will be sent to any address, prepaid, on receipt of \$1.50.

The Missouri Pacific Hospital, St. Louis, under the efficient management of Surgeon W. B. Outten, presents an attractive and homelike, as well as businesslike appearance. The psychical essentials to favorable progress and speedy convalescence have been kept in mind by the company in the selection of Surgeon Outten, and the surgeon in charge has not himself overlooked the other essentials besides surgical skill in the quiet, orderly and systematic working, apparent in this establishment, and in the cheerful aspect of the wards, and the improvements he has made and is making in the grounds. When men who work for such corporations know that they are to be so well cared for when in affliction, a part of the victory over disease is achieved through the favorable curative influence mind exists over body.

St. Louis Medical and Surgical Journal.—*Special Offer.*—To any one sending the names of FOUR NEW SUBSCRIBERS, with \$12.00, they will be credited with one year's subscription, or can have sent to them any book or instrument costing not more than \$3.00. New subscribers will receive the November and December numbers gratis. Club rates with this JOURNAL, \$7.00. Contains 96 pages each month. \$3.00 per annum, in advance; single copies, 30 cts. For further information, address Frank M. Rumbold, M. D., Publisher and Proprietor, 2622 Washington Avenue, St. Louis, Mo.

The Proceedings of the Association of Superintendents of American Hospitals for the Insane were crowded out by matters entitled to precedence in our pages. For the same reason the continuation of the subject of "Moral Insanity," by the editor, is postponed. An epitome of the proceedings of the Association of Superintendents has, however, already appeared in our pages, and some essential extracts may be made later.

Note Apologetic.—During our late change of residence to No. 3000 Chestnut Street, several valuable monographs sent us for review have been misplaced, among these, *three interesting papers, we remember, by Santini. The press of original matter for space, too, has crowded out the "Selection Department,"* which, however, is compensated for in the valuable selected translations which appear in this number.

Encyclopedia of Medical Wit, Humor and Curiosities of Medicine.—DR. Julius Wise, 806 Olive

Street, St. Louis, Mo., proposes to publish a large volume under the above or a similar title, and solicits witticisms and anecdotes of a humorous or curious nature. Also information regarding suitable literature—home and foreign, ancient and modern—will be gladly received and highly appreciated.

“Madness and Crime.”—The paper by Clark Bell, Esq., President of the New York Medico-Legal Society, which appears in the present number, is an interesting discussion of the subject from a legal standpoint, in that it recognizes the facts of disease, and endeavors to approximate the legal standard of irresponsibility to that of the medical, which is based upon research and not conjecture.

Dr. L. A. Merriam’s Report on “Nervous Diseases” is the first one of the kind ever made before the Medical Society of Nebraska. It certainly indicates appreciative progress in the right direction, and shows, with other similar signs, what was predicted at the inception of this JOURNAL, that the neural pathology is destined to reign paramount in medicine.

The Paper on “Insanity Defined” which appears as having been read before the Mississippi Valley Medical Association, was not read before that body, but before the National Conference of Charities and Correctional Institutions, Oct. 17th, 1884.

The American Public Health Association and the Conference of Charities and Correction have just concluded very profitable and entertaining sessions in St. Louis, as we go to press.

Explanatory Correction.—The reference in the last number to Dr. Evarts having been elected secretary of the Association of Superintendents of American Hospitals for the Insane, was gleaned from the public press. Dr. Evarts was made vice-president.

Report on the Insane.—Dr. D. Hack Tuke’s report on the inadequate care of the insane in Montreal, will probably result in a government investigation and reform.

Reprints of articles furnished at cost of press-work, paper and binding. Writers wishing them should not fail to designate the number they desire on their manuscript.

Lindsay & Blakiston’s Physician’s Visiting List,

for 1885, an indispensable pocket companion for every busy practitioner, is received as we go to press.

The late Professor Cohnheim discovered the migration of the white blood corpuscles through the walls of the capillary vessels.

The American Academy of Medicine meets in Baltimore, on the 28th and 29th prox. A good list of papers is announced.

Heredity Defined.—Dr. Mary Weeks Burnett formulates heredity as the sum of all of the ancestral forces, *plus* life.

Dr. Moreau (de Tours), the distinguished French alienist, has lately died at the age of eighty-one.

HOSPITAL NOTES.

RETIREMENT OF DR. CHAPIN AND APPOINTMENT OF DR. WISE.—Dr. John B. Chapin has resigned his office as superintendent of Willard Asylum, and Dr. P. M. Wise, late first assistant physician, is appointed superintendent. In the retirement of Dr. Chapin clinical psychiatry misses a laborious and successful “minister to mind diseased,” but in Dr. Wise the profession will find a worthy successor to Dr. Chapin. Dr. Chapin has been elected to succeed Dr. Kirkbride, deceased. Both excellent appointments.

DR. J. G. KIERNAN has taken charge as superintendent and physician of Cook County (Illinois) Hospital for the Insane, a well merited and strictly medical appointment. Dr. Kiernan is an industrious and competent observer and writer in psychiatry, whose name is quite familiar to the readers of this JOURNAL.

DR. H. R. STEDMAN, late of the Danver's Lunatic Hospital, has lately taken charge of “Woodbourne,” a private home for the insane and nervous, at Rosendale P. O., suburbs of Boston, Mass.

DR. A. H. WITMER, of the Government Hospital for the Insane, at Washington, D. C., is announced to marry Miss Roberta K. Stone, of that city on the 30th *courant*.
Bon voyage.

REVIEWS, BOOK NOTICES, &c.

ON VISCERAL NEUROSES, being the Gusionian Lectures on Neuralgia of the Stomach and Allied Disorders. By T. Clifford Allbutt, M. A., M. D. Cantab., F. R. S. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1884.

These Lectures are the best of their kind which have appeared. They are worthy of an equal place with Fothergill's "Neurosal and Reflex Disorders of the Heart," and Tilt's "Physical Life of Woman." We commend them especially to such mentally distorted gynecologists and general practitioners as are accustomed to suspect, and in imagination find, physical uterine disease in all painful visceral conditions of the female sex.

The subject of Irritable Uterus will be found as interesting as Flint's Irritable Heart, and quite as instructive.

The time is ripe for such books as the one before us. A spurious gynecology has too long lorded it over medical thought, until, distorting it and wrongly specializing pathology, to the damage of the sex and the shame and ignominy of what is and ought to be a noble department of medical endeavor, viz., the rectification of the real special ills of woman.

Gynecology, in the minds of many who practice it, is only *hysterology* and neurosal diseases, which are common to both sexes, have been without warrant, and are now too commonly referred to the uterus as the *fms et origo mali*.

If gynecology is rescued from degradation it must be rescued from its errors. It needs salvation from its professed friends, which can best be accomplished by those broad-minded and logically enlarged gynecological thinkers and practitioners who can discern something more in the physical ills of woman than what is revealed through the *prima via* of the speculum and uterine sound.

The uterus is not all there is of woman, yet modern gynecology, as taught by many of its votaries, maintains that the uterus is the woman. As well say the testes, etc., is the man, for the nervous connections are about as intimate with the whole of his organism and testes as with the female uterus and ovaries.

It is questionable whether there is a legitimate field for gynecology as a specialty, with the full significance of the term, any more than there would be for *anthropology* as a branch of medicine, with its full significance. Gynecology and anthropology respectedly, the whole study of woman or the whole study of man, is all there is of medicine; but gynecology, as practiced by many, appropriates all the diseases of woman, and refers them to the uterus and its appendages. When gynecology becomes properly restrictive to hysterology, medical and surgical, as it will with the light now being thrown upon once so called uterine disease by neurology, it will indeed become a true science and art and its votaries better worthy of liberal professional confidence than they

generally are to-day. Indeed, in gynecological practice, even now, among the better-informed, the sober second-thought, tardy-in-coming, sways the once narrowmind. Old heads and maturer wisdom which comes of experience now confess the errors of sanguine and narrow-minded youth, and candidly concede that the uterus, from a pathological stand-point, is not all there is of woman; and with the spread of this awakening conviction to the lesser lights that shine like *ignis-fatui* over the land, a bright day dawns for woman—a day of disenthralment from gynecological blunders, when she is to be recognized as a woman, with a nervous and physical system beyond the pelvis, just as man is, and her diseases are to be treated with the same common sense survey of her whole organism as man is when he goes to his medical adviser for advice.

Hasty conclusions, sealing her fate, will then not be jumped at as now, and true uterine disease will be separated from the spurious, the primary from the secondary, by a cautious, discriminating, conservative and honest gynecology; and even then there will still remain enough of real disease, primarily or secondarily, located in the uterus, for the most ambitious and industrious hystological therapist and surgeon.

The following excerpted passages will serve to show the drift of the author's views:

“Let us take as an instance a young lady coming of a family in which great mental gifts had thrown into relief the many eccentricities and humors which accompanied them; a family, too, of which no household had been free from nervous disease. She possessed the gifts and the attractions of the neurotic diathesis, and labored under its defects. It is possible also that she was in some degree under the stress of what Anstie called the unconscious sexual impulse. She was restless, excitable and suffering. Her pains were mostly pelvic and abdominal. She never put her feet to the ground, partly because it intensified her pain, partly because she had been forbidden to do so. She had lain on her back for months. Pessaries had often been introduced, but being intolerable to her, were withdrawn. Her periods were agonizingly painful for the first two days, and were profuse; and she had constant leucorrhea. Her appetite was almost gone, her stomach queasy, her frame emaciated; but she was full of courage, unselfish, and would have scorned the wiles and exacting whims of hysteria. Her womb had been incessantly under specular and other examination for a year or two, and, like nearly all such patients, she had uterus on the brain. I found the vagina tender, and the womb exquisitely so; its substance was soft, and its attachments lax. Its position, therefore, was somewhat backwards and downwards. Acute suffering was caused in the upper hypogastrium when the fundus of the uterus was pressed upon per rectum. The rectum was full of feces. By the speculum I noted there was both uterine and vaginal catarrh, and that the os uteri was excoriated—in the state, that is, of the upper lip of a scrofulous and sniveling little boy. My most difficult task was to win my patient over to the belief that her disease was not entirely uterine, but mainly neuralgic; this once accomplished, our progress, though slow, was sure. I declined to initiate any treatment whatever until she would get her feet to the ground, and thenceforth cautiously regain the use of her

legs. Meanwhile, I declined to 'cure the ulceration of the womb' for the twentieth time, but made her content with rectal and vaginal astringent douches, first hot and afterwards cold. As soon as she could walk we perched her upon horseback. She was treated with the phosphide and valerianate of zinc, with bromide of ammonium, iron, quinine and like remedies, with occasional sedative suppositories. In six months, I found the uterus more compact, the ligaments braced, and the os clean and sound; the leucorrhœa had ceased, and all the parts could be handled without pain. Menstruation was still painful, but less so than formerly, and there was some menorrhagia. She was mixing, however, in general society, could ride gently to hounds, had regained appetite and looks, and, although I then lost sight of her, I have every reason to suppose she is as well as she is ever likely to become.

"Now, gentlemen, is not this case one which in their degrees could be multiplied a hundredfold from our case-books or our memories? Yet these are they who form a great part of the women who are caged up in London back drawing-rooms and visited almost daily for uterine disease, their brave and active spirits broken under a false belief in the presence of a secret and overmastering local malady, and the best years of their lives honored only by a distressful victory over pain.

* * * * *

"I assert that, in such neurotic subjects, uterine laxatives, moderate displacements and catarrhs owe their continuance, and often their very initiation, to an atonic state of body, and to a special instability of nerve-endowment, which may show themselves in failing function, and soon after in local trophic changes and perverted secretions. Such changes of function and such settlements of perverted action are often, no doubt, called to this spot or the other by some local deviation from the normal, as a consumption may take its beginning from some trivial and forgotten catarrh; but the essence of the malady is not there, and to try to cure such a malady by local means is as wise as to try to cure a syphilis by antiseptic dressing of its ulcers. Such subsidiary means are often needed, often indeed necessary; but in cases like those under discussion should be used as little as possible, because of the tendency of such methods to arouse and perpetuate a morbid possession of mind in the woman. All this our more robust, more clear-sighted and more candid gynecologists know well enough; in the rest the fault may lie rather with modern fashion than with themselves. Looking only to the uterine organs, their reason bounded by the confines of the pelvis, they attempt to stem the tides of general and diathetic maladies with little Partington-mops of cotton wool on the ends of little sticks. That many of the cases we have discussed need a judicious combination of local with general treatment is true, but in most of them the patient and the doctor are fascinated by the local phenomena, while Nature herself is performing on a far larger scale."

"How intimately this organ, or this system, is associated with the nervous system is well known; but, unfortunately, the weight of our knowledge all leans one way—it leans to a curious and busy search for every local ill which may arise in the female pelvis, while blind oblivion scatters the poppy over every outer evil which in its turn might hurt the

uterus; nay, more, a resolute prejudice would deny that in the woman any distress can arise which owes not its origin to these mischievous parts. *L'uterus c'est la femme* is a proverb which has received a new development in these days; for if by courtesy, rather than by conviction, woman be granted the possession of a few subsidiary organs, these, at best, have no prerogative nor any order of their own.

"The uterus has its maladies of local causation, its maladies of nervous causation, and its maladies of mixed causation, as other organs have; and to assume, as is constantly assumed, that all uterine neuroses, or even all general neuroses in women, are due to coarse changes in the womb itself, is as dull as to suppose that the stomach can never be the seat of pain except it be the seat of some local affection, or that the face can never be the seat of tic-douloureux unless there be decayed teeth in the jaw. All mucous membranes, indeed, seem readily to betray nervous suffering by relaxation or changed secretion; and I make no doubt whatever that a very large number of uterine disorders which are elevated to the place and name of diseases of the uterine system are but manifestations of neurosis.

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"A neuralgic woman seems to be peculiarly unfortunate. However bitter and repeated may be her visceral neuralgias, she is either told she is hysterical or that it is all uterus. In the first place she is comparatively fortunate, for she is only slighted; in the second case she is entangled in the net of the gynecologist, who finds her uterus, like her nose, is a little on one side; or again, like that organ, is running a little, or it is as flabby as her biceps, so that the unhappy viscus is impaled upon a stem, or perched upon a prop, or is painted with carbolic acid every week in the year except during the long vacation when the gynecologist is grouse shooting, or salmon catching, or leading the fashion in the Upper Engadine. Her mind thus fastened to a more or less nasty mystery becomes newly apprehensive and physically introspective, and the morbid chains are riveted more strongly than ever. Arraign the uterus, and you fix in the woman the arrow of hypochondria, it may be for life.

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"If the gynecologists pelt us with stories of long pain and sickness un cured by medical futilities, but rapidly cured under uterine medication, we can mate their stories and check them by double the number of cases received by the physician from the sofa, the manipulations and mental abasements of narrow uterine specialism. To underrate our debt to gynecologists, to forget the great work they have done in the past half-century, were as foolish as ungracious; but, like all great movements in special fields of inquiry, it must be subject to reaction, and its results must be checked by those which have been obtained by other methods and in other directions. The wisest and most disinterested of gynecologists now know well how lamentable have been the exaggerations, how narrow the views, and how deceptive the data of many opinions which have passed current in their school, and they are ready to declare that if medicine is not wholly to reclaim a great part of the field occupied by them, its culture must at any rate be shared with the physician. The physician has been at least as

much to blame, in that he has contemptuously thrown aside many cases of genuine malady and of genuine suffering as hysteria."

On the subject of dyspepsia, a disease which is more often cerebral than gastric, as Amariah Bigham, as far back as 1844, in this country, satisfactorily showed, and as the prevalence of dyspepsia among the over-brain-excited, over-brain-worried, has since proven, the author before us thus presents a view worthy of consideration. After conceding the existence of certain true dyspepsias the author says:

"A patient who suffers from many symptoms indicative of nervous derangement, tells you that on the empty stomach, generally in the morning, before breakfast, a dense yellow oily fluid gathers, and, lying there all day, would vitiate the viscus, would act as an eccentric cause of headache, and as a foul ferment upon the food in the course of digestion; so that his or her only hope of a comfortable day is to vomit or wash out these dregs at the beginning. Now, such an exudation may be due to some chronic distemper of the coats or glands of the stomach; but I incline to believe it is due rather to some perturbed innervation of a stomach otherwise healthy, seeing that the symptoms is one which I have always found in neurotics, and to be curable only by treatment planned mainly upon this diagnosis. Disordered work and distempered secretions, then, may well de due, and doubtless often are due to neuroses of the stomach; and such neuroses, lying between the more localized disorders and the purer neuralgias, are difficult to classify."

THE STUDENTS' MANUAL OF ELECTRO-THERAPEUTICS. By R. W. Amidon, A. M., M. D., of New York. G. H. Putnam's Sons, 27 and 29 West 23rd Street, New York. 1884.

This is a hand-book of ninety pages "presented to the medical public, chiefly as a protest against the mysticism and charlatanry which have ever hung around the literature and practice of electro-therapeutics."

The book is an honest protest against the unwarranted claims of quackery, but over reaches its mark by a pedantic display of skepticism, whose positiveness is evidently the result of a lack of patient personal experience, especially as regards the value of galvanization on the brain. In this regard the experience of Erb and Althaus, Latournian and Meyers, and the deductions which may be made from Onimus and Lyros' physiological experimentations.

Our experience controverts the statement that "when electrodes are applied to the head, the amount of electricity which really penetrates the substance of the brain, and its effects in the brain, if it does reach it, are matters of extreme uncertainty."

"Electricity as ordinarily applied to the head" may be "devoid of any curative power in tangible cerebral lesions," but Althaus and the reviewer have not found it so.

While too much has been claimed for electricity by certain electro-therapeutists in differentiating psychical (hysterical) maladies from organic and more permanent vaso-motional affections, the author under discussion *denies too much*.

Nevertheless this little book has many good features about it. It is plain, concise and practical, and its influence will be to make the student

cautious rather than bold in electro-therapy, and it certainly does not lead him to expect more of his batteries than they are likely to perform in inexperienced hands. But we can tell the author there is more in the painstaking and judicious use of electricity than is dreamed of in his philosophy of its influence on the brain; but to use it aright, something of that *tactus eruditus*, which gives to surgery different results in different hands, is required. An operating case does not make a surgeon, nor does a battery make an electro-therapist.

In subsequent editions we shall confidently look to see the author's skepticism, in certain directions, give way to conversions—and honest skeptics make strong converts.

TEXT BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By Jno. J. Reese, M. D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, &c. P. Blakiston, Son & Co., Philadelphia. 1884.

This publication is a compact and meritorious volume worthy a place in the library of every physician who expects to appear in court.

No student of Legal Medicine can well do without it. The subject of Toxicology, very properly occupies a prominent place in this volume. Idiocy and Insanity are sufficiently well treated for the general practitioner, but, contrary to the author's expressed hope, all the essential medico-legal points on the latter subject are not discussed by the author. among them, especially, is the subject of Simulation of Insanity by the Insane.

The discussion of insanity, though as extensive and thorough as the limits of the book would permit, when we consider how many other subjects are treated, is altogether too brief. Likewise the subject of Idiocy. But the book is not intended to supplant special treatises on special departments of medical jurisprudence, but is worthy to occupy a convenient and acceptable place within the reach of the active but studious general physician, and as such we commend it to our readers.

VISIONS OF FANCY,—

Is a small basketful of the flowers of poesy, poured into the lap of a prosy profession, by a physician of Moberly, Missouri. The name of the talented author is N. M. Baskett, and the little volume is also dedicated to the memory of the author's parents, to his wife and children, and specially to Dr. H. E. Gore, of Paris, Mo.

The poems are smoothly written, and of general interest rather than special, to the medical profession, save the lives on "The Medical Student," a very good poem, except the opening eight lines, which are questionable in taste and fact.

The story of Orpheus and Eurydice, is captivatingly and briefly told, and a vein of philosophy permeates the book in other parts, and runs up to the heart. The poems are all worth reading, but the author's cast of mind, as betrayed in them, is a little over melancholy.

A Consideration of the Causes of Insanity, is the subject of a paper on our table, by Walter Channing, M. D. Reprinted from the Fifth Annual Report of the Massachusetts Board of Health, Lunacy and

Charity. From a critical survey of the whole subject the author reaches the following conclusions:

"1. That so far as the causation of insanity is concerned, the statistics of insane hospitals are unavoidably incomplete and unreliable.

"2. That the insanity of the present day is peculiarly the disease of an imperfect civilization.

"3. That the foreign population of America largely increases the aggregate amount of insanity, and indirectly acts as a causal element in producing insanity in the native population.

"4. That heredity, both in relation to mental, moral and physical conditions, is of greater importance in the causation of insanity than is generally supposed. And, further, that environment tends to perpetuate heredity.

"5. That bad education, lack of education and over-education, increase the number of persons becoming insane; while, on the other hand, a good system of moral and school education is a powerful influence in preventing insanity.

"6. That certain occupations are more favorable to the development of insanity than others, while want of occupation is frequently a cause, sometimes an early indication of insanity.

"7. That ill-assorted marriages increase insanity; but celibate men, and probably celibate women, are more prone to insanity than the married. And further, that consanguineous marriages are attended with too much uncertainty to be entered on, except in rare cases."

Proceedings of the First Three Meetings of the Surgeons of the Eastern Division, W., St. L. and P. R'y, held respectively at Decatur, Illinois, January, 25, 1882; Fort Wayne, Indiana, June 4, 1883, and Springfield, Illinois, April 30, 1884.

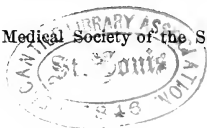
Explanation of the Pathology and Therapeutics of the Diseases of the Nerve Centers, Especially Epilepsy. By J. McF. Gaston, M. D., Atlanta, Ga. Advance sheets from Transactions of Georgia Medical Association.

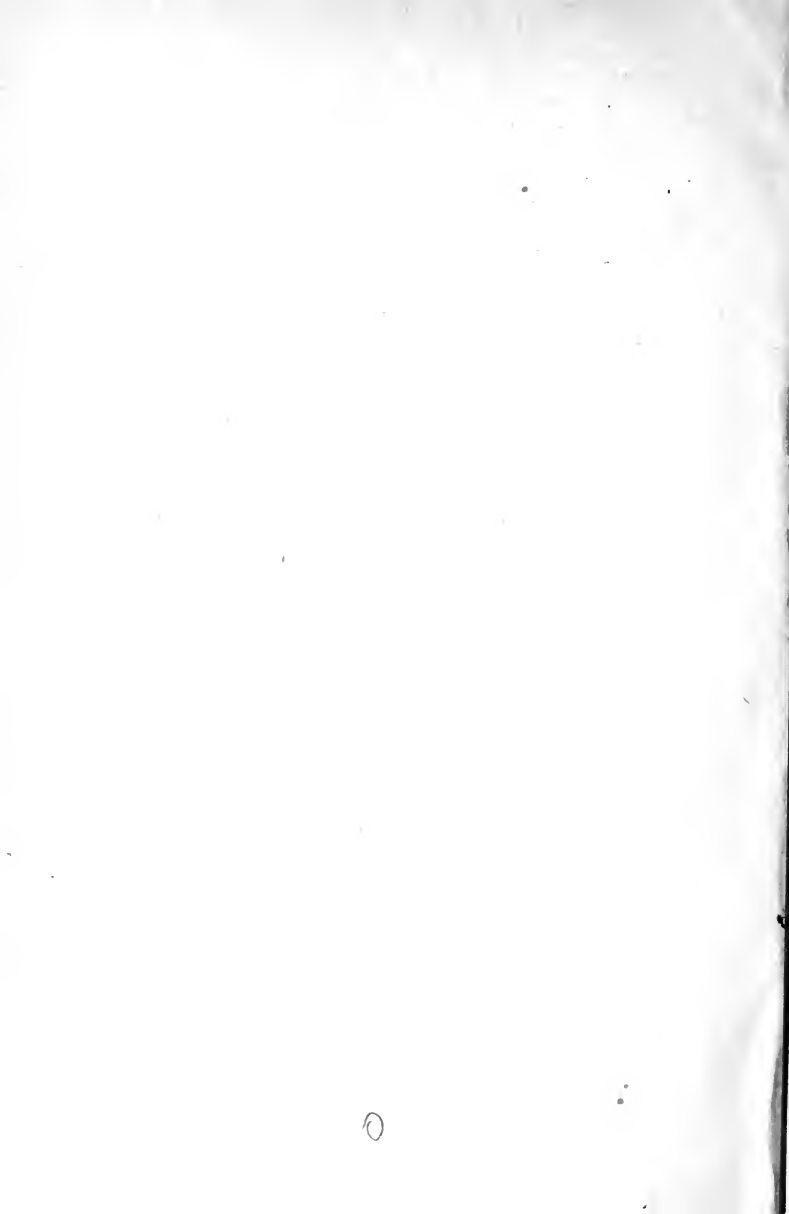
Nervous and Mental Physics. By S. V. Clevenger, M. D. Reprinted from *The American Journal of Neurology and Psychiatry*, for August and November, 1884.

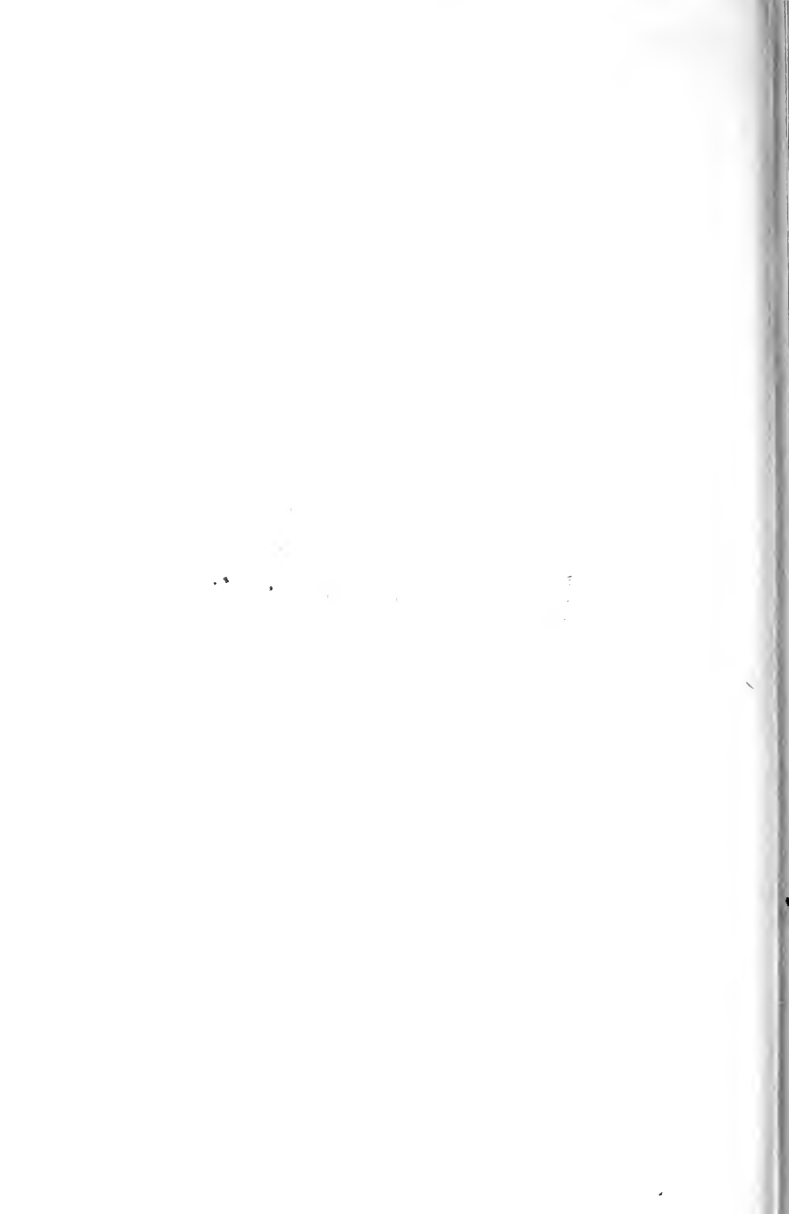
Notes on The Opium Habit, by Asa P. Meylert, M. D., Member of the Medical Society of the County of New York, etc. A sensible but incomplete paper.

Diagnosis of Spinal Disease, and Observations on Hip Disease, by Thos. P. Grant, M. D., Louisville, Ky. Reprinted from the *Louisville Medical News*.

Seventeenth Annual Session of the Medical Society of the State of West Virginia. May 21 and 22, 1884.







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