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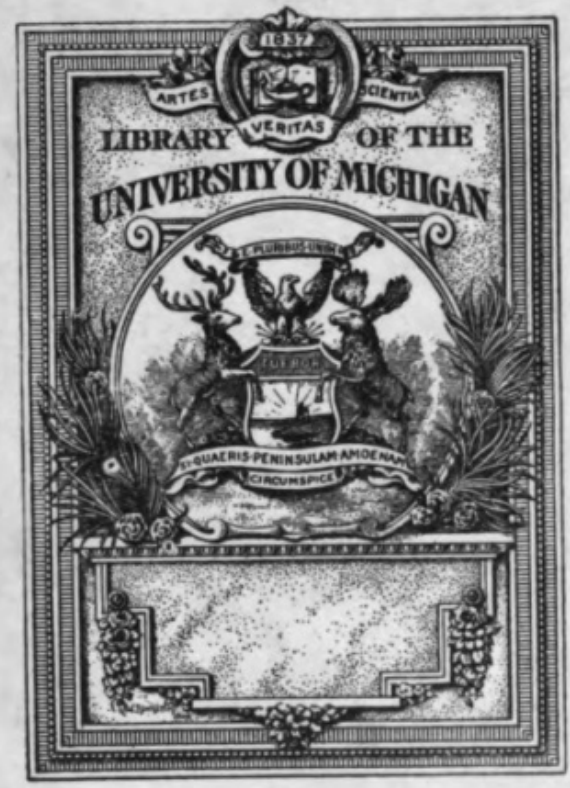

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THE

ALIENIST AND NEUROLOGIST

A QUARTERLY JOURNAL

OF

SCIENTIFIC, CLINICAL AND FORENSIC

Psychiatry and Neurology.

Intended especially to subserve the wants of the General Practitioner of Medicine.

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

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—EDITED BY—

C. H. HUGHES, M. D.,

And an associate corps of collaborators.

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CONTRIBUTORS TO VOLUME II.

C. W. CLARK, M. D.,
Hamilton, Ont.

T. D. CROTHERS, M. D.,
Hartford, Conn.

JOHN CURWEN, M. D.,
Harrisburg, Penn.

D. V. DEAN, M. D.,
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Bendorf.

W. R. GOWERS, M. D.,
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G. SEPPILLI, M. D.,
Reggio-Emillia, Italy.

A. TAMBURINI, M. D.,
Reggio-Emillia, Italy.

OTTA A. WALL, M. D.,
St. Louis.

JOSEPH WORKMAN, M. D.,
Toronto, Canada.

T. L. WRIGHT, M. D.,
Bellefontaine, O.

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THE

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VOL. 2. JANUARY, 1881. No. 1.

ORIGINAL CONTRIBUTIONS AND TRANSLATIONS.

Art. 1.—Contribution to Cerebral Localizations.*

By Dr. Lorenzo Monti, Medical Superintendent of the Insane Asylum of Colorno, Italy.

Translated by JOSEPH WORKMAN, M. D., Toronto, Canada.

Amnesia and verbal paralysis with right hemiplegia and contracture.—Softening of first frontal and of the posterior of the third frontal on the left.—Apoplectic foyer in the left caudate nucleus.—Atrophy of all the left cerebral and cerebellar hemispheres, and lesion of the cortex of the parietal region.

SANTINA B. was received into the old (now suppressed) Asylum of Parma, in January, 1862, because of a light degree of dementia, with *aphasia* and *right hemiplegia*, and contracture of the great toe of the right foot; all which phenomena were said to have followed a strong cerebral congestion. She remained in the Asylum of Parma many years without having, as far as could be observed, presented any deterioration. In July, 1873, she was transferred, with all the other insane, to the new

*From the *Rivista Sperimentale*; Anno VI.—1880.

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asylum at Colorno, when it was not possible, after so many years, to obtain accurate historical notes of the case. Having reached the age of 49, menstruation had ceased. She was in excellent nutritive condition, and presented no disturbance in the thoracic or abdominal organs which were carefully examined. She was of middle stature, had thick, black hair, a well formed cranium of brachicephalic type, and an apathetic, silly physiognomy; she walked with much difficulty, warping the right leg, and she took no part in work, being unable to use the right arm. No lesion of the muscles of the face was observed; the movements of the tongue were regular; the muscles of the neck, on the right, were much impeded in their lateral movements, and always appeared stretched and rigid. The right arm was completely paralyzed, and was flaccid and less nourished than the opposite one; the lower limb of the same side was in almost the same conditions, but it was rather less impeded in its movements, since, as we have mentioned, the patient managed to walk; a strong and permanent contracture was presented in the right great toe. The temperature of the right paralyzed limbs was constantly four degrees under that of the sound limbs; the dolorific sensibility was normal on both sides; specific sensibility, with the exception of the visual, which was normal, could not be satisfactorily examined, owing to the aphasic state of the patient. The dynamometer gave K. 55 on the right, and 70 on the left; ophthalmoscopic examination gave negative results. The patient was always quiet and docile, showed no desires for anything, and did not speak. This state of taciturnity depended not so much on her general mental debilitation, as upon her impairment of language. She had completely lost memory of words, and therefore she did not speak, being unable to clothe in words her few ideas; merely when an urgent necessity constrained her, she uttered a broken complaint, because she found herself unable to express, in appropriate words, her desires, and she did not cease from weeping until she heard those present

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pronounce the words which conveyed her ideas. On being asked to designate anything presented to her by its right name, she could not apply to it the proper word, and perceiving her error she promptly corrected it, by unsaying, with the monosyllable *no*, the word she had used, and not before suggestion of several names would she repeat that one which perfectly corresponded to the object presented to her. It frequently, however, happened that she was quite unable to repeat the names which were suggested to her, or she did so with manifest difficulty, pronouncing them badly. It was therefore manifest that her alteration of language, besides representing the character of *verbal amnesia*, represented also *verbal paralysis*.

In the physico-moral state above described, she continued until December, 1879, when she was taken with symptoms of intestinal catarrh. During her residence in the asylum she never had been affected with any incidental disease worthy of remark; much less did she suffer convulsions or any other nervous disturbance. Being finally seized with a profuse diarrhœa, she died in January, 1880, in slow collapse.

In the autopsy, held twenty hours after death, general nutrition was observed to have been good, and the skin was pale, tense and glossy; incipient, blackish spots were observed over the abdomen. The skull was thick and of regular form; the dura-mater was normal; the other meninges, on the convexity of the left hemisphere, appeared a little wrinkled, especially in correspondence with the foot of the third and first frontal convolutions, and the anterior part of the inferior parietal, where they formed a notable folding resembling a purse, under which appeared an abundant liquid exudate, bearing a saffron-yellow color. On the rest of the left cerebral convexity, and also on that of the right, there was observed under the arachnoid, a distinct collection of gelatinous exudate, of citron-yellow color, and along the superior inter-hemispheric borders, the arachnoid was thickened and infiltrated

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with a white fibrinous exudate. On the base there was a smaller collection of gelatinous exudate beneath the arachnoid. The pia-mater on the right was slightly congested, but much more so on the left and between it and the underlaying convolutions on the left there was a copious collection of the same exudate, of reddish-yellow color. On removing the pia-mater, this exudate readily escaped; but on the left side, in correspondence with all the first frontal, the posterior half of the third and all the inferior parietal, it was much more dense and stuck to the cerebral surface; and here the pia-mater was with difficuity detached from the softened and flattened convolutions. All the right hemisphere was normal; the left, on the contrary, was manifestly very small, atrophied and as if flattened and pressed down upon the base, and the left hemisphere of the cerebellum presented the same alterations.

The atrophy of the left hemisphere extended over the convexity, the base, and the island of Reil, with the exception, however, of the two central ascending convolutions (F and P), which, when compared with all the other parts, appeared much enlarged. These two convolutions were not in due line with those of the opposite side, but were carried forward by the notable reduction or atrophy which the whole frontal lobe had undergone. Being compared as to weight, the left cerebral hemisphere was 83 grammes less than the right, and the left cerebellar 10 grammes less than the right. The occiptal lobe was naturally squeezed down.

Describing now minutely the more grave and important lesions met with in the diseased hemisphere, which are seen (colored) on the preceding figure, we noted all the first frontal softened, broken down, almost destroyed and up to its foot atrophied. The softening extended into the interior of the convolution, and was carried down to the convolution of the corpus callosum, which was a little destroyed at its anterior part. The second frontal, in its foot was also softened and destroyed deeply, so

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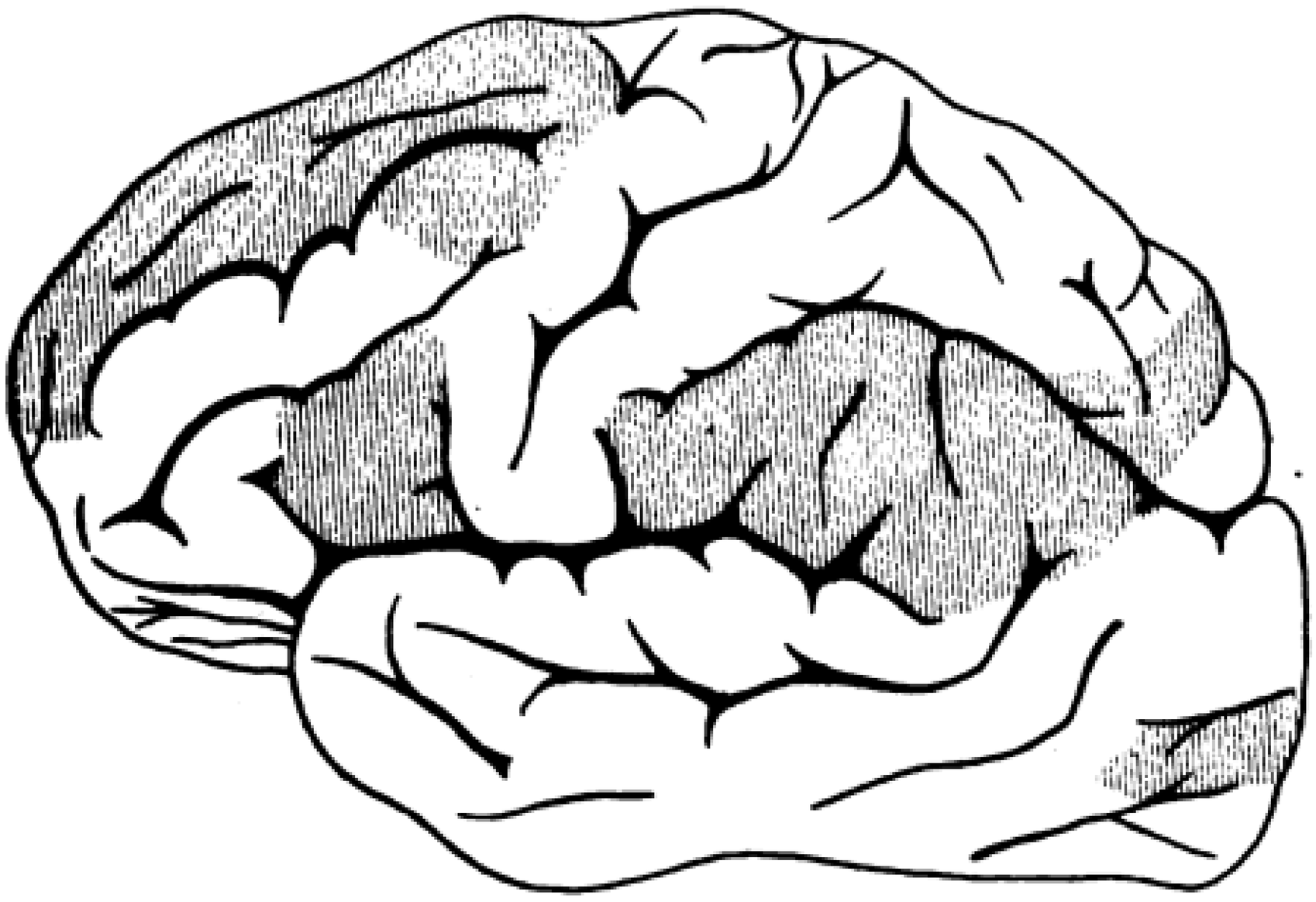

The Shading shows the diseased parts.

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that at first it formed there a notable excavation. The third frontal was softened, broken down, and as it were, eaten away in the posterior half. The superior parietal, in its posterior part, was extremely softened; all the inferior parietal, including the angular gyrus, presented softened convolutions, depressed and a little broken down, and on its anterior part was much eroded and presented a notable excavation. Finally, the second occipital in its posterior part was also a little eroded and softened. The surface of all these lesions, and especially the interior of the cavity above described was covered by a reddish-yellow detritus and by the thickened pia-mater, which adhered strongly to the convolutions covered by it, and these were eroded, atrophied and softened. On the interior of the left hemisphere, in its oval center and in the basal ganglia, nothing abnormal presented, unless that in the caudate nucleus there was observed a cavity very narrow, and about half a centimetre deep, containing a detritus of chocolate color. This cavity had a direction from within outwards, so that it overlapped the posterior part of the internal capsule, which must therefore have undergone a certain degree of compression.

A clearer or more evident proof of the theory of cerebral localizations could not be afforded than that presented by the grave and extensive lesions of the left frontal lobe. In fact, the almost complete destruction of the posterior part of the first frontal, in which *Ferrier* has localized the center for lateral movements of the head, explained that state of rigidity, in which the muscles on the right of the neck were permanently held. The other disturbance, very grave and manifest, that is the *verbal amnesia*, depended, without doubt, on the morbid state of the whole of the same frontal lobe. We have said that the first frontal was softened and broken down up to the foot and extraordinarily atrophied; that the third was in its posterior half as if eroded; and that the second, although less injured, was notably wrinkled and atrophied. Now these lesions gave a clear explanation

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of the verbal amnesia, which, as appertaining to the first species of disturbances of language, that is to disorders of verbal ideation, ought to result from extended lesions of the frontal cortex, where, as *Tamburini* has demonstrated, the memory of verbal images has its seat, and the formation of the verbal ideas, which, as he expresses it, constitutes the more intellectual part of language.

The disorders of verbal ideation cannot be limited to a circumscribed part—the third left frontal—as Broca maintains; for in the whole of the frontal cortex, where ideas are developed and formed, the formation of verbal ideas should have place, or that investing of them which constitutes the ideation of verbal images. According to *Tamburini*, the second species of aphasia, that is disorders of transformation of verbal ideas into motor impulse, has its seat in points more circumscribed, which are in the margins of the Sylvian fissure, and especially in the foot of the third frontal, where by all observers the motor center for the muscles of the lips and the tongue has been located. Our patient, besides having totally lost the memory of words, could often not repeat those suggested to her; she was therefore further affected with verbal paralysis, which resulted from the lesion of the third frontal; and that it was not more accentuated and manifest, depended perhaps on the *quasi* integrity of the other margins of the Sylvian fissure, and especially on the inferior part of the ascending frontal.

From the studies of *Ferrier*, *Luciani*, *Tamburini* and others, it is to-day known with precision that the centers of the various movements of the different parts of the upper and lower limbs are localized in the two central ascending convolutions, and therefore, if during the life of our patient it might in a great measure be suspected that there existed in the frontal lobes those lesions which were discovered in the autopsy, yet from deficiency of the case history, and want of certainty of the presence of multiple lesions, it was held that the hemiplegia might

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depend on some cortical lesion of the superior two-thirds of the two central ascending convolutions; we were then surprised in finding in the autopsy these convolutions perfectly sound. It is true, that for a hemiplegia of cortical origin, we should admit the existence of certain important symptoms, which, from what appears, were never presented—as partial lateral convulsions of a single group of muscles, primitive monoplegias, and the more late appearance of complete hemiplegia. But then, considering that among the cortical lesions most frequently observed are those of the central ascending convolutions, and having recognized, almost beyond doubt, the alteration of the frontal cortex, as well from the presence of disturbances in the muscles of the neck, as from the form of the aphasia, which is always of cortical origin when it assumes the character of verbal amnesia, it could not be excluded that the central ascending convolutions were affected, whose lesion ought to give place to hemiplegic symptoms. But, to the contrary, the autopsy showed the existence of multiple lesions, and that of the left nucleus caudatus clearly explained the primitive and lasting right hemiplegia. Although, as has been well shown by *Charcot*, hemiplegias depending on circumscribed or partial lesions of the gray nuclei are commonly transitory, little notable, not indelible, and always benign, they are no longer so when alteration of the internal capsule is added to the lesion of the gray nuclei.

The transitory character of a paralysis, resulting from partial lesions of the basilar ganglia, may indicate the existence of a functional supplementation, whether between different parts, for example of the caudate nucleus, or between this nucleus and the different segments of the neighboring lenticular nucleus. On the contrary, when the internal capsule is lesed, or simply compressed by some lesion of the caudate nucleus, the hemiplegia is then very strong and persistent. Further, if the compression or any lesion whatever of the internal capsule occupies its anterior part, which is the white tract that separates

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the anterior extremity of the lenticular nucleus from the head of the caudate nucleus, then the paralysis will not be accompanied by any disturbance of sensibility, whilst if the lesion resides in the posterior part of the same internal capsule, there will be symptoms of hemiplegia and hemi-anæsthesia. Now, at the autopsy it happened that, as already stated, the small hemorrhagic foyer reaching to the exterior of the caudate nucleus produced a permanent irritation of the anterior part of the internal capsule, from which proceeded the old and persistent hemiplegia, without any disturbance of sensibility.

Taking our ground now on the phenomenon of the early and permanent contracture of the right great toe, let us see if during the life of the patient this part could furnish to us any very secure indication for diagnosis of the morbid condition, and if at the autopsy it served in association with the diverse microscopic discoveries, as explanatory of the case. From the studies of *Maragliano* we know that when with paralytic disturbances or hemiplegia, there is from the outset a contracture associated, this should be regarded as a cortical lesion. Early contracture, *Maragliano* affirms, does not exclude cortical hemiplegia; but it is met with far oftener in lesions of the cortex, then in those of the central organs. Now, the existence of this contracture confirmed us in the suspicion that the hemiplegia must be of cortical origin; but on the contrary, from the fact of the lesion of the caudate nucleus, and the manifest compression of the internal capsule, we must hold that the contracture was dependent on the latter lesions, and hence was of central origin.

Pitres admits that when the lesion is central, the symptom of early contracture is produced by irritation transmitted to the lenticular nucleus, which being excited causes that contraction of the muscles of the opposite side, which is the constant effect of experimental excitation of this nucleus. Now, in the case studied by us, the compression of the internal capsule was manifest, and hence we should readily admit that such compression

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would give place to a state of permanent irritation of the contiguous lenticular nucleus, from which the early and permanent contracture of the great toe resulted.

The origin of this contracture being thus explained, it remains for us to examine the extensive cortical lesion of almost the entire left parietal region, and of the posterior part of the second occipital convolution. We must premise that during life there never was, nor really could there be (because of want of relative phenomena,) any suspicion of the existence of so very extensive a cortical lesion of the whole parietal region. In fact, although there was lesion of the cortex of the posterior part of the superior parietal, where *Ferrier* locates the center of those movements of the foot and leg opposite, which take place in walking, yet there was not observed any phenomenon of disordinate locomotion, though the whole inferior parietal was altered, along with the angular gyrus, where according to the experiments of *Ferrier*, *Luciani* and *Tamburini* are found the centers for movements of the palpebrae, the ocular bulbs and the iris, and yet there was not found any disturbance of the movements of the eyes, nor any dilatation of the pupil, and besides the absence of these motor symptoms there was also the want of those of the visual faculty, which, from the lesions above described, ought to have resulted, according to what has been established by *Ferrier*, *Luciani* and *Tamburini*. *Ferrier* in fact, admits the center of the visual faculty in the angular gyrus, the other two locate it not solely in the same part, but also further back, in great part, if not in the whole of the convexity of the contiguous occipital lobe. But this want of motor and sensory disturbance should not be interpreted as a fact contradictory of the theory of cerebral localizations; on the contrary it is to be explained as the effect of a functional supplementing, or compensation of the corresponding center of the opposite hemisphere. *Luciani* and *Tamburini*, through the same supplementing by opposite parts, explain the absence of sensory disturbances, which ought to follow the destruction or alteration of the respective centers of

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a single side. In fact, these writers affirm that if after the disappearance, total or nearly so, of right eye blindness, which has followed the destruction of the related left center, we destroy the corresponding right center, the disorder ensuing is not confined to the left side, but is also reproduced on the right side, where it had passed away. *Maragliano*, in his second work, seeks to explain why the sound hemisphere may cause its influence to be felt on its own side of the body, besides on the opposite side. Adopting the ideas of *Flechsig*, he admits certain fascicles of direct fibres, which, proceeding from each hemisphere, pass without crossing into the same side of the body. If such fibres exist, it is easily explained how the sound hemisphere becomes substitutive of the injured one. In fact, although the latter, by the law of decussation, ought to give place to disturbances corresponding to its lesion, yet these disturbances do not appear, because the fascicles of direct fibres proceeding from the sound hemisphere serve to maintain the normal functionality in all parts of the sound side. This fact we hold to have obtained in our patient, and as such substitutions or supplementings take place the more easily, the more slowly the lesion has been produced, so the cortical lesion of the parietal region, having been developed very slowly, as will be seen hereafter, the supplementation would naturally be developed very gradually.

Endeavoring now to explain the mode in which the various lesions above described were developed and their course of succession, it is proper first to learn whether there could exist any pathogenic relation between the profound alterations of the left frontal lobe and that of the caudate nucleus. *Luciani* and *Tamburini*, in another work, admit that in diseases which date far back, lesions of the basilar ganglia may very well represent the effect of descending degenerations, and hence may depend on alterations of the cortical zones. We do not believe this interpretation can be applied to our case, as relates to the order in which the diverse symptoms appeared. If the lesion of the caudate nucleus had been the effect of

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descending degeneration, and had depended on the extensive alterations in the frontal lobe, across that part of the white substance, which, as Charcot has very well indicated, conjoins the centers of ideation with the basilar ganglia, the symptoms of hemiplegia and contracture should have appeared much later, and in succession to those of aphasia. This, on the contrary, did not happen; from the beginning of the disease the aphasia and hemiplegic symptoms appeared simultaneously; therefore we ought, without doubt, to hold that the lesion of the caudate nucleus can not be regarded as the effect of descending degeneration, but rather as the result of multiple lesions formed at the same time; as then the nature of the little foyer of the caudate nucleus was of hemorrhagic origin, so, by analogy, we should hold that one and the same process of softening of hemorrhagic origin took place in the posterior part of the first and of the third frontal. *Foerster* affirms that partial softenings of the brain may be the product of extended hemorrhagic foyers, which, according to *Haase*, when their seat is on the surface of the brain, have a form depending on that of the convolutions, seldom spherical, but more or less flattened and irregular. The frontal lesions described by us showed these characters. Hemorrhagic softening, continues *Foerster*, is presented of a reddish-yellow color, and when death does not soon happen, the sanguinolent pultace becomes a mass of brick-red color, or saffron-yellow, and is fluid and friable; it is surrounded or covered in part by the dura-mater (?) which forms on the exterior a sort of purse, and on the other part by the cerebral substance which has become atrophied. Having reached this point, the foyer presents an excavation or depression more or less deep, and formed at the expense of the obliteratcd sulci and the softened and thinned convolutions. All this must have happened in the two grand centers of softening above described, and the pia-mater in these two parts, formed, in fact, a protuberance in form of a purse hanging and fluctuating, under which there was seen a distinct quantity of saffron-yellow exudate.

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If it is admitted by all authors that the brain, as *Jaccoud* affirms, after a cortical hemorrhage, even inconsiderable, undergoes a slow and general atrophy, to which that grade of dementia corresponds which is observed in apoplectics, and, if therefore we should regard the general atrophy of the cerebral and cerebellar left hemispheres as the consequence of the two frontal centers of softening, we ought to hold that from these two centers was likewise derived that strong lepto-meningitis which we have before described. Furthermore, the pia-mater, as has already been stated, was notably congested and very strongly adherent to the convolutions; it was covered by a dense reddish-yellow exudate, which stuck to it, and was most abundant on the anterior parts of the inferior-parietal, where it had gradually given place by compression to the excavation or depression above noted, and had besides developed the rest of the lesion of the left parietal region and of the posterior part of the second occipital. It therefore follows that the lesion of the parietal cortex should be regarded as an altogether secondary fact, and as dependent on the other lesions previously formed.

This is the interpretation by which we would reservedly seek to explain the development and succession of the multiple and extended alterations above described, and we would submit them to the severe and sapient criticism of our colleagues, to whose studious attention we could not, in the interests of science, omit to subject the important clinical case narrated by us.—*Colorno, March, 1880.*

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Art. II.—Moral Insanity, Depravity and "the Hypothetical Case."

A MEDICO-LEGAL BRIEF.

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

IN the annals of criminal jurisprudence is to be found a class of exceptionally desperate and immoral persons to whom lawyers, with crude and inexact notions of what constitutes true mental disease, are prone to apply the most extreme views of irresponsibility, seemingly forgetful or unmindful of the fact, that the intense display of the passions and emotions and extreme measures adopted in a rational manner to gratify them, may not be incompatible with a sound and responsible state of mind. The exceptionally bad man, who, regardless of consequences, with:

"Unconquorable will
And study of revenge * * * *
And courage never to submit or yield,"

takes the law into his own hand, recognizing no right or power to restrain his perverted will and passion, and with callous heart and bloody hand contrives and executes deeds of blood, rapine or vengeance, that by their magnitude startle and appall the average human mind and conscience, is regarded as necessarily insane. While by a strange and unaccountable process of reasoning, the exceptionally good man, whose life is one of more than ordinary charity 'towards his fellow-man, in whose kindly breast abounds a love for reaching and intense as the abiding malice and immortal hate of the other, who, "clothed in the armor of a pure intent," no

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less securely than the heart of the other, is "mailed in scorn," is never thought of as mentally deranged*

It is thus that the pleas of moral, emotional and homicidal insanity, proper enough in exceptional cases of real disease, have of late years been brought into popular disrepute, and come to be regarded in the public mind as mere medico-legal contrivances, planned by cunning or mistaken lawyers, aided and abetted by the co-operation of unscrupulous and mercenary or ignorant, unpractical or extremely self-sufficient and egotistical physicians, who substitute theoretical notions of psychical disease for the facts to be gleaned from clinical observation; and have, therefore, either no proper idea of, or concern for, the true line of demarkation between immoral and *morbid* mental action, and thus is justice robbed of her due, and thus are the habiliments of a noble science trailed in the dust of contumely and public contempt.

History still repeats itself in its despicable Nero's and daring Dick Turpin's, who, without the extenuation of disease, make a business, a pastime or a pleasure of crime; as well as in its pitiable *Corniers*, who, without interest, without passion, without motive, without concealment or attempt at escape, cut off the heads of innocent, defenceless children and cast them into the street; or, like the deluded Freeman, plunge the cruel knife into the hearts of their own innocent, confiding offspring and sacrafice them to God in obedience to a delusion.

And, though the world does not so long tolerate their outrageous and inhuman conduct, it has still characters like Tiberius, compounded, as his tutor on the authority of Tacitus said, "of mud and blood;" or like Caligula, whose

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*That moral, emotional and homicidal mania are to be found less often existent, in fact, than they are made to appear before the courts, it must be conceded. The greatest intellects and observers in psychiatry have believed in their existence, from Pinel, Esquirol, Prichard, down to Bucknill and Tuke, Maudsley and our own great I. Ray; while it would be unfair not to mention in this connection that those eminent names, among them, especially, Mayo and Blandford have gainsaid, on theoretical grounds, the possibility of mental disease existing "without appreciable lesion of the intellect." All, however, concede that such a diseased mental condition as moral insanity exists as a fact, while some deny the appropriateness of the definition and appellation.

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reign begun mildly and kindly, changed in one year after a violent attack of disease, to one of cruelty and crime unparalleled. The world, however, has no longer its monster Judge Jeffreys, laughing, joking, swearing, in the intoxication of intemperance and unrestrained passion, while sentencing to be hanged or transported hundreds of blameless lives. At this day, a commission of inquiry *de lunatico*, would speedily ascertain if such a monster should himself be hanged or restrained as a lunatic.

On the one hand is moral depravity, deep and damning, whose extinction by the law the moral welfare of society, present and prospective, imperiously demands, while on the other is resistless disease, which merciful law, founded in the moral sense of all civilized mankind, pities and pardons.

While it is the duty of the law to draw the line between morbid and immoral acts, it must be conceded that the understanding of the mind diseased in its many phases of aberration is an intricate subject, baffling sometimes the profoundest student and the most practiced observer of psychical law and phenomena. Insanity ought to be and is, though the fact is not generally confessed by them, to lawyers a stumbling block, for, unmindful of the fact that correct notions of this disease and its unfortunate victims, as every practical alienist to-day will confess, are only to be obtained by long and familiar intercourse with them. The members of the bar glean from books that little dangerous smattering of knowledge which either transforms them into bold skeptics or timid and weak sentimentalists, respecting the connection between and severance of, insanity and vice.

They become extremists, and either regard all great crimes as the offspring of disease, as an occasional medical man has done, or look upon those who, from the standpoint of real observation, know that disease enters largely into the causation of much of the otherwise inexplicable and unaccountable immorality and crime in the land, as mentally biased by overmuch intercourse with

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the insane. The asylum superintendent is facetiously termed by them an "insane doctor," and regarded as a little weakened by the erratic company he keeps, and as holding, of course, somewhat morbid and perverted views on the subjects of insanity and crime. The interrogatories often put to the expert witness by lawyers who sometimes read much more of psychiatry than they comprehend, reveal, to the practical student of psychological science, the false or erroneous views often held by the latter, respecting the relationship which, undoubtedly, frequently exists, but which only a thoroughly practical alienist can generally correctly trace, between crime and disease. Disease or organic criminal propensity being the legitimate heritage that vice transmits to the generations which spring from the loins of the vicious, is by the legal mind often indiscriminately transposed or they are commingled. The Cains of bibical story, with their adequate and vengeful motive, appear as pardonable homicidal maniacs; and the Archangel Lucifer whose rebellious conduct justly secured his expulsion from Heaven, they would fashion into a guiltless monomaniac, whose morbid ambition and egoistic monomania would be an eminently proper "plea in bar" to arrest judgment and execution of sentence by the Almighty.

Yet these are they whom the law entrusts to sift the wheat from the chaff of the symptomatology of mental diseases, and aggregate in such a way the morbid appearances of a given case or supposed case of mind deranged, that the physician to whom their array of symptoms is submitted may make an *unerring diagnosis*. The law expects the medical man to conclude upon the existence or non-existence of disease, from the necessarily incongruous and heterogeneous collection of facts, which such a non-medical man interested in making a particularly bad case, would more likely than not bring together.

In seeking to frame a strong hypothesis of disease, especially of mental disease, the most frequent error made by attorneys is in putting together incongruous

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symptoms of incompatible forms of mental aberration, such as those of acute mania and chronic dementia, advanced general paralysis and melancholia. They confound the categories, as the logicians would say, and then expect the expert to evolve order out of the chaos they make, and call it a particular form of mental aberration. Lawyers, like criminal malingerers, generally overdo their simulation, the exception being mainly where they obtain the active assistance of a capable physician in collecting and putting together their medical testimony. The result is, that even in cases where there is evidence to the physician of the actual existence of underlying mental disease, yet, "taking all the facts submitted by him to be true," which he often knows cannot possibly be true, and yet the disease sought to be proven exist, he is often obliged to rule out the disease he may really think may possibly be there because of symptoms unwittingly introduced to make a stronger case, but which really contra-indicate the existence of the probably really present disease. Thus is the cause of the client often unwittingly wounded in the house of his friends—the sanctum of his counsel. No one is really competent to construct a hypothetical disease unless sufficiently familiar with symptomatology to diagnosticate the diseases he supposes to exist, and with familiar acquaintance with the varied and varying aspects of mental aberration and the recognized oft-resemblance of the displays of mind disordered to those of mind rational, comes extreme caution in the search for the differentiating signs. Lawyers are not so cautious or discriminating in their search after these signs, and often present, to the astonished expert, a remarkable superstructure of disordered mental symptoms, reared upon an impossible foundation of perfectly healthy cerebral substratum; and it also sometimes happens, unluckily for the poor client *if he be really insane*, that the attorneys for the prosecution possess a better understanding of the nature of insanity than the defending attorney, in which case the analysis of the prisoner's character is more cleverly made and presented

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in a light that reflects more disparagingly upon him by his foe at the bar than can be shaded over by his friend. *No victim of real exculpating disease should be subjected to a contingency in a court of justice, which may be the means of his losing a life, which public polity does not demand as the proper penalty of voluntarily violated law.*

That time-honored forensic procedure which requires a medical opinion without permitting a personal examination by the physician whose opinion is sought, and often without the presentation of any facts gleaned by medical men, and even after the suppression of essential medical facts known to the family physician, upon an array of such supposititious facts, presented often without essential qualifying circumstances or supporting circumstances, such as would have been sought for and not overlooked by an expert in ferreting out the existence or non-existence of disease, is a medico-legal *faux pas*—a falacy of the law, because it does not tend to elicit what the law con-templates, and justice imperatively demands in the trial of any cause, namely: "The truth, the whole truth and nothing but the truth." The hypothetical case thus framed, wrongs the prisoner at the bar, outrages justice in her temple and defames science before the people. The sick man has pulse and tongue, secretions and organs to be examined "by sight of science," and that *tactus eruditus* which is most capable of properly interrogating them, is not possesed in any high degree by the hand mainly skilled in writing briefs. The absurd and foolish custom of the law, so greatly at variance with the *usual medical methods* of determining whether or not disease is present in given cases, has been severely animadverted upon and justly condemned by the highest authority in the medical jurisprudence of insanity in this land.* In lieu of the present methods pursued in criminal cases, the appointment of a special commission was advised by him," consisting of men who posses a well-earned reputation in the knowledge and management of mental derangement."

*Dr. Isaac Ray—Med. Juris Insan.—*Preliminary View*, Ed. 1840, p. 70.

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The only reason we have ever heard given in justification of the custom of summoning witnesses to appear and testify to their opinions on suppositions (though the sub-pœna which brings experts into courts calls them to testify concerning the real case at issue, when the real case and real facts can be passed upon and the patient is in reach and could be personally examined by the medical expert), is that the expert opinion, if given on the facts, would virtually be permitting the expert to supplement the jury. (And why should it not in strictly medical questions, or the jury be composed altogether of medical experts?) In the one instance as in the other, if the expert opinion has weight with the jury, it is taken to apply to the real case at issue and the judgment on the medico-legal case is really, after all, rendered by the expert. How much better would it be to always submit the *real* case and let the medical expert decide, by personal observation as well as examination, of *all of the real testimony, what symptoms of disease should be taken into account in forming a conclusion as to the presence or absence of mental unsoundness;* to let the medical aspect of the case be not only passed upon, but searched out by medical men, either by a commission of inquiry or by attendance throughout the trial, conjoined with frequent personal observations of the man *himself*, especially if the alleged insanity persists. The risk of losing sight of facts having a possible bearing upon the existence of disease should not be incurred by the courts (the supposed custodian of the rights of the arraigned, and bound by the law to see that he has every possible chance for a complete defence and fair play), by requiring the medical expert to engage in a vicarious search for them through legal glasses necessarily abscured by inexperience in psychiatric symptomatology; not a hairs breadth of chance for life should be taken from the prisoner by any custom of the law or ruling of the court.

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Art. III.—Nitrite of Amyl in the Treatment of Epilepsy.*

By Prof. Edward Maragliano, Genoa, Italy, 1880.

Translated by JOSEPH WORKMAN, M. D., Toronto, Canada.

AMONG the many medicines which have been used in the treatment of epilepsy, nitrite of amyl has found a place. The first to experiment with it was S. [Weir] Mitchell, a distinguished Neurologist of New York [Philadelphia.] Taking his departure, as many others, from the fact that in the epileptic access there is present a cerebral ischæmia, and at the same time believing that the nitrite of amyl has the property of causing dilatation of the blood vessels, he concluded that it ought to be capable of combating the disease in one of its elements, and that its principal one—which is the constriction of the cerebral vessels.

After Mitchell, the nitrite came into use by several others, among whom were *Chrichton Brown*, *Stackter*, *Bourneville*, *James Philip*, *Bride*, *Adriani*, *Talford Jones*, *Pick*, *Ladendorf* and *Schuller*.

By all these physicians the nitrite of amyl was specially employed to procure abortion of the fits, so that it was given not to combat the disease itself, but rather that when a fit was approaching it should either fail to be manifested, or at least, it should be mitigated in its violence.

This special object to which the nitrite was directed, led to its use merely in the moment prior to the occurrence of the fit, or on the first appearance of one.

The method selected by all for its administration was that of inhalation. The dose usually employed was five to

*From the Italian of *Note di Clinica Medica*.

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ten drops, once or oftener daily, given on a handkerchief or any other similar cloth, by breathing from it from five to ten minutes.

The treatment thus instituted gave to the greater part of the physicians excellent results, in cutting short the fits at the moment of their approach, especially when the inhalations were administered in due time.

The special mode of action of the nitrite on the cerebral circulation determined us also to have recourse to it in some cases of epilepsy; but we believed it advisable to use it in a manner somewhat different from that hitherto followed, and with intentions different from those of previous experimenters.

For the majority of the cases it appeared to us too small a compensation merely to moderate or cut short a fit; we therefore decided on endeavoring to discover whether in any case the nitrite had the radical virtue of modifying in a constant manner the cerebral circulation, and hence of deminishing, or also completely annulling the number of the fits.

With this view, irrespective of the fits or of their development, we administered the nitrite, causing it to be inhaled in determined quantities, during determined periods of time.

The inhalations were vigorously carried out by means of little India rubber bags, into which a flock of cotton-wool was put with the quantity of the nitrite decided on poured on it. The bags were so employed that the nose was kept closed, whilst the patients could freely breath through the mouth. With this preface we proceed to the details of our observations.

Case.—Dellacassa Emanuele was a youth of twenty years when received into the Hospital for Chronics in 1876. He was affected with epilepsy and with frequent fits for eight or ten years past, which seemed to have been caused by a fright. From his admission the fits occurred almost daily, and often many times in each day. Having been admitted into the clinic, in 1877, he was held under observance for one month. He was then placed under the exhibition of

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inhalations of the nitrite in varied doses, and with intervals of its suspension. In the following tables the collected results of these researches, in the various periods of treatment, will be found.

The author here presents a series of elaborate statistics. which, though exceedingly interesting, would cover more space than the pages of the ALIENIST AND NEUROLOGIST could devote to them. They extend in regular series from the 17th of November to the 25th of the following May, and are presented in distinct periods of ten days each. The tabular columns show the succeeding days, in divisions of ten, the number of fits in each day, with the distinction of daily and nightly; the character of the fits, as strong or weak; the treatment pursued through the ten days periods, and lastly, the total number of fits during the same.

We must request the reader to be content with the footing of the column of total fits, which may give a sufficiently clear understaning of the results obtained:

OBSERVATIONS AND TREATMENT.	NO. FITS.
1st ten days, no treatment	37
2d " "	40
3d " "	36
4th " 8 inhalations daily of 10 drops each, during 10 min. each	23
5th " 8 " " 15 " " " 20 "	19
6th " 6 " 20 drops each, 15 minutes each	17
7th " 6 " 20 " " 15 " "	9
8th " 6 " 4 " " 20 " "	7
9th " no treatment	2
10th " "	9
11th " "	19
12th " 4 inhalations, 25 drops each, 25 minutes each	11
13th " 4 " 40 " " 15 " "	9
14th " no treatment	13
15th " 6 inhalations, 20 drops each, 15 minutes each	3
16th " 6 " 20 " " 15 " "	2
17th " no treatment	10
18th " "	29
19th " 6 inhalations, 10 drops each, 15 minutes each	6

The author closes this table with the following remarks:

"The same results followed with the strictest constancy in our alternation of the treatment by the nitrite of amyl and its total suspension, so that we were persuaded beyond doubt, both by our knowledge of the patient's state before his entrance into the clinic, and by his condition under suspension of the treatment, that the diminution of his fits was in reality due to the action of the nitrite."

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Professor Maragliano gives two other similar tables showing like results. He makes the following remarks under the second table:

"In the periods during which the inhalations were employed the number of fits diminished extraordinarily; but when the inhalations were suspended, the number of fits successively augmented, so that the strict relation between the fits and the treatment or its suspension was manifest."

We now present, as meriting the discreet consideration of those who feel an interest in the subject, the concluding remarks of the distinguished Genoese professor:

"If we now halt to take a glance at the special manner in which the fits comported as regarded their number and violence in the three patients whose cases engaged our attention, we must certainly concede that the nitrite of amyl exercised an influence in curbing the manifestations of the disease. Hardly had the medicine been commenced, but we discovered a diminution in the frequency and force of the fits. In the first case we saw the fits descend from forty to two in the day; and in the last case we saw them cut off for a period of thirty days, in a patient who had not for two years previous ever had exemption from them, and on whom other therapeutic means had proved fruitless. In the second, also, the fits descended from twenty and over, to five or eight in the ten-day periods.

Again, as regards the violence, we saw that before the use of the nitrite the fits were strong in all the three, and that the violent fits were more numerous than the weak; but after the administration of the nitrite, we saw, on the contrary, the violent fits almost completely disappear and give place to the mild.

Bourneville had seen, in one of his patients, the attacks suspended for a period of eight weeks after inhalations of the nitrite. Another patient remained free from attacks for four months after the inhalations.

Tassi had in three cases obtained diminution in the number of fits; but neither from his cases nor those of *Bourneville* can we draw decisive conclusions, because they have treated of individuals in whom the fits were wont to appear at intervals of some days, and hence we cannot exclude the possibility and the well founded doubt, that the retardations in the appearance of the fits were accidental. Our cases, on the contrary, from this point of view, exclude every doubt. The habitual frequency and the constancy of the daily fits, and the interruptions produce by the treatment, place it beyond doubt that the benefits obtained ought to be ascribed to the inhalation of nitrite of amyl.

Another corollary deducible from our tables is this: The action of the nitrite was not persistent, and at the most it lasted for a period of only ten days from the date of its suspension. In order to have proof of this fact it is sufficient to refer to the period in the first case, from the 5th to 14th of February. (No. 9 in our abstract.) In this period,

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notwithstanding the suspension of the inhalations. the number of the fits still decreased to such an extent as to go down to two, but in the next ten days they again gradually increased. By this we neither intend, nor pretend, to deny that the efficacy of the nitrite of amyl may be extended to an indeterminate period; for it might well happen that by using the drug with constancy and permanence better results might be secured; we restrict ourselves to the simple statement of what we have obeerved. We do believe that the results established by us on the patients referred to and some others, ought to encourage physicians to test the treatment with more persistency. For our own part, we reserve further action, happy if we shall have induced others to follow our example.

The doses used by us call for some consideration. As we have said in the commencement of this article, five and ten drops had been habitually used in each inhalation of five and ten minutes.

Van Ermengem, in a complete study of the nitrite of amyl, in which he collected all the data relating to this drug scattered in books and journals, admits as the maximum dose four drops. From the reports of all those who have used it, it appears that they have limited the quantity to a few drops; and, *Catanni* gives that of fifteen drops at a time, as an exceptional dose, instancing the possible danger of a larger quantity by inhalation.

It is only in a work of *Winfield Zeigler* that we find any indication of larger doses. He says that experience has taught him that the nitrite may be administered more liberally than has been customary, and he carries the inhalation up to half a drachm twice a day. *Bennets*, also cited by *Zeigler*, encourages us to advance with security, saying that the nitrite of of amyl is no traitorous remedy.

Encouraged by the assurances of these practitioners as appears from our tables, we have pushed the drug still farther than they have done.

We had commenced to experiment with small quantities, two, three, five, six and eight drops; but whether it was the quality of the drug used, or the gravity of the disease, the fact was that in several epileptics no benefit resulted. Convinced of the necessity of availing of larger doses, we resolutely began with ten drops, finally to ascend to forty in the course of one day; and yet we have not had to note any bad effect; but even with increased quantities we have seen very marked advantages. Not only in the quantities of the drug, but also in the duration of the inhalations and the number of them did we depart from the custom. In fact, we ordinarily caused the protraction of the inhalations to fifteen minutes, going up so far as twenty-five, whilst in general they had not exceeded five; and so much the more attacks were insistent, so much the more did I insist on the number of inhalations prescribing them, according to requirement, every hour."

The author next enters upon a very interesting detail of the results of inhalations of the nitrite on the temperature of the head, which is followed by a series of observations on its effects in the production of glycosuria; but

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as these records would demand more space than our pages, with a due regard to other requirements can afford, we are compelled to take leave reluctantly but gratefully of of our illustrious Italian confrere.

Art. IV.—Arrested Prodromal Insanity with Auditory Hallucinations and Auto-Mysophobia.

By D. V. Dean, M. D., Superintendent and Physician of City Hospital, St Louis, and C. H. Hughes, M. D.

ALIENISTS are not unfamiliar with suspicions of personal contamination held by the insane, and, in this city, two well-known cases, at least, of mysophobia in persons not having been considered sufficiently impaired in mind to necessitate medical treatment might here be named.

The following case is somewhat antipodal, yet similar to these in its psychical display. Cases like it, too, are not rare in confirmed insanity; but the fears which the insane entertain of contaminating others pertain rather to *moral* than to physical defilement. The fear of *being* physically contaminated is more common, too, than the fear of contaminating others by reason of self-defilement; the morbid egoism of mental aberration displaying itself rather in a personal concern for self than for others.

On February the 17th last, there was admitted to the St. Louis City Hospital an unmarried German laborer, aged forty-two years, who gave of himself the following history: Two and a-half years before he worked in the lead works. After working there for a year he was compelled to stop on account of pains in the abdomen; after that he worked on a farm and elsewhere. About December

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the 25th (the patient states) wherever he worked or went people would say that he smelt bad, and, on one occasion, he struck a party for saying this (and he has otherwise annoyed persons in his neighborhood by the manner in which he often communicated his suspicions of them and to them). He thought ladies in the street car said: "How that man stinks! He ought to be ashamed to come into the car."

When admitted to the hospital, the patient said so many people said he smelt bad that he thought it must be so. He could see them point to him, and sometimes they whispered and sometimes they spoke aloud of his smelling bad.

The patient was so anxious that Dr. Dean and others should not be biased and, without sufficiently examining into the case, conclude his hearing was subjective, that he said: "I know what hallucinations are, and I know I heard those things; but if you will go and ask those persons if they did not accuse me of stinking, and if you honestly tell me they said no, I will believe I had hallucinations." The Doctor even went, at the patient's request, to where he had worked, and ascertained of his fellow workmen if ever they had said he smelt bad, and learned that they had not, but they had all noticed his keeping by himself. On being informed that they denied saying anything more than that he acted strangely, he admitted he was mistaken and labored under an hallucination, and said he was ashamed to talk about the matter—but it must be understood that the patient had, by this time, improved, having been some time in the hospital.

The patient was, withal, a cleanly man, washing his feet, arm-pits and person elsewhere often; and neither Dr. Dean nor myself could discover any bad odor emanating from him.

The patient now states that, when at work in Cheltenham, the room he slept in was occupied at night by five laborers, and he sometimes slept out of doors on a porch

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and awoke in the morning wet and cold with dew; that he used to wear a heavy beard and had shaved himself shortly before these suspicions began to disturb him. His nose used to discharge in cool weather, but this season it was dry. Just before this hallucination developed he felt a sense of distension—outward pressure—in his ear, and pain. The idea which he came finally to entertain that he did really stink, as he believed everybody thought he did (and he could sometimes smell something disagreeable or peculiar, though he could not quite trace it to himself), led him to accept hospital treatment willingly under the belief that he could there get rid of his obnoxious odor.

He was committed to the hospital as insane, though the false belief or delusion which he finally reached that he emitted a bad odor would have been rational enough, had the hallucination of hearing been a fact.

Under bromide and iodide of potassium and chlorate of potash, with judicious moral management, the hallucinations soon left the patient and he went to work, under pay, about the hospital grounds, in which manner he has been engaged for several months. Within the past few weeks, however, he manifests a return of the former suspicions. When he first noticed this he was working for several days near a box in which the bones from the kitchen are deposited, and which smell very bad; but he never thought of *his* stinking until others spoke of it, which he is sure they did and do. He now reasons, that if he really stinks, as must be, because people say so, it must be from his nose, and this because of the exposure, he mentioned; and, on the other hand, the fact of his catarrh and exposure leads to his more ready admission or belief that he does stink.

Thus he reviews his hallucinations, seeking, in these circumstances, to found them on a rational basis; but an assurance by us that his suspicions are groundless, though we promise to thoroughly cleanse the throat and nose, for the time satisfies him, and he returns to his work.

The man did not, in the beginning, sleep, but he does

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now; and his appetite is remarkably good; none of his bodily functions are appreciably disordered. He, however, is so excessively deliberate in whatever he does, taking twice as much time as the average man for the same work, and it being impossible to hurry him, that his peculiar manner as a workman has attracted attention and remark from those about him, and he is sure they accuse him of stinking.

The case is one of arrested mania prodromata, probably having their exciting cause originally in Eustachean-tube obstruction, middle-ear trouble and vascular disturbance extending to the cerebral auditory center. An altered condition of the Schneiderian membrane, though not now apparent, may likewise have been an early causative factor.

Art. V.—Problems in Psychiatry for the Family Physician.*

By C. H. Hughes, M. D.

PSYCHIATRY is prëeminently a practical subject. Comparatively few general practitioners of medicine have had adequate opportunity afforded them of practically studying the *portean* phases of mental alienation, as they are mainly to be seen, under the present methods of treating the insane, in the hospitals. This fact adds perplexity to the problem of properly treating and disposing of insane persons when we encounter them in general practice.

The absence of that clinical experience which comes from daily intercourse with and observation of the disease, and which usually enables the general practitioner to

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*Being part of a paper read before the Tri-States Medical Association, at Louisville, Ky. November 9th, 1881.

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make a prompt and satisfactory decision in the diseases he is accustomed to more often encounter, and the consciousness of this want of the requisite clinical experience, which is not infrequently apparent is likely to occasion, either a kind of hesitation and indecision in determining upon therapeutic methods which may not be always such as the exigencies of the case may require, or to result on the other hand, in a too hasty and indiscriminate consignment of the patient to the most convenient State Hospital for the Insane. The more intelligent and skillful the physician is in ordinary cases, and the wider the range of his general medical observation, the greater will be his caution, for such a physician has a just conception of the gravity of the malady and of the grave consequences to the patient, both of premature and of too long delayed commitment.

The general failure on the part of the schools at which most of the older physicians now in successful practice have graduated, to give practical instruction in psychiatry with opportunities for clinical observation of insanity, and the absence of any considerable number of alienist physicians in the land outside of the hospitals for the insane, and the large cities and even in the former, where political considerations govern the appointments of the medical staffs and rotation in office, on the vicious principle of spoils to the victors is frequent, often leaves no alternative to the conscientious medical advisor, who would if possible rescue the overthrown mind of his patient, but to consign him to the insane hospital. He would treat him at home if he could, and thus save the patient and the friends of the patient, the pain, expense and stigma (which latter still unjustly attaches to one bereft of reason), of separation and removal to the asylum; and he would, likewise, if he could, add one more laurel to the brow of victorious medicine.

One of the practical problems in psychiatry for the general practitioner is, therefore, THE HOME MANAGEMENT OF THE INSANE.

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How can the physician determine when a given case may be safely treated at home? To determine this rightly, the physician must satisfactorily solve many very practical questions:

1. He must ascertain if the patient is homicidal, suicidal, violent, or destructive in any way to the person or property of himself or others, beyond the likelihood of ordinary home vigilance to prevent or circumvent, or is he in eminent danger of becoming so? Is there danger to wife or husband or children? It would not add to the family physician's reputation, as a safe adviser, should a bloody tragedy, or other calamity, follow shortly after advising the retention of such a patient at home, in lieu of promptly committing him to the hospital.

And here the physician, in forming his judgment, must bear in mind how lightly the family are likely to estimate those threats of the patient which often precede their startling execution. Having known the patient, it may be, as always kind and affectionate, they are not prepared to realize the impending radical change of feeling and conduct because of disease towards those whom he has loved and respected.

2. Is the patient so indecent in his habits, conduct or language, or otherwise so regardless of the ordinary proprieties of life, as to render it unfit for him to remain long at home?

3. What antipathies has he formed? Is the presence of the wife or children, or *vice versa*, detrimental to his mental welfare? Can he be treated and cured by medicine alone? How long would it be safe, without incurring the liability of malpractice or violating the golden rule, to attempt to treat him at home, in the midst of those surroundings and causes, real or imaginary, which may have engendered or excited his malady or still contribute to keep it in existence?

4. Was the patient's insanity caused and does it seem aggravated by *any* of the circumstances surrounding him

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and are they or are they not removable? What is the pecuniary condition of the patient or his family and the disposition of the latter to incur every needed expenses (and expenses in such cases are often very great) for securing the removal of all causes which really, or in imagination, offend the patient and interfere with his chances for recovery, and what certainty is there of the necessary nursing, attention and watching being given him?

5. Does the patient persistently refuse food, and is his condition, in many or most respects, such as to require those moral agencies, appliances, restraints and that constant surveillance which only great wealth at home, or organized private hospitals, or the lavish munificence of the State or rich corporations, now furnish in the well-ordered hospital for the insane?

Other questions, too, the home physician has often to solve:

How can the patient be approached daily and treated without incurring his antipathy? When ought treatment to be foregone, and the certificate given which is to consign the patient to the insane hospital, etc.? Delay, in most cases, is dangerous. How are the exceptional cases to be determined? On the other hand, a too hasty and unnecessary certificate of insanity may sully the patient's good name and imperil his interests and social standing, for insanity is a grave affliction. To be declared insane and sent to an asylum is to become, in the eye of the law, *non compos mentis* and divested, while the affliction lasts, of all of the political, and many of the personal, rights of the citizen. In law, the adjudged lunatic becomes a child again, and his property, interests and business affairs must be conducted, at least for a time, by some one whom the law regards as "possessed of sound mind and understanding.

Mental disease, too, is still looked upon in many otherwise enlightened communities, as among the disreputable afflictions, little less opprobrious, even, than syphilis or

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leprosy, though the superstitious notions which once prevailed respecting the diabolical possession of its victims, have, to a great extent passed away. The insane are no longer burned or drowned as witches, though they are still sometimes unjustly hung as crimnals.

To our noble profession, ever the enemy of superstition and ignorance, which was the first to strike the shackles from the poor unfortunate lunatic and recognize him as a friend and afflicted brother, rather than fiend incarnate, belongs also the proud honor of having stayed in numberless instances, the judicial murderer's hand and rescued, in the name of outraged humanity and dispised science, many an innocent creature. Alas, that there should be one in our own ranks to assert that the homicidal insane are fit only to be executed, and one, too, who, not holding with Dr. Burrows, "that madness is one of the curses imposed by the wrath of the Almighty on his people for their sins," but that, "just as a good candle gives good light; a good fuel, good fire; so does a good brain give good mind." One whose views are not *psychosomatic*, but purely *somatic and material*, of mind and its operations should entertain more charitable views towards the unfortunate possessors of defective mental organisms.

Many more questions than those I have here enumerated will present themselves to the general practitioner for cautious solution as he is confronted from time to time in his practice by cases of mental derangement, and to answer them rightly, will often perplex him. He will oftentimes be greatly assisted in their solution by the experimentally acquired knowledge of asylum superintendents and those alienists who have long and specially studied how best to treat and provide for the insane, and by often visiting these excellent institutions, and learning there what can be but slowly learned, if, indeed, it can be fully understood outside of them, that much more than mere medication is essential to the successful treatment of many of these patients; that the facilities for classification and diversion and the separation from home, give

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aid to hospital physicians, which the medical man at home cannot have in their treatment.

I have found the superintendents of our asylums for the insane, to be generally intelligent and observant men, well informed in practical psychiatry, courteous to medical visitors, and cheerfully disposed to impart their practically acquired knowledge.

These questions are all practical ones, to be best understood and answered in the same way as we understand variola or varicella, scarlatina or rubeola, phthisis or bronchitis.

Many forms of insanity resemble each other as much as these varieties of what was, until recently, regarded as more properly physical diseases, in their early stages. To arrive at correct conclusions respecting them, how to treat and dispose of them properly, requires the same kind and degree of practical judgment based on experience as gives the best results at the bedside generally.

In the face of the oft reiterated experience of all physicians, from the great Esquirol to those of our own day, who have made themselves thorough masters of the subject, that it is necessary that we should have a familiar personal and experimental acquaintance with the insane in order to comprehend their malady and all concerning them as patients, there still exist some medical men who, without adequate practical observation in psychiatry, and wishing to be regarded as teachers on this sucject, boldly discuss the prëeminently practical question of insanity in a theoretical way, and on general principles. Thus we often see physicians on the witness stand reasoning out conclusions at variance with the testimony of experience only to be discomfited by more logical and better read attorneys. Yet none would be more ready than they to condemn those who would lightly regard the conclusions drawn from clinical acquaintance with other diseases, on purely theoretical grounds. "Great powers of reason are doubtless requisite," as Vogel has observed, "to understand men distitute of reason," but "in the practice of our art," says Dr. Chas.

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West, "things which seem almost as slight as the gossamer film, serve often to decide points of great moment, and the detection of the real nature of disease is often, or even oftener, the result of minute, well-schooled observation, as of acute reasoning or of great mental power."

So in the practice of that eminently practical branch of medicine called psychiatry, we must make ourselves personally familiar with the insane in order to obtain exact notions respecting them. We must live with or often see them in order to appreciate the infinite cares and numberless details which their treatment requires. "In the gestures, movements, looks and general aspect, in his proposals, actions and *shades of conduct which are imperceptible to others*, the physician often derives his first thought respecting the treatment which is suited to each patient committed to his care."* Thus only, or by often visiting them and intimately studying their malady, can we properly understand and treat them. That physician is, therefore, fortunate who lives near to and has often access to the modern State Hospital for the Insane, with its pleasure walks and drives, and farm and garden, dairy and work-shops, and games and amusements, affording opportunities for timely recreation and diversion, such as the physician may prescribe, with its means of sequestration in moments of great excitement, and number of distinct communities in separate halls, yet under the same roof, affording opportunities for such change of immediate surroundings as the varying mental changes of many cases often require in the progress of their malady.

Unfortunately for the general practitioner, cases of insanity, for various reasons, many of which I have indicated, are now only mainly to be found in the asylums. They are sent there quite indiscriminately, at present, for lack of that clinical experience on the subject, in which the profession at large is deficient, some going that ought not to go, while some are kept away too long that ought to be early sent, so that here, if he should fail at home,

*Esquirol—Mental Maladies—American Ed., 1845, p. 72.

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as he will often do for lack of these auxilliaries, "the general practitioner of good common sense, with such a knowledge of the human mind and of cerebral physiology as can be obtained by study, and familiarity with all the factors in the patient's history, may succeed." Such a man makes the average asylum physician of recent appointment, taken directly from the ranks of the profession at large.

A skilled medical judgment is not as yet so much the power that moves the insane into our asylums, or keeps them at home, as considerations of expediency or fear of violence, etc. on the part of the friends or relatives.

Many physicians act most conscientiously and wisely when confronted with this disease in a form in which they have never before seen it, by advising prompt commitment to an asylum. But the time must come, and is not far distant, in the progress of our science and art, when such cases as can be safely treated at home will be treated by physicians outside of asylums, having a taste for studying the interesting problems of psychological medicine, and cured there or in the many private-home retreats now in existence, or to be created by private medical enterprize in different parts of the country and well adapted for certain kinds of cases.

"There are few diseases of equal magnitude so susceptible of successful medical treatment in the incipient form as those implicating the normal action of thought." —*Forbes Winslow.* Many of these (by no means all, however,) can be well managed, and some better managed outside of an asylum than in one. The duty now devolving on medical men is to make a wise discrimination, based, not on theoretical notions of this mysterious and protean disease, but on clinical observation and deduction, and certainly not upon the heretical and preposterously illogical idea that non-asylum physicians know, *prima facia*, more about insanity than those, even the same medical men, who subsequently take charge of aggregated bodies of insane.

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It would be better for the general practitioner to advise that all his cases be promptly sent to the asylum, than to attempt to manage at home, forms of the malady he does not fully comprehend, especially the acute forms in their curable stage.

This is the course the conscientious physician usually advises, and no class of men are more conscientious, the ministry not excepted, than thoroughbred and educated regular physicians.

But a man may be conscientious and yet err in judgment, he may judge well and wisely advise, and yet be disregarded—so that we see to-day, the same sad spectacle not much abated in its melancholy aspects, described by an eminent English medical writer, twenty-five years ago in these words: "The existence of so vast an amount of incurable insanity within the wards of our national and private asylums, is a fact pregnant with important truth. In the history of these unhappy persons—these lost and ruined minds—we read in many cases, recorded the sad, melancholy and lamentable results of either a total neglect of all efficient curative treatment at a period when it might have arrested the onward advance of the cerebral mischief and maintained reason upon its seat, or of the injudicious and unjustifiable measures of treatment under mistaken notions of the nature and pathology of the disease. In no class of affections is it so imperatively necessary to inculcate the importance of early and prompt treatment as in disorders of the brain affecting the mind."—*Forbes Winslow.*

Physicians are not so much at fault now as they were a quarter of a century ago. They know more and see more of insanity now.

But sympathetic ties of consanguinity clinging to loved ones afflicted with this dire disease, too long keep these patients from the hospital or errors of judgment on the part of the family or those who influence them, false family pride and mistaken notions of the necessity of medical advice and treatment, too long keep away the counsel and the aid of the family physician. And when the

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physician is consulted, as doubtless every physician here present has more than once realized, he is confronted with the difficult problem of drawing the line between home treatment, or rather treatment outside of an asylum, and of consigning the patient to the hospital. On the one hand, as already intimated in the beginning of this paper, may be Scilla, on the other Charybdis.

To discuss this subject *in extenso*, would more than exhaust the evening. I may say, however, in brief, that among the cases that are likely to be too soon or needlessly sent to the asylum, are:

1. Puerperal insanity during the first six weeks after labor, in consequence of parturient shock, exhaustive discharges and inadequate nutrition and in passing, let me say, in parenthesis (that I believe the usual *post parturiens* low diet to be largly responsible for many cases of hopeless puerperal insanity. The lying-in woman should be better nourished than the old rule allows).

2. Insanity of Utero Gestation.—This form of insanity might often, by judicious treatment, be kept in abeyance until the crisis is past; but these cases require great watchfulness against violence to the child by the mother during parturition and after, for a while, and often demand the keeping of the new-born babe from the mother's sight until mental restoration takes place.

The asylum, if easily accessible, is often, however, the only place for them, because of the strange antipathies, violent tendencies and incapacity of friends and familiar hands to exert restraint from premature and dangerous physical effort.

3. Insanity of Lactation, which may usually be averted or arrested in its incipiency by the prompt weaning of the child, taking it away from the mother and supplementing a wet nurse or the bottle, securing sound sleep every night, quietude during the day, by means of the malt preparations, extract of hops, the best of nutrition, and the usual therapeutic calmative neurotics and hypnotics.

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4. General Paralysis of the Insane.—These patients being never cured, and generally as happy in one place as another, and seldom dangerous, may be treated as well at home, or by traveling, as elsewhere, provided they submit without attempting violence or intolerable annoyance to the control of their affairs by others, and these patients often have large property interests, the incessant effort to accumulate, which has culminated in their insanity.

5. Acute Psychic Disturbance, consequent upon hyperæmia, while the patient is still, though ever so vaguely, conscious that something is wrong with him and will receive treatment.

These cases require, however, much watchfulness and skill in management, if they have any delusions of suspicion that may lead to homicide or suicide. The advice that is to keep them out of an asylum should be cautiously given and based on ample means, and disposition on the part of friends to keep the patient under constant surveillance.

6. Cases of *mania a potu* or delirium tremens, having their foundation in acute nerve exhaustion, which may be soon restored by judicious treatment. These cases should always be treated until it is satisfactorily ascertained that the cerebral debility and the alcholic poisoning are chronic, before signing the certificate that commits to the asylum.

7. Senile dementia. These cases being generally much debilitated and certain not to recover, should, if possible, be permitted to die at home.

8. Insanity with recent hemiplegia or paraplegia, until recovery from the immediate effects of the stroke have passed.

9. Insanity connected with far advanced or metastatic tuberculosis, unless violent and destructive, and such as appear sometimes in the course of the examthemeta, zymotic diseases or acute affections, which appear to threaten an early, fatal termination. For obvious reasons, such patients had better be kept at home.

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10. *a*—Mild cases of melancholia, without fully developed delusions or suicidal propensities, where the patient could afford the expense of a medical attendant away from his immediate home. But these cases are often the most uncertain and treacherous the physician encounters. It is out of them that the annual harvest of suicides is largely made. Ceaseless vigilance should accompany the attempt to treat them at home.

b—Melancholia of whatever kind, dependent on reflex causes, like hemorrhoids or fistula, should not be sent away before the benefit of an operation is first tried, if it be possible to perform it. Hepatic derangement and morbid states of the generative apparatus should be always first looked for and remedied, if found.

In using the term home-treatment, we do not mean to imply, in every instance, the patient's own household, but the vicinity in which he or she resides. The temporary removal of the patient to the home of his or her physician, or to the house of some neighbor, who might be congenial to and exert a salutary influence on the patient is very often one of the concommitant necessities of any attempt at home-treatment, the chief aim being to allay the patient's developing fears, antipathies and suspicions, and secure willing acquiescence in such medication as may be essential to restore mental tranquility and subdue the growing excitement. Failing in this, there is no resource but the hospital, the final resort in the vast majority of instances, and in no case of acute insanity should fruitless home efforts be long enough continued to imperil the chances of recovery in the hospital. In the majority of cases, from a month to six weeks of trial is enough to ascertain if restoration at home is probable, and in no instance should a patient *who* even steadily grows worse from day to-day, sleeping little, if any, and eating little or none at all, be kept at home one half or one-third of this time. His surroundings are fuel to a consuming flame, and the sooner he is removed from them the better.

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Art. VI.—Locura Paralytica (*Paralytic Insanity*). Delirio Mixto (*Mixed Delirum*).*

By *DR. MELENDEZ.*

Translated by JOSEPH WORKMAN, M. D., Toronto, Canada.

THE *Revista Medico-Quirurgica* of Buenos Aires, of May the 8th, presents under the above title an interesting case described by *Dr. Melendez*, physician of the *Hospicio de las Mercedes*, who seems to have been rather undecided as to its appropriate designation. It is, however, our belief that it presents the leading characteristics of a form of mental alienation with which the physicians of European and American insane asylums are but too familiar, and though one or two of the psychological manifestations may be of unusual occurrence, we cannot see that these should demand the introduction of a new nosological term; neither do we think that the one suggested by Dr. Melendez—*megalomania*—posseses any distinctive merit, for in no small proportion of all cases of mania, delirious extravagances of a highly accentuated order are to be met with. That in Roman Catholic countries, in which pictorial representations of Scriptural subjects, and particularly of the sufferings and death of the Savior, are so largely employed as a means of awaking and stimulating emotional piety, the delusions of the insane should sometimes be strongly tinctured with a corresponding mental strain, we regard as a very natural phenomenon. Even in Protestant communities, similar delusions are by no means unknown. Few superintendents of large asylums have not made acquaintance with imaginary Christs, Virgin Maries, Popes, Emperors and

*Translation and comments by Joseph Workman, M. D., retired Superintendent of the Toronto, Can., Lunatic Asylum; Ex-President Toronto Medical Society, etc.

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great Generals, and certainly the personation of death has not been one of the unknown occurrences in their experience. No delusion need be regarded as extraordinary among the subjects of *General Paresis*; and to this class, without any hesitation, we should assign the case described so vividly, and we doubt not, so truthfully by *Dr. Melendez.*

The following is a translation of the details of the case:

CASE.—N. N., a native of the Empire of Brazil, aged 31, married, of nervous temperament, a merchant of good constitution, entered the *Hospicio de las Mercedes* on the 23d of April, 1879, under certificate by Dr. Blancas. According to the statements of his relatives, he had enjoyed good health and a brilliant commercial position until, in consequence of adverse business affairs, he became unbalanced and abandoned himself to alcoholic indulgencies, which resulted in the mental disorder under which he now suffers. As far as we have learned, no family antecedents authorize the belief in hereditary predisposition. He daily lost his cheerful character, and ended by abhorring his wife and children whom he had before idolized. Everything disgusted him, and the most trivial matters became to him serious disgusts. He frequently left home to sojourn with friends, towards whom he exhibited profuse generosity, as if he possessed a large fortune, inherited from a near relative. He had not passed a long time in exhibiting his ideas of grandeur, when he abandoned the vicinity of his family and went into another part, where he committed some excesses and acts of violence, in consequence of which it became necessary that one of his friends should go in quest of him, and, having found him, it was proper to have recourse to coercive measures to conduct him to *Salto Oriental*, from which he was brought to this institution.

STATE OF THE PATIENT ON ENTRANCE INTO THE HOSPICE.—N. N. was attired in a Kersey dress, carrying on one of the lapels a sort of a crown, which he had himself made out of a piece of tin, and placed on the part indicated. His physiognomy presented nothing remarkable, excepting some alteration in color, which was darker than customary, and his hair was neglected and tangled. Being asked as to his name, he persisted in styling himself N. N., Duke of Braganza, and the possessor of the riches of the universe.

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He passed the first days tranquilly, until his impatience, pride and desire for liberty led to a quarrel with the attendants, similar to those which had taken place at home before his entrance here. He every day demanded large sums of money for the purchase of exquisite viands from the best hotels and confectionaries of the city; when reply was made that we did not possess what he demanded, he called for paper, on which to write telegrams to the principal bankers of Brazil and Europe, with whom he said he had fabulous sums in deposit. He did not talk merely of hundreds and thousands, but of millions and trillions of sterling money. When paper was given to him, he wrote very tardily, and if by chance he made a mistake, he did not cross it out with the pen, but smudged it with the finger, as if he was writing on a slate. The writing was unintelligible and showed great incoherence of ideas, but always with his characteristic grandeur. When we gave him paper he never concluded any writing; he would begin a page, and before filling it, he would turn over to another and begin to treat of a new subject, which had no relation to what preceded. The form of his writing was notably altered and quite irregular, the lines were not parallel, but descending and ascending in curves more or less pronounced, and disagreeable to the eye. The tremor of the hand caused him to describe curved lines of various degrees. At the end of a month he began to tear his clothes, alleging that he had others more elegant and rich to replace them.

PROGRESS OF THE DISEASE.—The patient continued as above for two months, when he became sad and his delirium took a religious form; he was frequently found kneeling, with his hands joined on the palms, and in the attitude of praying. The form of his delirium became daily more accentuated until he finally refused all nourishment. His emaciation seemed to abolish all hope, and he stretched himself out on the floor; it then became necessary to place him in one of the infirmaries where he might receive the care which his condition required. Having

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been placed in bed, he persisted in his ideas and ended by believing himself the redeemer of the world. In consequence of his persistent refusal of food, alimentation was very difficult. He finally declared himself the Son of God, and asserted that he must die on the cross for the redemption of mankind from the captivity of satan. One day we were amused by seeing him simulating dying on the cross, and presenting a figure that might attract the attention of the most fastidious observer. Lying on his bed in utter muteness, he stretched his lower extremities in such a manner that they appeared held by a very strong exterior force. He extended the arms in a similar way, so that it was impossible to bend them by any force used by us for that purpose. Once, while in this attitude, he opened his eyes so widely that they appeared about to start from their orbits. He opened his mouth similarly and thrust out his tongue with great force, uttering a peculiar cry as if a noose was strangling his neck.

He remained in this state for some minutes, when his cries ceased and he passed into apparent lifelessness; his respirations became imperceptible and his face was bathed in sweat; finally he settled into apparent death, with complete relaxation of all his members. New attacks took place at intervals of some hours, and whilst they lasted he continued perfectly indifferent and estranged from all surrounding occurrences. While he was in this state, in order to test the peripheral sensibility, we pricked the skin with a needle and sometimes excited convulsive action, but other times not. When this experiment was made at the times in which he simulated agony, convulsions occurred at each pricking, he gave a loud cry and thrust out his tongue with great force as if to indicate that he believed himself wounded by some weapon. He persisted for some days in simulating the death of Christ, but at length, through the influence of bromide of potassium and injections of the muriate of morphia, he became tranquil. After this he passed into a

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melancholy and taciturn state, and was observed to weep frequently, without indicating the cause of his suffering, which we failed to discover, though we interrogated him often in this relation. His moral suffering being now so far calmed, he began gradually to take food and his emaciation decreased. After a time he left his bed, and commenced to walk in the open air; still, however, preserving his melancholy cast. At length he regained strength and some degree of cheerfulness, and we judged it best to place him among the boarders of his own class.

THE PRESENT CONDITION OF THE PATIENT.—At the present time N. N. exhibits a phase quite distinct from that observed in the outset. We now see in his case all the most notable symptoms of paralytic insanity, the progress of which we believe cannot be retarded, if we may judge from his general condition, and the fact that no benefit has resulted from the course of medication pursued. He is greatly emaciated; his aspect is of an ashy hue; the hair is frizzled and lustreless, as are also the beard and whiskers; and his general appearance indicates the disease under which he labors.

The pupils are unequal, that of the right eye being the larger. The sense of smell is torpid to such a degree that he does not distinguish the odors of the most familiar substance—as garlic or onions. The taste is similarly affected, and the sensibility of the skin is much diminished. The lips and superior members present marked tremulousness, especially when he talks fast, or is agitated, or when he uses the hand to take food, or to light his cigar. The muscular force is diminished, as is readily shown when he is made to raise heavy things, or to squeeze our hands. He presents no change of gait, with exception of the tardiness observed when he takes his walks, and the absence of that air of satisfaction which at the first distinguished him. His appetite is good, or indeed it is bulimic; he eats greedily and abundantly, without manifesting predilection for anything, thus showing that all are equally agreeable. His digestion is perfect, and there is no diffi-

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culty in his deglutition. His bowels are persistently costive, and exhibition of purgatives is necessary. His urine is voided involuntarily; he does not seek for the chamber vessel, nor go, as at the beginning, to the latrine, but passes both urine and fæces wherever he chances to be seated, or in his bed.

His delirium always ranges in grandeur, he persists in the belief that he is a millionaire, and general of the armies of the Empire of Brazil. He becomes irritated from time to time, and threatens us with powerful batteries of cannons, bombardments and colossal squadrons. He rises suddenly with shut fists and trembling limbs, grinds his teeth, and utters cries and tremendous threats. He resists the exhibition of medicines and the injection of morphia. At the first he called both poisons, and he believes that by means of the injections we are trying to empoison his noble flesh. When he sees the operator coming with the syringe of Bravat, he absconds, or becomes agitated, and cries out, "*here comes the hangman bearing the torment with which to lacerate and poison my flesh.*" He sleeps little, and whilst awake, he continues in his delirium in the usual form, and sometimes cries out, destroying the quietude of his associates.

General Considerations.—This patient, from his present state and that observed at the outset, presents to me some interest. In the first days, symptoms of megalomania were noted without any of those somatic phenomena which accompany paralytic insanity of free progress in its invasion. There was no tremor or vermicular twitching of the lips or any alteration of the speech; neither was there alteration of smelling, inequality of the pupils, change in the gait, or more or less pronounced fever; and from these facts I was led to regard the case as a *megalomania*, and not one of paralytic insanity with the delirium of grandeur (general paresis).

The mixture of delirium affecting a triple form is not common; at least, I confess, that I have not had occasion of observing any similar case in a period of four years,

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among more than forty individuals of the same class, and with a delirium ambitious, melancholic or hypochondrical.

Another particular deserving of note is the period at which the religious delirium was presented, during which he believed himself to be the redeemer of the universe, and represented that most interesting spectacle of dying on the cross, a process which he appeared to struggle to characterize by the most vivid colors and agonized gesticulations.

We omit the treatment adopted by Dr. Melendez, regarding it quite as futile as he has acknowledged it to have been. Not many readers of the ALIENIST AND NEUROLOGIST, we imagine, who have had large asylum experience, will hesitate to assign the case to its proper class. *Paresis*, just as other forms of insanity, presents no stereotyped uniformity, either in its somatic or its psychologic phenomena, and we cannot see either in the positive or the negative divergent symptoms noted by Dr. Melendez, sufficient grounds for excluding the case of N. N. at any period, from the class of the paretics. We attach no importance whatever to the *triple form* of delirium which he seems to have regarded as of diagnostic value, for nothing can be held as extraordinary or improbable in the course of paretic delirium. It is in its final stage that we most clearly identify the malady.

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Art. VII.—The Latent Zone and Non-Motor Areas of the Cerebral Cortex.*

By DR. BOYER

Translated by E. M. NELSON, M. D., St. Louis.

IN an inaugural thesis before the Faculty of Paris, Dr. Boyer communicated, last year, some "Clinical Studies upon Cortical Lesions of the Cerebral Hemispheres," which led him to the conclusion that there are non-motor by the side of the motor areas of the *cortex cerebri*. This communication is interesting in connection with the direct clinical confirmations of the doctrine of localized psycho-motor centers in certain definite portions of the convolutions of the cerebrum. Cerebral lesions, he says, do not always cause motor symptoms; these depend upon the points where the lesions are situated. He thinks we can circumscribe the area of the non-motor points, and, by the difference, demonstrate the existence and seat of the motor area upon the external surface and in the middle of the cerebral hemisphere. A case will be the less accompanied by motor symptoms as it is seated farther from the fissure of Rolando; so all the points of the lower surface of the hemispheres of the brain can be affected by latent lesions (except where the function of the vessels at the base are interfered with).

By their relation with the vascular parts, by experimental determination as well as clinical observation, it would appear already demonstrated that the motor centers occupy the circumference of the fissure of Rolando, and the origin of the fissure of Sylvius.

*From the *Gazette des Hopitaux*, Jan., 1880.

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The most certain and the earliest localization, that of aphasia, consists in three lesions: Lesion of the surface of the third left frontal convolution (certain); lesion of the island of Reil, on the left (under investigation); lesion of the white pediculo-frontal bands of the third frontal convolution on the left (certain).

The area of the center of language corresponds to the posterior third of the third left frontal convolution, all around the ascending branch of the fissure of Rolando.

We can seek out the motor centers by the aid of the facts of partial epilepsy. It never takes place in lesions of the lower surface of the brain.

The study of cases of monoplegia is alone capable of permitting to fix, definitely, the exact seat of a center, and its point of maximum physiological function.

The study of cases of associated monoplegia will indicate the extension of a center, or that this action of one motor center upon another has occurred by a superposition of the edges of two contiguous centers, or that the white bands derived from two neighboring centers underwent decussation in the centrum ovale of the hemisphere.

The center for the arm occupies the space which separates the center for the face from that for the leg. Its extent is considerable, as we often find monoplegia of the arm associated with other monoplegias, especially that of the leg, which constitutes then incomplete hemiplegia, without facial paralysis.

We can fix the minimum center in the following points: Language: third left frontal in its posterior third. Face: the base of the frontal and of the ascending parietal. Arm: the middle third of the frontal and of the ascending parietal. Leg: the upper third of the ascending parietal.

BRACHIAL MONOPLEGIAS.—*M. Gaston Decaisne* read a thesis on "Paralyses of Cortical Origin of the Upper Extremity (Brachial Monoplegias.") We find in this, aside from a confirmation of many of the propositions which precede, some new and interesting diagnostic indications.

In general there is no apoplectic stroke properly speaking

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Most frequently the patient experiences a vertigo, he staggers, even falls, still maintaining a more or less distinct idea of what is passing about him. Often there exists, at the same time, a passing embarrassment of speech, due probably to a momentary congestion of the convolutions of Broca. It is remarkable that it is most frequently the leg which first attracts the attention of the patient. He feels himself failing, and generally perceives the loss of motor power of the arm, only after a time, relatively quite long. Certain individuals, taken at night, find only on the next day that they have no power to move their fingers.

Gradually the general phenomena disappear. Language, when it has been affected, recovers its functions, and if the motor center of the arm alone has been really involved, we can follow the evolution of the brachial monoplegia in all its details and all its phases.

That which strikes every one at first in this kind of paralysis is the conservation of the sensibility. When that is affected, it is generally only in the first moments, and it is most frequently only blunted. When it is more seriously compromised, which occurs exceptionally, it depends solely upon a greater extent of the lesions. In most of the cases, when the first shock has been dissipated, the patient perceives the least prick and the lighest touch. Sensibility to cold and heat is equally intact.

The temperature of the limb undergoes no modification, at least in the immense majority of subjects, contrary to that which takes place for central lesions.

Generally these paralyses are incomplete, more properly pareses. Sometimes having been general in the beginning, certain groups recover, while the condition persists for some time in other muscles. Inversely it may occupy certain muscles at first and extend to others. These paralyses are generally transitory. Sometimes the face participates in the paralysis, but only temporarily. and in its lower half alone.

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The prognoses of cortical paralyses of the upper extremity, depend on the one hand, upon the extent of the lesion; on the other, upon the initial affection which has been the first cause of the cerebral disorders.

There have been given, as principal characteristics of cortical paralyses and, consequently, as diagnostic signs, the limitation and circumscription of the paralysis to one muscular group, as also the fact of being incomplete and transitory. Although this is so in the generality of cases, M. Decaisne is of the opinion that none of these circumstances can be invoked as absolutely characteristic, the contrary being present, exceptionally it is true, for each of them. A more certain sign is the preservation of the sensibility.

Finally, the brachial monoplegias are not generally accompanied by modifications of the temperature of the limb, nor by trophic troubles. It is evident that when these different characters are found united, the diagnosis can be made without any hesitation.

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Art. VIII.—Hemiopia.—Mechanism of its Causation on the Theory of TOTAL Decussation of the Optic Nerve Fibres in the Optic Tracts at the Chiasma, (Optic Commissure).

By William Dickinson, M. D., St. Louis.

IN the discussion of this subject, which, during the last score of years especially, has engaged the talent of a large number of investigators in this country and in Europe, I beg to premise that I assert no claim to original research, but have simply availed myself of the achievement of others; and, in as brief manner as is consistent with the importance which I attach to the subject, I shall present the results to which I have arrived, from a faithful perusal of the literature which they have furnished, and which has been accessible to me.

For the better elucidation of my subject, I briefly refer to the anatomy of the optic apparatus. The term "*optic nerves*" I shall employ exclusively to designate that portion of this apparatus extending from the optic commissure anteriorly to the globe; while that of the "optic tract" embraces all that portion extending from the commissure, posteriorly, to its multiple sources of origin in different parts of the brain. Systematic works on "Anatomy" teach that each optic *tract* derives its origin from the Corpora Geniculata, from the posterior and inferior aspect of the Optic Thalamus, and from the optic thalamus itself, and from the Corpora Quadrigemina. From these points of origin it proceeds forward and joins with its fellow in front of the Tuber Cinereum, to form the optic commissure; that, within the commissure, the *central* fibres of each tract cross each other to pass to

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the opposite eye; while the *outer* fibres of each continue their course uninterruptedly to the eye of the *corresponding* side. This mode of crossing, of a portion of the optic nerve fibres, is termed *partial* or semi-decussation. According to this doctrine, the *nasal* half of each retina is supplied by the optic tract of the *opposite* side; while the temporal half receives *its* contingent from the tract of the *same* side. Fibres continued across the anterior border of the chiasma are described, connecting the *optic nerves* of the two sides, having no relation with the optic tracts. In respect to these, Gudden, of acknowledged high authority, states: "they cannot be demonstrated." Fibres corresponding to these are also described upon the inner margin of each optic tract, continued across from one to the other side of the brain, having no connection with the optic nerves. The same anatomist states: "these do exist, but they have no physiological relation to the nerves; on the contrary, they are wholly independent of them."

Thus divested of all collateral fibres, we have remaining, as the constituents of the optic commissure, fibres which *cross* each other, and fibres which do not cross each other; both together subsequently in their course, forming the optic nerve of each eye. Now, is this description true, or is it not? Does a *part* only of the fibres of each optic tract cross each other in the chiasma, or do *all* the fibres thus cross each other? If *all* the fibres cross each other, then the optic *nerve* proceeding to each eye is the continuation through the chiasma solely of the optic nerve fibres of the optic *tract* of the *other* side; if they do not, then the former description is correct, viz: that each optic nerve is composed of both the crossed fibres and the lateral fibres. Our inquiry is, in other words: Is decussation *total* or is it *partial?* I shall endeavor to recite arguments in proof that *all* the optic nerve fibres in the optic tract *do* decussate in the chiasma, and thus disprove the doctrine of semi-decussation taught in all our text-books.

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We shall assume as granted the existence of the law of isolated conduction in reference to the fibres of the optic *tracts* and optic *nerves*, *i. e.*, that the nerve fibrils are multiple, and constitute an essential element in the mechanism of vision; that they have a real, continuous course from localities far behind those *usually* assigned, even from the cortex cerebri to their termination in the retina, or to be more exact, in the ganglion cell-layer of the retina. Morphologically, therefore, the optic nerve may be regarded as a part of the cortex cerebri, and the retina itself as an outpost of the brain, since a portion of its fibres attach themselves to a fasciculus of the *corona radiata*, which has its origin in the cortex.

The chiasma or optic commissure consists of the aggregate plexiform interlacement of the *optic nerve fibres* placed side by side, destitute of a fibrous sheath, the whole being covered in by the pia-mater. It is situated beneath the corpus callosum, with which it is in connection through the Lamina Cinerea, and through the medium of the former, it is in connection with the anterior, middle and part of the posterior lobes of the brain.

The texture of the several parts of which it is composed is soft, succulent and, therefore, readily compressible. It rests upon the olivary process of the sphenoid bone, a hard, unyielding body presenting, conspicuously, an elevation in reference to its surroundings. The chiasma thus situated, is to some degree *normally* pressed upon by the corpus callosum and also by the parts which *it* in turn supports above. It is bounded in front by the Lamina Cinerea, which forms the anterior part of the inferior boundary of the third ventricle; at either lateral angle, by the gray matter of the substantia perforata anterior, corresponding to the under-surface of the corpus striatum; behind by the Tubera Cinerea, which forms a part of the floor of the third ventricle; *here* are also situated the Pituitary Bodies, the posterior lobes of which contain a cavity; which, through the medium of the Infundibulum, communicates with the third ventricle; also, the Corpora

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Albicantia and the Substantia Perforata posterior, which forms the posterior part of the floor of the third ventricle, and corresponds to the under surface of the Optic Thalami.

The anterior perforated space is perforated by numerous orifices for the transmission of small vessels to the Corpus Striatum. These orifices, through which they pass, are in size three times as large as the vessels themselves, and therefore afford but slight support to them. These vessels are derived from the anterior and middle cerebral arteries of the "Circle of Willis." The posterior perforated space is perforated in like manner for the passage of blood vessels to the Optic Thalami; these are derived from the posterior cerebral arteries.

The relatively large size of the Chiasma, its peculiar and exceptional position render it eminently obnoxious to variable degrees of pressure in consequence of changed conditions of the numerous and diverse cerebral factors by which it is surrounded. In addition, "Michel has devoted much attention to the upper surface of the commissure, and its relation to a layer of gray matter over it containing a recessus or cavity communicating with the third ventricle in the middle line and the lateral ventricle at the sides, in such a way that fluid injected into one lateral ventricle would distend this cavity, and so press on the commissure. The communication of this recessus with the third ventricle is of great importance pathologically, as in this way the front, lateral or posterior parts of the commissure may be pressed on."

I am the more desirous of giving special emphasis to the form and situation of this body and of its relations to the several parts immediately adjacent, since, on the theory of *total* decussation, *upon its four angles and their vicinity* must be impressed the proximate causes of all hemiopic symptoms. The region within which these causes are to be found, is, therefore, very limited; while on the theory of semi-decussation, the causes, being the *same*, may be sought at any point in the course of the optic tract, between

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the Optic Chiasm and its origin in the cerebral ganglia, and in its more remote points of origin in the gray substance of the hemispheres.

Pressure, either directly or in its results, inducing nutritional changes, as will be shown, at length, in the sequel is the *occasion*, probably, of all forms of hemiopia from intra-cranial causes, whatever may be the nature of the cause by which the pressure is exerted. If this be applied at the anterior angle of the Chiasma, temporal hemiopia will result; the central portions only of the entire ordinary visual field being illuminated; for the optic nerve fibres supplying the nasal halves of the two retinæ are compressed, and their sensibility destroyed, or conductibility interfered with.

If it be applied at the right lateral angle, the right halves of each retina will be incapacitated, and, consequently, vision in the right visual fields alone is possible; if, on the other hand, it be applied at the left lateral angle, vision in the left visual fields alone remains. Again, if the pressure be applied at the posterior angle, the optic nerve fibres destined to the *outer* halves of both retinæ being compressed, their faculty power of conduction destroyed, and these portions of the retinæ incapacitated, vision in the outer fields alone remain, constituting nasal hemiopia; a form of hemiopia inexplicable on anatomical grounds on the theory of semi-decussation.

Now, this is a simple and very intelligible presentation of the entire subject of the mechanism of causation, and an unequivocal guide to the solution of all the forms of hemiopia.

The array of authority in support of semi-decussation, the theory now generally prevalent is truly formidable, viz.: *Newton*, *Vater*, *Wollaston*, *Mueller*, *Graefe*, *Jackson*, *Hirschberg*, *Knapp*, *Wilson*, *Gudden*, *Reich*, *Schoen*, *Monk* and others; but names, however distinguished, avail but little, if their doctrines, subjected to the crucial test of later discoveries, are found to have been predicated upon the sandy foundation of mere hypothesis. But yet, to

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illustrate the doctrine of total decussation, we are able to record a galaxy of worthy names, viz.: *Biesiadecki, Mandelstamm, Michel, Brown-Sequard, Pawlowsky, Cohn, Illing, Bastian* and others, whose names, though of less repute in the republic of medical science, will ever receive the merited honor of bringing to naught the hypothesis and teachings of their predecessors; for *their* doctrines are founded upon the everlasting rock of anatomical demonstration.

I shall now offer reasons why the theory of semi-decussation cannot be sustained; and

First. It is founded upon an hypothesis.—I have not been able to satisfy myself as to the opinions and teachings of the *earlier* anatomists respecting the subject of decussation, but upon consulting the writings of Hieronymus Fabricius, a distinguished anatomist of the seventeenth century, I find this statement, viz: "The optic tracts approach each other and *appear* to decussate at the chiasma, but they do *not* thus decussate; the right optic tract after this approximation leaves its fellow, and becomes the optic nerve and proceeds to the right eye, and left optic tract in like manner to the left eye." It was, therefore, his opinion that no decussation whatever took place, each eye being supplied exclusively by optic nerve fibres from its own side. This declaration, we know, is widely at variance with the observations of later anatomists. Vesalius, however, who flourished a century earlier, records an anomalous case, in which "there was *no* junction of the optic nerves, and the sight was never double," nor were other symptoms mentioned by him; and an instance of congenital absence of the optic commissure is now preserved in the museum of Westminister Hospital, London. These are certainly very exceptional cases.

Whatever may have been the accepted doctrine prior to his time, Sir Isaac Newton was the first, who, in the year 1704, from physiological reasons, as he conceived, advanced the possibility of a partial decussation of the optic nerve fibres to account for the phenomena of

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Hemiopia. It was with him but an *hypothesis*, a mere conjecture. He *himself* may not have been convinced of its reality, but on this assumption, certain observed phenomena obtained a more ready solution than on any other hitherto suggested. Perchance he only *designed* this as a mere hypothesis, after the manner of astronomers, who in their effort to account for perturbations observed in the revolutions of certain planets, assume the existence of an intermediate planet hitherto undiscovered, and then pursuing a course of reasoning and calculation upon this assumption, determine whether the hypothetic planet, if it actually did exist, is capable of producing the phenomena observed. It was thus "Bruno conjectured the fundamental fact of the nebular origin of the heavenly spheres; Kant reasoned out its foundation idea, and LaPlace developed it."

Twenty years after the promulgation of this hypothesis, three cases of Hemiopia by *Vater*, in a dissertation, were explained on the theory of semi-decussation, thus lending it additional confirmation. A century later the same theory was adopted by Dr. Wollaston, of London, to account for hemiopic symptoms, of which he thrice was the subject.

Second. The theory of semi-decussation is disproved by physiological experiment.—It has been ascertained that section of *one* optic tract in living animals gives rise, *not* to bilateral hemiopia, as would result if decussation was partial, but to amaurosis of *one* eye *only*, and *that* of the opposite side; also that section longitudinally through the chiasma in the median line, causes *complete* amaurosis; which is in harmony with the doctrine of total decussation, since all the fibres of both tracts would thus be divided: while on the theory of semi-decussation temporal hemiopia would result. Flourens ascertained that destruction of either Corpus Quadrigeminum was followed by loss of vision in the eye of the *opposite* side. If both these are destroyed, blindness, double and complete, is the result. In like manner it has been ascertained that destruction of one angular gyrus, where Ferrier

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located the origin of the optic nerve, produces temporary blindness in the opposite eye; and when the angular gyri of both hemispheres are destroyed, blindness of both eyes is produced and that permanent.

Third. The theory of semi-decussation is disproved by clinical experience.—In cases of uniocular neuritis, from a cerebral tumor, recorded by Dr. H. Jackson, the neuritis was on the side *opposite* to that of the tumor. Wundach reports a case in which the *left* eye had, for a long time, been blind from detachment of the retina; he found, on examination after death, atrophy of the *left* optic *nerve*, and also of the *right* optic tract. Beer relates a case of disease of the substance of the *left* hemisphere which had resulted in blindness of the *right* eye *only*, from intra-cranial disease of the left side. It was found to be occasioned from the effects of a vascular cyst containing two cunces of fluid in the substance of the posterior part of the *left* hemisphere. Magendie also records a case in which the *right* eye having been for a long time lost, the optic *nerve* was atrophied throughout its entire length to the optic commissure, and also the *left* optic tract to its visible source of origin, that condition usually found consequent upon loss of function. Irrefragible evidence of our position is furnished by the case of Professor De Morgan, a distinguished mathematician, examined by Dr. Bastian, and by him reported: "The patient was blind in the *right* eye almost from birth; the corresponding *optic nerve*, upon section, was found to be atrophied, and, likewise, the *left* optic tract; while the optic tract of the *same* side presented a healthy appearance." And, akin to this case, and rendering accumulative proof, is that of a dog examined by Michel. This animal had been affected with congenital malformation of the eye of the right side; the *right* optic *nerve* and the *left* optic *tract* were found, on section, to be atrophied. In all these cases, on the theory of semi-decussation, one optic tract alone having suffered lesion, there should have resulted bilateral hemiopia, since each tract supplies corresponding portions of both retinæ.

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Fourth. The theory of semi-decussation is disproved by the teachings of *comparative* anatomy.—It is admitted even by the advocates of partial decussation, that in birds, the bat, in the osseous fishes—the cod, halibut and sturgeon—in rabbits and dogs, the decussation is *total*. The same condition has been found in all vertebrates in which decussation has been *demonstrated*; and we are authorized to assert, on the authority of Biesiadecki, that the same obtains in *all* vertebrates, including man, one scheme of conformation everywhere prevailing. And why should there be found an exception in man? Is it not possible? Some one may inquire. Yes, it is *possible*, and nature is competent to inaugurate this anomaly, but she is not fickle or capricious; nor does she delight in departures from certain well-defined models in creation, *now* adopting one scheme and now another. She works according to simple, general and inflexible laws, and, when uninfluenced by extraneous causes, produces uniformity of results. The autocracy of general law everywhere prevails, and wherever anomalies or monstrosities occur, they are due to some mechanical impediments or interference in the process of development, which were insuperable.

Fifth. The theory of semi-decussation of the optic nerve fibres in man is disproved, finally, by the anatomy of the optic commissure itself.—This affords the coronal and *ne plus ultra* testimony, and must forever disarm argument, dispel doubt and silence conjecture. Hypothesis on this subject, has dominated the medical world for a century and a-half. But hypothesis and theories thereon constructed, that will not triumphantly endure the ordeal of demonstration must fall, and speculative physiology must ever yield to the revelations of anatomy. Biesiadecki appears! And he alone enjoys the honor of first grasping this fallacy and given to *it* a successful refutation, though so long maintained and embalmed in all works on descriptive anatomy. *He* was so fortunate as to be able to *pursue every single fibre of one*

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optic tract through the chiasma to the optic nerve of the opposite side, by the separation of the fibres of the chiasma, and thus succeeded in demonstrating total decussation. Michel and Mandelstamm, *simultaneously* and *independently* of each other, arrived at the same result. They never found the fibres of one tract *bending round* to the nerve of its own side, but they all pass to the optic nerve of the opposite side. Michel states: "the optic commissure in man is made up of the fibres of *both* nerves arranged in a kind of *basket-work*, whose meshes form more or less irregular squares." He thus renders unequivocal corroboration to the anatomical demonstration of Biesiadecki. It was venial in the dim twilight of medical science of Newton's time, that this hypothesis should have been proposed and taught, awaiting the advent of better and truer things; but now, in the full blaze of its meridian splendor, hypothesis gracefully yields to demonstration; anatomy, confirming the substitution, imparts fitting correction to the printed page, and time, the great arbiter of all things, transmits the record of the present to the judgment, revision and perfection of the future.

[Other aspects of this subject will occupy our attention in the next number.]

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Art. IX.—The Psychological Aspect of Alcoholism.*

By Ira Russell, M. D.,

MEMBER OF THE ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN HOSPITALS FOR THE INSANE; OF THE NEW ENGLAND PSYCHOLOGICAL SOCIETY; OF THE MASS MEDICO-LEGAL SOCIETY, Etc., Etc.

THE influence of alcoholic stimulants upon the human system, in health and disease, is a matter of deep interest to the physiologist, psychologist, jurist and philantrophist. The effects are seen in all the relations of civilized life—moral, religious and governmental. Never before has it attracted so much attention as at the present time. Men of the highest scientific attainments in this country and in Europe are engaged in investigating the dietetic, therapeutic and toxic properties of the various forms of alcoholic stimulants. By the assignment of your committee, I am restricted to the psychological aspect of alcoholism, while the gentleman who is to follow me will present its pathological phases. It must be evident to everyone, that it is difficult to separate entirely the psychology and pathology of inebriety. But little can be said upon the influence of alcohol upon the mind, when taken in moderation or in small quantities, without producing any physiological effect save a slight exhilaration of the mental faculties; it is rather when taken in excess that we are to consider the subject; in short, in what way, and to what extent are the mental faculties affected by inebriety? For convenience, I will divide inebriates into four classes: The *occasional*, the *habitual*, the *confirmed*, the *dipsomaniac*.

*Read before the Mass. Medico-Legal Society, June 8th, 1880.

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The occasional inebriate is one who, through social enjoyment or excitement on some holiday, becomes intoxicated, due perhaps to the solicitations of jovial companions; such an event is followed by mental depression, a sense of shame and feelings of disgrace.

The habitual inebriate is one who makes constant use of stimulants, is not often fully intoxicated but thoroughly saturated with liquor. The influence upon the mind of such a course of life may not, at first view, be very apparent, but upon a closer investigation, it will be found that there is a general deterioration of all the mental faculties.

The confirmed inebriate is one who, uninfluenced by moral considerations and caring not for the disgrace and loss of character that follows intoxication, becomes drunken whenever an opportunity occurs. In such a person, the sense of moral obligation is blunted; the lowest and most brutal passions are unrestrained, and the love of home, wife and children is destroyed. We have among the insane a class called insane criminals, so it is with inebriate—there is a class of criminal inebriates, and they are found mostly among the confirmed drunkards.

The dipsomaniac is one who goes on sprees occasionally, craving for alcoholic stimulants, occurring paroxysmally, with a constant liability to periodical exacerbation. During the intervals of sobriety he has no desire for stimulants, and will associate with those who are drinking without partaking, and then, without any apparent cause, will go on a debauch lasting from a few days to several weeks until he becomes completely exhausted, and with a paroxysm of remorse and repentance abstains for a season. But these periods of sobriety become shorter and shorter, and he finally becomes a worthless, demented being, a disgrace to his friends and a curse to society. The dipsomaniac is found among the most refined and cultivated, embracing both men and women. During the intervals of abstinence, the dipsomaniac may be punctilious in the observance of the proprieties of life; the kindest of

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husbands or wives, and the most devoted and affectionate of parents; but when the paroxysm seizes him he becomes crafty, cunning and the most consummate of liars, resorting to any stratagem or subterfuge to procure stimulants. Men of this class, of refined taste and cultivated manners, will hide away among the lowest and vilest to gratify their insane thirst for stimulants. The dipsomaniac before commencing his debauch has certain psychical, premonitory symptoms. He is nervous, low-spirited, loses his wonted interest in his business, seeks solitude and life seems a burden. To relieve this mental condition he resorts to stimulants. I know it is a disputed question whether this conditions is purely psychical or the result of some obscure disease of the nervous system. Dr. Bucknill denies the the disease theory, while Dr. Clouston and others equally well informed maintain it. But I see no reason why the psychical condition which results in dipsomania may not be as truly mental as that which results in dishonesty, theft and cruelty. No fact is better established than that the vice of intemperance, like other vices, and peculiar mental manifestations is due, in many instances, to hereditary transmission. Had I time and were this subject germane, I could cite numerous instances showing the liability of transmitting to offspring the peculiar mental characteristics caused by inebriety. That which in the parent was merely a habit, becomes in the child an impulsive uncontrollable desire which all the motives that can be brought to bear upon the understanding conscience, self-interest, self-esteem, friendship, love and religion are powerless to influence or control. Could we lift the curtain and unveil the family history of some of our most distinguished men, we should be appalled at the fearful inheritance they have transmitted to their children. To say nothing of the descendants of some of our most distinguished statemen, I will refer to the two Coleridges, father and son. The father an opium eater, the son an inebriate. The son aware of his own weakness wrote thus of himself:

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"Oh! woeful impotence of weak resolve,
Recorded rashly to the writer's shame;
Days pass away and time's large orbs revolve,
And every day beholds me still the same:
Till oft neglected purpose loses aim,
And hope becomes a flat unheeded lie."

Inebriates not only transmit a desire for stimulants, but a great variety of morbid mental conditions. The late Dr. S. G. Howe found, that out of 300 idiots he examined, 145 were children of intemperate parents. The first and most important mental faculty to be affected by alcoholism is the power to control the will. How often we see instances where inebriates have tried to reform—signed the pledge and joined a reform club—who, when the first wave of temptation overtakes them, fall away. The strongest intellect, the highest cultivation, the greatest refinement and the most delicate conscience, when subjugated by alcoholism, has no power of resistance. The older members of this society can call to mind the Washingtonian Movement, inaugurated by John Hawkins, of Baltimore. By his example and preaching, many drunkards were reformed. Some became religious, joined churches, and, for a while, ran well, but the majority fell away and became as bad as before. I know that some men claim that they can accomplish more intellectual labor while taking alcoholic stimulants than without them. It is, no doubt, true that some of the master-pieces of Poe, Burns and Byron, were inspired by alcohol; so, no doubt, we are indebted to opium for some of the profoundest thoughts of Coleridge and the brilliancy of DeQuincy. The same phenomena are sometimes observed in insanity. Cowper, when insane, wrote most delightful poetry. The legitimate influence of alcoholism upon the intellectual faculties are seen in loss of memory, impaired judgment and dullness of observation. The moral faculties suffer no less than the intellectual. It seems to paralyze the higher moral faculties, the sense of right and wrong of duty and accountability, giving full sway to the lower passions and propensities. The most important part of this subject is the relation of alcoholism to insanity. In

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reading the reports of our insane asylums, I find that a large percentage of cases are attributed to alcoholism. But the insanity to which I wish more particularly to call your attention is that of insane drunkards. The insanity which lasts only while the victim is under the influence of alcohol, and which passes away when he becomes sober. Among the insane drunkards we have every variety of symptoms that are observed in an insane asylum. One will have melancholia with all the characteristic symptoms peculiar to that form of insanity: depression, self-blame, suicidal tendency with direful forebodings of impending calamities. Another will exhibit the symptoms peculiar to general paresis, the same self-complacency, exaltation and extravagant ideas and actions. He will imagine he has untold wealth, and will spend freely and foolishly whatever he has. Another will manifest all the symptoms of acute mania: intense excitement—the reason completely dethroned, and all the lower passions in full play—destructive and homicidal, a perfect terror to all around, and utterly regardless of the consequences of his acts. Our newspapers are constantly reporting the terrible tragedies perpetrated by this class of insane drunkards. Many of this class claim, when sober, that they have no recollection of what they have done. Another class will have all the symptoms of dementia, with its stolid indifference, the mind oblivious to everything around them. The mental symptoms exhibited by those suffering from delirium tremens, is not foreign to the subject under consideration, inasmuch as the peculiar form of mental manifestation in this disease is due to the poisoning influence of alcohol upon the mind. Fear is a uniform symptom common to all such cases—fear of death, fear of devils, fear of enemies. They have hallucinations of sight and hearing; sights of the most terrific character annoy them. Robbers, spectres, ferocious wild beasts surround them; snakes crawl about their beds; fiends are getting in the windows or coming down the chimneys; they hear voices and sounds terrific. The

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terrible mental sufferings of such persons are expressed in every feature and by their trembling, restless, agitated movements. There is a form of insanity due to chronic alcoholism, which differs very materially from the acute attacks that frequently accompany and follow intoxication. It is seen in some persons, where the intoxication is prolonged and it becomes a fixed habit. The mental symptoms are less acute than in the insanity of acute alcoholism, but more persistent and continuous. The delirium is milder, of the melancholic type. There is distrust of friends, fear of persecution; the memory and judgment are weakened; the imagination is perverted, and the moral sense greatly impaired. Such an one will become apathetic, indifferent, stupid; will bestow but little attention upon his person, and will take no care of his business or family. Talk with such an one and he will make no effort to conceal the cause of his miserable condition, and will weep and lament because he is unable to extricate himself from the deplorable results of his habits. Little by little this form of insanity increases. At night, while half asleep, all sorts of ill-defined phantoms torment him, and he seeks relief in new potations which may allay them for a short time, to be followed by hallucinations and illusions of more hideous and frightful forms.

From this enumeration of the mental phenomena expressive of inebriety in its various forms we see what a great variety of psychical symptoms alcohol will produce that are not due to any structural lesion of the brain. The most prominent effect of alcohol upon the mind is a paralysis of the will and higher moral and intellectual faculties, and stimulation of the lower and vicious propensities; and the symptoms of nearly, if not quite, all of the various forms of insanity, at least such as are not peculiar to the female sex alone, may be produced by it.

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Art. X.—On the Propositions of the Association on the Organization of Hospitals for the Insane.

THE SUPERINTENDENT AND PHYSICIAN.

By John Curwen, M. D.,

SUPERINTENDENT AND PHYSICIAN OF THE PENNSYLVANIA LUNATIC HOSPITAL, HARRISBURG, PENNSYLVANIA.

WHEN, in the advancement of medical science and the development of clearer and more correct views on the subject of mental disorders, it became evident that some other method of treatment must be resorted to than that which had, for its primary and principal object, the detention and confinement of those afflicted with mental disorders, and that such disorders were to be traced to some disease or disordered condition of the bodily system, the employment of physicians to take charge of such persons, became, as a dictate of common sense, a matter of simple justice and propriety. Institutions were at first organized so that the general management of affairs was committed to some one who could attend to the purchase of stores and the employment of those who might be needed to perform the various offices in the domestic arrangements of the institution, and the physician made his visits to the patients daily, or occasionally, as his other duties in general practice enabled him to do. This was soon found to be unsatisfactory from the fact that the insane required more careful, constant and regular attention, and this could be given much better by some physician resident on the premises, and, when that plan was decided on and fairly

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tried, it became farther evident that, for the successful execution of all the affairs of the institution, it was necessary, in place of two or three officers directing different departments, and often with a diversity of views, the whole authority should be lodged in one who should be the chief executive officer, and manage and direct all on some definite plan, with a view to greater harmony and success. The qualifications and duties of such an officer are clearly and succinctly defined in the following proposition:

4th. "The physician should be the superintendent and chief executive officer of the establishment. Besides being a well-educated physician, he should possess the mental, physical and social qualities, to fit him for the post. He should serve during good behavior, reside on, or very near the premises; and his compensation should be so liberal as to enable him to devote his whole time and energies to the welfare of the hospital. He should nominate to the board suitable persons to act as assistant physician, steward and matron. He should have the entire control of the medical, moral and dietetic treatment of the patients, the unreserved power of appointment and discharge of all persons engaged in their care, and should exercise a general supervision and direction of every department of the institution."

Not only should the superintendent and physician be fully educated in medical science, but he should have had experience in the treatment of the insane by residence in, or connection with some institution in which their treatment was the special aim; for the plain reason that, as mental disorders form a class, rather peculiar in their manifestations, a residence among them will give an insight into those peculiarities and the proper and best methods of management which cannot be gained from books or in any other way.

The theory has lately been advanced that, in order to the successful treatment of the insane, a physician should spend several years in the general practice of the profession, that thus he may be better qualified for the discharge of his duties. That theory proceeds on the fallacy that an amount of general disease is found among the insane which is not verified by experience, and is opposed to the view so carefully and steadily adhered to in everything

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else, that the sooner a man gives himself to the special examination and duties of the calling in which he proposes to engage, the better and the earlier will he be qualified for the performance of those duties. Every physician desirous of becoming thoroughly acquainted with disease of the heart and lungs will seek those institutions where the largest number of those complaints are to be found, that thus he may be better able to obtain a full knowledge of those minute but essential points, presented in a great variety of cases, which will enable him more readily and more successfully to judge of and discriminate them when called to any one suffering from any such diseases. The same holds true in every other branch of the profession and every trade and calling.

Men who desire to be thoroughly proficient in their calling do not waste their time over a variety of matters having general relation only to what they design to pursue, but they give themselves at once directly and assiduously to the careful study and practice of that to which they propose to devote themselves. A physician engaged for a number years in general practice, has to commence at the beginning, when he enters a hospital for the insane, and he does not find what he has devoted himself to for several years so great an aid in the acquirement of what he has now turned his thoughts and attention to as he hoped, and he finds himself compelled to give more time and closer thought to his new duties, and free his mind from many ideas which had been seduously cultivated in prospect of other duties. When a young man has completed the usual course of medical studies, and can enter a hospital for the insane, he will, by careful study of the cases coming under his care, obtain a better knowledge of their peculiar disorders, modes of thought and the way in which he can best meet all those varying conditions, and be much better qualified to guide and direct them in the right way, than one who has been in general practice and has to commence just where he did, with the disadvantage of a mind pre-occupied with modes of thought

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and views adapted to other and different conditions. There is no high road or short cut to proficiency in any branch of the profession, but the knowledge required can only be obtain by hard study, careful thought and diligent examination of every case which is brought to notice or placed under care.

Not every man has the nerve and dexterity to be a good surgeon, though he may have the requisite knowledge. Few men have the nicely discriminating distinction of sounds, requisite to detect the finer sounds of the heart and lungs when diseased; and so it is not every man who has the peculiar temperament and other qualifications which will enable him to become a successful superintendent of a hospital for the insane, and win his way to the confidence of his patients and their friends.

A man may be most thoroughly acquainted with all the minutiæ of the anatomy and physiology of the brain and nervous system, and be able to make his way to a good general practice, who, from some peculiarity of temperament, may be totally unfitted to conduct the treatment of the insane.

The superintendent and physician should be a man in the enjoyment of good bodily health, of a quiet, pleasant and agreeable manner, even-tempered, or with good control of his temper, for he who would control others must first control himself; gentle and kind in all his intercourse with those about him, easily approached and free from all assumption of importance; of a cheerful disposition and happy temperament, and always ready to speak a pleasant, cheering word to all those under his charge; firm and decided in all his convictions and views, but not so impressed with their importance as to be constantly obtruding them on all occasions; willing to devote himself heartily, and at all times, to whatever may be requisite to promote the welfare of those under his charge. He should be liberally educated, endeavor to keep himself well informed on all matters of general interest in the community, so that he may be able to bring to his aid

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everything which can be of advantage to those entrusted to his care. His social position should be such as to give him access to the best society, so that he may be able to gain and to retain the confidence and esteem of all classes of the community. He should be, at all times, readily accessible to all, and, on that account, he should, in every State institution, reside in the building, so that he can not only visit his patients at any time during the day or night he may desire, but also that he may be in a position to give to the relatives and friends, who may visit the institution, such information as they may desire, and also to all who may have occasion to call on business of different kinds connected with the hospital. In a regularly incorporated institution, not under State control, the residence might be on the grounds of the hospital or wherever it could be placed with the greatest convenience to all parties concerned.

Wherever his residence may be, whether in the hospital building or in a separate house, he is entitled to apartments strictly private, and free from all liability of intrusion, so that his family may enjoy that retirement and freedom to be had only in a family circle, and this is more particularly desirable when he has a family of children, that they may be as free as possible from all association of an unpleasant character.

As he is prevented by the absorbing duties of his position and his residence from engaging in any private practice, his compensation should be so liberal that he can give his whole time and thought to his duties in the hospital without distraction and without being harassed with the fear and anxiety that he has not sufficient to enable him to provide for his family properly, give them that liberal education which they should have and enable them to enjoy the society in which he has been accustomed to move.

No community has the right to require the performance of arduous and responsible duties, demanding all a man's physical and mental energies without giving him in

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return a full equivalent for what they require, and that equivalent should be graduated in an enlarged and enlightened view of the duties required, and the restrictions on his social enjoyments and professional opportunities.

The term for which the superintendent is appointed should be during good behavior, or for a long term of years, not subject to removal for partisan purposes, or by reason of the changes of party politics, because as has been very well said, "in the selection of medical superintendents to hospitals for the insane, it is important to choose men with the highest qualifications both as respects professional acquirements and moral endowments: and therefore, that any attempt, in any part of this country, to select such officers through political bias, be deprecated by this association as a dangerous departure from that sound rule which should govern every appointing power, of seeking the best men irrespective of every other consideration."

As the chief executive officer of the hospital, he is held responsible for the manner in which the affairs of the institution are conducted, and on that account all orders of every kind from the trustees or others should pass through him to the other officers of the institution, and in the same way, all communications from them to the trustees should past through his hands. There can be but one head to any institution, and the attempt to conduct any institution in any other manner must result in confusion and trouble; that has been the uniform experience of all past time, and will be for all time to come until the time arrives when all will think alike, be animated by the same spirit of mutual forbearance and good will and free from all envy, jealous and uncharitableness.

It has been the very general experience in all sections of this country, and in fact, in every civilized country where similar institutions exist, that the difficulties in the management of the institutions have arisen from the efforts of subordinate officers to assume and exercise authority which did not strictly belong to them, and thus to en-

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deavor to undermine and interfere with the authority of the chief executive officer, and unless such a spirit is promptly checked, it is sure to give rise to difficulties which interfere with the harmonious and successful administration of the affairs of the institutions.

To secure harmonious action it has been found most advisable that the selection of all the subordinate officers should be placed in the hands of the superintendent, in order that he may be able to have around him those who will feel bound by honor, and a regard to their own welfare, to do all in their power to aid him in the discharge of the duties devolved on him, and to consult freely and fully with him in all matters pertaining to the interests of the hospital and the welfare of its inmates.

As the most enlightened treatment of the present day embraces everything which can be made subservient to the greatly desired object of the restoration of those afflicted with mental disorders, it is wisely provided that "the entire control of the medical, moral and dietetic treatment of the patients" should be left in the hands of the superintendent and physician. He alone is able, by a careful study of those placed in his care, to judge what will be most serviceable in each case; and as no one of enlightened views at the present day pretends that medicine alone can relieve or remove the idle fantasies of the brain; the proper kind of food to be eaten to invigorate the system and place it in the most favorable condition after the removal of any diseased action, and the proper kind and degree of exercise, must be directed by the same mind which directs the medical treatment.

Very often the amount of medicine required is small and the hygienic measures, or the proper and systematic regulation of the food, sleep, exercise and other matters of the kind are those most relied on; and with these must be combined every appliance which can be devised to divert the mind from its morbid fancies and lead it into healthy channels; and when once led in that way, to strengthen and develope all the powers of the mind in the

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most judicious manner, that the individual may thus be better fitted for the duties, the trials and the responsibilities which lie before him in life; even where a restoration cannot be effected, very much may be done to promote the happiness and comfort of those whose minds may be partially clouded or so disordered, as to render them unable to do anything for their own relief or comfort.

It will be evident, at the first glance, that such a course of treatment can only be devised and thoroughly carried out by one mind, which can so arrange all the details as to make them .conspire and combine in the most advantageous manner to the accomplishment of its designs. With these means must also be combined "the unreserved power of appointment and discharge of all persons engaged in their care," for without this power and its timely and judicious exercise, it wonld be impossible to adapt means to the end, so as to reach, in the most direct manner, the object held in view.

Attendants, being constantly with the patients, have the opportunity of doing much good by their prudent advice and counsel, and by the manner in which they treat those under their care, and they have also the opportunity of doing much injury by such a course as will give wrong impressions to the patient, and influence him in an improper manner. The wilfulness, the carelessness, the indifference or neglect of attendants may thwart the best devised plans, and, unless the power is held and exercised when needed, which will enable the superintendent to remove all obstructions in the path, it would be clearly impossible to secure the best results.

If the attendants are appointed by an authority, separate from the superintendent, they will naturally feel that they owe no allegiance to him, and will not be inclined to obey his directions, more particularly if these directions should require of them a greater degree of attention to their duties, or a more exact conformity to rules than they may think required of them.

It is the favorite theory of many reformers of the

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present day, who possess, in the highest degree, the destructive faculty, but have very little, or none, of the constructive, that each department of the institution should be under the control of a different individual, and all directed by a number of non-resident gentlemen, whose time is occupied by their own special duties, and, however well intentioned, have neither the time nor the inclination, too often, to give to the examination of such details as must be necessary for a thorough understanding of all the facts and circumstances which are absolutely necessary to arrive at a clear and reasonable conclusion.

To meet such a state of things, it is wisely provided that the superintendent "should exercise a general supervision and direction of every department of the institution," and every man of business, who has had success in his own affairs, will readily assent to the truth of the proposition, because none know better than himself that if he had not kept a careful supervision of all the different matters under his control and management, and directed them steadily and persistently in one direction, and with one uniform purpose, he never could have succeeded in his business.

The same principle applies in every department of every trade and profession by which the affairs of this world are managed; and it is a well recognized fact with all who will be guided by the experience of the past, and not by their own whims and crotchets, that one paramount authority must control and direct every institution if the object of that institution is to be attained with any degree of success.

All executive officers are of course bound to give due obedience to the authority which appoints them, but at the same time the appointing power should confine itself carefully and exactly to the rules which it has laid down for its own guidance, and not go beyond or behind those rules in any way or for any purpose, and any departure from this principle will be sure to lead to difficulty sooner or later. In case of difference of opinion, the points of

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difference can be best adjusted and arranged by a free conference and mutual explanations; but matters, entirely unconnected with the relations in which the parties stand to each other, ought never to be allowed to have any determining influence over the minds of either party.

Since the above was written, I have had the very great pleasure and privilege of looking over the work on "Hospitals for the Insane," by Dr. Kirkbride, so widely known and highly distinguished, no one, in fact, more so, for his life-long labors in the cause of the insane, and with his kind permission, I make the following extract in corroboration of the views advanced in the paper:

"It would seem to need but little argument to show that a hospital for the insane should have but one official head—in reality, as well as in name—to whom every one employed about it must be strictly subordinate. It would be just as reasonable to suppose that a proper discipline, or that good order, would prevail on board of a ship with two or more captains, or in an army with two generals-in-chief, or in a college or school with several principals, as to expect to find them in a hospital of the kind referred to, where two or more individuals are acting independently of all others, or in which there are certain officers over whom the physician-in-chief has no control.

If such an arrangement ever worked well anywhere, it must have been owing to some very rare or exceptional mental organization in those acting under it, and not because the principle is not radically wrong. Every such trial—there have been many within my own observation—so far as I know, has been a complete failure in the past, and, in my opinion, is sure to be so in the future.

The very peculiar character of a majority of the patients received into such institutions, the numerous body of assistants required in their care, the large number of persons employed in the various department, the necessity for active and unceasing vigilance, joined with gentleness and firmness in all intercourse with the menally afflicted, and for prompt decisions in cases of difficulty,

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rendered it indispensable,—if we wish the best results, that a large amount of authority should be vested in the chief officer.

It must always be borne in mind that every department of a hospital for the insane, its farm and garden, its pleasure grounds, and its means of occupation and amusement, no less than its varied internal arrangements, its furniture, its table service, and the preparation and the serving of the food, the mode in which its domestic concerns are carried on, its heating and ventilation—everything connected with it, indeed—are parts of one great whole, and, in order to secure harmony, economy and successful results, every one of them must be under the same general control. It is not to be supposed that the chief physician of the institution should personally superintend all, or a majority, of these matters, or fritter away his time in a constant attention to these details, or even that he should be proficient in every one of them; but he should be expected to be so constituted, mentally and physically, as to be able and willing to make himself familiar with all of them, so far, at least, as to know when everything is in good order, and when all services are properly performed. He should especially have that kind of tact and judgment which will enable him to fulfill, efficiently, one of the most important functions of his office, that of selecting individuals for every department, fully qualified to discharge their appropriate duties, and who will be held by him to a strict accountability for the proper performance. It is a great error to suppose that there is any detail about the management of a hospital for the insane beneath the dignity, or unworthy the attention of its chief medical officer. Everything that has any relation to the patient—and everything has some direct or indirect connection with them—may have an influence not readily appreciated by a careless observer, and, to preserve unity of purpose, nothing should be arranged or changed without consultation with the head of the establishment.

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The physician-in-chief, who confines his attention to the mere medical direction of the patients, must have a very imperfect appreciation of his true position, or of the important trust confided to him. He ,becomes, in reality, a very secondary kind of officer, and his functions will be pretty sure to be considered, by many around him, as quite subordinate in importance to these of some others concerned in the management of the establishment, which, under such an arrangement, can hardly keep permanently a high character.

It is unfortunate for hospitals for the insane that so many physicians show their ability, only in prescribing medicine and conducting pathological investigations, for, important as these unquestionably are everywhere, they are only a part of what is essential in the chief of a hospital for the insane. It is quite safe to say that the most expert diagnostician, the most accomplished microscopist, the most brilliant lecturer or writer—desirable as all these accomplishments are, may still be utterly unfit to be placed at the head of such an institution. No one will deny that the arrangement recommended—which is the only one that can be relied on to work satisfactorily—places much power in the hands of the chief physician, but it must be remembered too, that in him the responsibility mainly rests. A man to whom this amount of control cannot be safely intrusted, certainly is not the person to be placed at the head of an institution containing 250 insane patients. Dividing this power between two, three or more, would only tend to produce discord, destroy all proper discipline, and prevent prompt and wise action. The simple profession of adequate authority by the chief executive officer of such an institution, often obviates the necessity of its being exercised. It may be unseen and unfelt, and yet a knowledge of its existence will alone often prevent wranglings and difficulties in the household, and secure regularity, good order, economy and an efficient discipline about the whole establishment.

The long continued and uninterrupted performance of

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the duties of a hospital superintendent among his patients is a tax upon the mental energies, and ultimately upon the physical powers of an individual, not easily appreciated by those who have not had some experience of the kind; and one of the best modes of counteracting these effects, is for that officer to devote a portion of his time to the supervision of out-doors affairs. By this means, without leaving home, he will not only have the invaluable advantages of active muscular exercise in the open air, but also a form of occupation for the mind, that will more effectually than any other, divert it from the train of thought induced by a protracted visit through the wards. Change of occupation—both mental and physical—is the relaxation of a superintendent of a hospital for the insane, and is indispensable, if he expects for any long period to preserve his health and usefulness. So many noble men in our own country have already broken down while engaged in the zealous performance of these duties, that hardly a better contribution could be made to the cause, or one that would more subserve the interests of the afflicted, than that which would aid in preserving the mental and physical health of the right kind of hospital physicians, and in securing a proper supply of them.

The nomination of the assistant physicians, steward and matron, by the superintending physician, will probably secure harmonious action between these officers, in the operations of the house. This point is one of great importance, and without it, there can be neither satisfaction nor the best results in the management of the institution. No board of trustees having at heart the prosperity of a hospital for the insane, could be willing to select or retain in office, any of those named, who do not cordially aid in promoting the views and carrying out the plans of the chief executive officer. No subordinate officer not entirely loyal to the chief executive officer should be permitted to remain in any institution."

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Art. XI.—Unilateral Gunshot Wound of the Cerebrum, with Sequel of Right Carotid Inter-Cranial Aneurism and Left Hemiplegia.

Reported by Drs. Hodgen and Connery, St Louis.

ALEXANDER YULE, aged 18 years, was wounded on the night of June 21st, a pistol ball having entered his skull a little below the outer angle of the right orbit. He had vomited, and was then comatose. His pulse was feeble, intermittent and "fluttering," and his breathing was sterterous. Dr. Connery, who attended him, gave him brandy till reaction came on. He was semi-comatose the next day, but his pulse and breathing became good. The wound was enlarged and kept open. There was complete left hemiplegia and rapid emaciation, notwithstanding he was abundantly nourished. Restlessness, acute pain in the head, and marked insomnia appeared, over which bromide of potassium had but temporary effect. The restlessness became extreme when not restrained by chloral. The face was not much distorted, but the tongue, when protruded, was drawn down, and to the left. His speech was muffled, thick and difficult. The right iris was *dilated*, the left one *contracted*, and there was ptosis of both lids. The right eye was first inflamed and protruding, then the left. The pulse ranged from 80 to 88 beats per minute, and regular till within about a day before death, when it became again feeble and irregular. Febrile symptoms were slight. Finally, repeated hæmorrhages came from the brain through the wound, and the patient died seven weeks from the day he was shot.

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The autopsy revealed a vertical cicatrix, three-fourths of an inch in length, just above the right zygoma, about one inch posterior to the external angular process. There was a large collection of dark fluid blood under the dura-mater, chiefly about the anterior portion of the right hemisphere, and connected with a large cavity filled with blood above the ventricles, extending into the anterior and posterior lobes, and communicating into the lateral ventrical in the middle cornua.

The basal ganglia were not disturbed or encroached upon.

The cavity was connected with an aneurismal sac, which was formed on the carotid artery, just as it passes along the body of the sphenoid, and extended to the inner aspect of the external wound. The bullet formed part of the sac, and rested beneath the posterior clinoid process, having cut the artery.

SELECTIONS.

CHARCOT ON THE STUDY OF NEUROLOGY.—As a sequel to, and in consequence of, the progress accomplished by the anatomy and physiology of the nervous system in the course of the last thirty years, nervous pathology has been, in its turn, renewed and enriched. In the vast domain of neuro-pathology, those parts of the soil which have, at all times, been cultivated, have been enlarged at almost all points; regions, heretofore uncultivated, have been cleared, and promise large yields; unexplored tracts have been discovered, and thus old riches, accumulated by tradition, have added to themselves the fruits of new conquests.

The great movement which has led to such results is by no means ready to stop. To produce it, the love of novelty and fashion have done very little. It recognizes the most profound causes for its vitality, and its

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power seems to become more marked each day by the ever increasing number of good publications.

For a long time, the work done in neuro-pathology has been disseminated in those large periodicals, where medical productions of every variety find place.

One day, it was thought that it would be both rational and profitable to unite these labors in a special publication. It was only in this way that they could be made profitable: by uniting them, grouping them, and classifying them according to their natural affinities. Here, only, could psychiatry, long since specialized, be brought into permanent contact with neuro-pathology proper; these are two parts of the same unit separated by practical necessities, but philosophically associated and held together by indissoluble bonds.

Abroad, several publications of this kind have appeared in the past several years.* In France we do not yet possess one which exactly fills the requirements we have just mentioned, and it is with the intention and hope of filling this hiatus that the *Archives de Neurologie* has been founded.

In medicine, now that analysis has become more profound and learned, and now that facts are multiplied unceasingly, and almost to infinity, no one could seriously think of embracing, or of thoroughly knowing, everything; the encyclopedia is more than ever above the strength of any individual, each one of those who work, sooner or later, learns the necessity of limiting himself, if he would not be forced from the field of his labors. From this springs a state of affairs which tends to become more and more pronounced. From one point of view, it is not devoid of perils. The far-seeing ones are becoming alarmed; they ask themselves if the unity of our science is not going to disintegrate some day, divide into an indefinite number of narrow specialties, struck, so to speak, in their very inception, with a barreness proportionate to the isolation in which they may be thrown.

This danger we are far from ignoring, but escape is possible, we are convinced, by a good organization of work.

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*In England: ***Brain***, a journal of neurology.
In America: ***The Journal of Mental and Nervous Diseases***, and THE ALIENIST AND NEUROLOGIST.
In Germany: ***Archiv fur Psychiatrie und Nervenkrankheiten*** and ***Centralblatt fur Nervenheilkunde, Psychiatrie, etc.***
In Italy: ***La Rivista Sperimentale di Freniatria, di Medicina Legale***, and ***l'Archivio Italiano per le Malattie Nervose.***
In France: ***Annales Medico-Psychologiques***, a journal held in high esteem, and more particularly devoted to mental diseases.

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This is a proposition which may yet be sustained at some future time and in a suitable manner. At present, we limit ourselves to the assertion, that a well directed federal system does not exclude amity and harmony in efforts; that it is possible, when endowed with a broad education, and when deriving light from all branches, to stop and consider closely the partial fact, the episode, without fear of losing sight of the relations, the entirety, the whole history; that, in such conditions, even when restrained in a confined space, it is possible, by rising, to see the horizon enlarge.

Nowhere else than on neuro-pathological ground can we better conceive the necessity of placing the specialty on a solid foundation of strong general culture, keeping up incessant communication with its surroundings. For, in the living organism, the role of the nervous system is almost universal; here, dominating; there, dominated, whichever it is, it matters but little; in fact, but very few cases present themselves, either in physiology or pathology, in which some part of the nervous system is not more or less directly involved. With such existing conditions, the drawbacks attached to a too-exclusive study, are not formidable.

The *Archives de Neurologie* has, for its principal objects, nosography and the *clinique*. But a large space will be accorded to anatomical, physiological and pathological researches; to work, in which experiments and the proceedures of the physical sciences are adapted to clinical facts, and contribute their aid in observations; in a word, space will be given to all those efforts inspired by modern scientific intelligence, and which have been, and will continue to be, great forces in producing progress. Finally, and this may become a future of this journal; writings will be most warmly received, which will especially tend to establish intimate relations between nervous pathology, regarded as a distinct branch, and other departments of medicine. (Introduction to the new French journal, *L'Archives de Neurolgic.*)—*Translated by A. H. Ohmann Desmesnil, A. M. M. D.*

THE PRESENT STATUS OF NON-RESTRAINT IN GERMANY. CONTINUATION OF DISCUSSION—NASSE'S VIEWS.—For the last fifteen years he has abolished mechanical restraint in his practice as far as practicable, and declares himself a decided advocate of the method, still he cannot but name a

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a number of classes of patients who must be restrained by mechanical means, and this, upon the basis of his experience in Anderaact during the last few years, to wit: Surgical cases and eye cases, persistent self-umbulators, excessive masturbators, especially females; further, those who persist in standing until their feet become œdematous; cases of excessive anemia that need the horizontal position; those that kneel persistently until the skin over the knees becomes gangrenous; further, cases of excessive motor disquietude with fever, for instance, cases of melancholia agitata, and those of acute delirium of male paralytics (securing patient in bed, use of wet blanket). Lastly, where the patient beseeches to be restrained from fear of injuring himself. Feeding with a bougie may be also considered restraint (but still he resorts to it in cases of obstinate refusal of food). Also, Koprophogoé need restraint, though it be doubtful whether it is proper except in cases of excessive filthiness. Finaly, it cannot be denied that there are cases which wear out the patience of the attendants, and which are so dangerous to them that restraint must be employed. In such exceptional cases, he considers the failure to employ mechanical restraint as inhuman, for it is the duty of the physician, as well as to the patient's interest, to employ it. The speaker concluded by quoting the sentiments of Yellowlee's: "non-restraint in so far, and so long as it is to the interest of the patients." Snell asked information on the subject of "Isolation," the advocates of non-restraint in England claim that they isolate the patients only at night, and then not very strictly. He believed that these were theories that no one had ever put into practice. Filber has not used the jacket since 1870. In reply to Nasse, he would say that it is not necessary to humor the patients, they can be disciplined, but should not be harrassed; it is necessary to individualize. Even surgical cases, as well as most of those mentioned by Nasse, can be treated without the jacket, by means of constant watching. Forcible feeding is not restraint. Conolly was right in objecting to isolation—it need not be employed even in the case of homicidal maniacs if they are put with well persons at first, and only later allowed to be with other patients. Brosius wished to know what substitute had ever been found for the jacket; what role do drugs, baths, and nourishment play in the treatment. Everyone is agreed that non-restraint is to be aimed at

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as far as practicable. He has banished the jacket, but its place has been taken by cells and by walled enclosures. It has not yet been proven that baths are of any service. According to his experience, a generous diet is the best substitute for the jacket. Besides, he could not understand how it is possible to treat the cases enumerated by Nasse without restraint. Excitable patients cannot be held day and night by attendants (in fact, such attendants cannot be found), and to narcotise them with morphine is worse still.

THE PRO ET CONTRA OF THE DOCTRINE OF CEREBRAL LOCALIZATION.

We continue brief records from the rapidly multiplying facts bearing upon this interesting subject by commencing where we left off in the last number, with a detail of more of M. A. Pitres' new facts relative to this study.

M. Pitres approaches the examination of this subject from the pathological side. To these must be added the experiments of Dr. R. W. Amidon, of our own country, showing the effects of willed muscular actions on the determination of local temperature in the brain, as an attempted demonstration of the subject (open, of course, to some objections, but still worthy to be studied), from a physiological standpoint.

FACTS PRESENTED BY M. A. PITRES CONTINUED.—We pass over observation third since it only refers to the case of a demented woman, in whom there was no hemiplegia, the autopsy revealing atrophy of the hemispheres (the weight of the whole brain being 870 grammes), and softening of the head of the corpus dentatum.

Obs. IV.—Old right hemiplegia.—Aphasia.—Cortical softening of the third frontal convolution and of the frontal and ascending parietal convolutions.

Chastus, aged 73 years, admitted to the Hospital for Incurables (service of M. Le Dr. Solles), has been affected for several years with right hemiplegia and aphasia. She pronounced no intelligible word. Secondary contracture predominating in the right upper extremity; the fingers are so strongly flexed into the palm of the hand that it is impossible to straighten them out. The contracture is scarcely appreciable in the lower extremity, her walking is easy.

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Autopsy, Feb. 17, 1879.—*Right hemisphere:* healthy. *Left hemisphere:* large patch of yellow softening occupying the foot and upper face of the third frontal convolution, the lower half of the ascending frontal, and the middle third of the ascending parietal convolutions. On methodical sections, it was observed that the softening extended quite deeply into the centrum ovale, without affecting, however, the internal capsule nor the corpora striata. It had destroyed the inferior pediculo-frontal band, and the frontal middle parietal and inferior bands. The superior frontal and inferior parietal were preserved intact.

The left cerebral peduncle presented, at its middle part, a band, gray and oppressed from secondary degeneration. The left anterior pyramid was sensibly slighter than the right, but no modification of color or consistence was noted. Examination of the cord, after hardening, revealed a band of secondary sclerosis of the right lateral cord in the cervical region and the upper part of the dorsal region,

Obs. V.—Right hemiplegia.—Aphasia.—Hemi-anæsthesia.—Central softening occupying the inferior pediculo-frontal band, the corpus striatum and the internal capsule of the left side.

L . . ., a sailor, aged 43 years, entered the Hospital Saint Andre (service of M. Le Dr. Mabit), July, 1879, for a right hemiplegia with aphasia, which came on suddenly in June, 1878.

At the time of entrance, the following phenomena were observed: Total right hemiplegia, secondary contracture very marked in the right upper extremity, much less so in the lower extremity; sensibility greatly diminished in all the paralyzed side, almost absent in the lower extremity; aphasia, loss of memory of words; articulation almost impossible; hypertrophy of the heart; mitral insufficiency. Death, Nov. 6, 1879.

Autopsy: Dura-mater, healthy; quite abundant serous infiltration in the meshes of the pia-mater; *right hemisphere*, normal; *left hemisphere*—the arteries of the meninges were remarkably healthy. The pia-mater separated readily from the cerebral tissue lying beneath.

No appreciable alteration of the cortex; the third frontal convolution, and the ascending convolutions had preserved their consistence and color.

Prefrontal sections.—normal.

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Pediculo-frontal sections.—At the end of the inferior pediculo-frontal band there was a center of yellow diffluent softening, with irregular edges, measuring about a centimeter high, and three centimeters across. The middle and superior pediculo-frontal bands were spared; the portion of the corpus dentatum comprised in the section was soft and almost diffluent.

Frontal section.—Upon this section was found a single focus, of the volume of a large hazel-nut, involving the upper third of the nuclei of the corpus striatum and the portion of the internal capsule comprised between them. The centrum ovale was healthy.

Parietal section.—The focus had the dimensions of a quite small hazel-nut; it was situated below the corpora striata at the precise point where commences the expansion of the fibres of the internal capsule. Upon the pediculo-parietal section it had no more than the size of a large pea, and was situated a little below the central masses at the lower end of the pediculo-frontal band. The occipital sections offered nothing abnormal.

On a horizontal plane, the focus of softening of which I have indicated the topography, after the examination of the transverse sections, would be represented by an elongated cavity, expanded towards its middle part, and terminated at the front and at the back by tapering extremities. This cavity commenced anteriorly at the end of the inferior pediculo-frontal band; it reached, in its expanded portion, the corpus striatum and the internal capsule, and terminated at the back at the end of the pediculo-frontal band, and destroyed the continuity of the fibres at the foot of the "couronne rayonnante."

The cerebellum offered nothing abnormal. The left cerebral peduncle was thinner than the right, and all its lower face was of a slightly yellowish gray color. The left side of the protuberance was atrophied. The left anterior pyramid was narrower and more flattened than the right, and presented a very distinct gray coloration. The cord, preserved in dilute solution of bichromate of ammonia, has not yet been cut for histological examination, but one can see already, with the naked eye, a decending sclerosis of the more manifest parts in all the extent of the right lateral cord.

THE VARIABLE DECUSSATION IN THE ANTERIOR PYRAMIDS OF THE CORD.—Apropos of the subject of cerebral locali-

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zation, Dr. Landon Carter Gray, of Brooklyn, N. Y., at the conclusion of a most didactic essay read before the the Anatomical and Surgical Society, of that city, and published in full in the October number of *The Annals*, of that Society, thus refers to the discovery of Flechsig, and discusses the objection of Brown-Sequard:

Until within a short time, anatomists have assumed that the decussating fibres were always of the same number relatively to the non-decussating fibres. Among the most important of the discoveries, however, for which we are indebted to Flechsig, is the one that this proportion is extremely variable. He found two extremes. In the one, all the fibres of the motor tract entered the Lateral Pyramidal Columns of the opposite side of the cord, there being no columns of Turck. In the other, only 10 per cent. passed to the Lateral Pyramidal Columns. 90 per cent. descending upon the same side in the Columns of Turck. Between these extremes all manner of variations may exist. He gives the following table of the variations:

1. Total decussation (cases of the entire lack of the Columns of Turck).

2. Semi-decussation of one Pyramid, with total decussation of the other.

a. Semi-decussation of the right Pyramid,

b. Semi-decussation of the left Pyramid.

3. Semi-decussation of both Pyramids.

a. Less than 50 per cent. of each Pyramid, or of both, remains non-decussated.

b. More than 50 per cent. of each Pyramid, or of both, remains non-decussated.*

This discovery disposes of what is seemingly the most insurmountable objection to the waxing doctrine of cerebral localization. M. Brown-Sequard has collected, with his usual energy and enthusiasm, a large number of cases to prove that lesions on one side of the brain will sometimes produce paralysis upon the same side of the body; and, assuming in a by-gone fashion, that all motor fibres decussate, he believes that he has also proved the untenability of the doctrine of cerebral localizations. It still remains for M. Brown-Sequard to prove that the motor tracts of his cases did not vary, as Flechsig has shown us they may do.†

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* Op. cit. P. 272, 273.

† Brown-Sequard's experiments, according to which the gray matter of the cord is said to be in part the path of this transmission, are to me inexplicable, inasmuch as they make gray matter *conduct*—a something that can only be done by white matter, if we may trust facts in general. Moreover, they are flatly contradicted by the researches of Miescher (Ludwig's Arbeiten, 1870, p. 172) and Woroschiloff (Ber. über die Verhandl. der Konig. sachs. Gesellschaft Mathem. Phys. Classe, 1874, III., IV., V., S. 248), which are much more in consonance with accepted physiology and pathology. Conduction of sensation is along the white columns of the æsthesodic tract, conduction of motion along the white columns of the kinesodic tract; this will, I think, be a justifiable statement in the present state of our knowledge, and will be confirmed by the future.

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A CEREBRAL SYPHILOMA DEMONSTRATING MOTOR LOCALIZATION IN THE CORTEX.—Among the clinical notes and cases in the *English Journal of Mental Science*, for July, 1879, Dr. Clouston describes and delineates a syphiloma of the brain, which perforated the skull at the top of the parietal eminence. When, during life, the patient was tapped over this spot, which was always tender, convulsions of the opposite leg followed.

CONTRA.

BROWN-SEQUARD divided, in a rabbit, the right lateral half of the protuberance, when he noted a complete anæsthesia of the left paw. Dividing then the posterior cord at the level of the tenth dorsal vertebra, a section which is commonly followed by a hyperæsthesia of the posterior limbs, he observed the anæsthesia to persist on the left, while the hyperæsthesia appeared on the right side. He then performed a division of all that was left of the marrow of the left side; the anæsthesia gave place to a hyperæsthesia of that side, while the insensibility was carried over to the right side. The conclusion which the learned professor draws from this interesting experiment is: in lesions of the cerebrum the anæsthesia does not depend upon the conductors, but rather upon an influence exercised from a distance upon the spinal marrow.

In another series of experiments, Prof. Brown-Sequard divided the right corpus striatum. In the majority of cases he saw, as is generally admitted, a paralysis of the two limbs on the left side. Having then divided the pons Varolii of the same side, he saw the paralysis of the left side disappear, and, at the same time, a paralysis of the right side occur. The long recognized opposite paralysis was thus transformed into a direct paralysis. It follows from these facts that identical results can be obtained experimentally, in regard to the sensibility and motility, and that it is possible, by proper sections, to carry the paralysis from one side to the other.

In a third communication, Brown-Sequard reports to the society new experiments, not less extraordinary than the preceding. If in an animal, a dog for example, the motor zone, which presides over the movements of the opposite side, is exposed, one can, by a direct galvanization of that zone, easily prove the existence of those movements. If one then divides the corresponding half of the protuberance, *the whole part which up to this time has been considered as motoric*, he sees that the movements caused by galvanization instead of being diminished, are rather augmented, at least at all times when the animal is not in a state of syncope. Hemisections of the cerebral peduncle, and of the motor parts of the bulb give analagous results, with a few exceptions. In an animal in which the right motor half of the pons Varolii was incompletely divided, the left half of the bulbs was afterwards cut through, there remained no other way of communication between the two halves of the encephalon than by a small portion of the anterior longitudinal mass of fibres on the right side of the protuberance. Now, in this case, the galvanization of the motor centers at the right and the left, caused exactly the same movements in the limbs of the side opposite to

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the centers. The experiment was repeated a number of times, always giving the same results.

In regard to the countre-proof, which consists in producing lesions of the motor centers, Brown-Sequard promises to give positive conclusions at another time. At present he believes himself already authorized to say that a somewhat profound lesion of these centers causes not a true paralysis, but motor disorders with alterations in the muscular sense. The exact removal of a motor center produces the same effect. Quite the contrary, when one removes the motor center, in passing around its border in a manner without either touching or irritating the same, then the most one observes is some functional disorder in a few minutes. but, finally, the pseudo paralysis itself is absolutely wanting.—*Gazette Medicale de Paris.*

GOLTZ *vs.* THE LOCALIZATION OF CEREBRAL FUNCTIONS. —Prof. F. Goltz, of Strasburg, removed nearly the whole of the gray cortex cerebri in a dog by the aid of a stream of cold water. The animal showed, at first, neither any sensorial nor intellectual activity, neither any spontaneous movements nor any sensual perception, and hardly a trace of reflex action. *A year after the operation, however, the dog moved about as usual, was capable of getting hold of objects with his fore-paws, and was fully in possession of all the muscles of his body.* Yet there remained a remarkably diminished power of sensual activity, and the animal was in a demented condition. There was actual proof that it received impressions through all the organs of sense, but the faculty of disposing of these perceptions was apparently missing.—*Pfluger's Archiv fur Physiologie.* XX–I.

CLINICAL NEUROLOGY.

NEW RESEARCHES ON THE NATURE AND MUSCULAR DISTURBANCES OF PARESIS.—The author comes to the following conclusions:

1. There is a real enfeeblement of muscular energy in general paralysis, of the same kind as one observes in all chronic affections, and yet this enfeeblement is not well pronounced.

2. There is no constant relation between the diminution of muscular energy and the progress of the marasmus. Even in the interval of several months, during which the marasmus was rapidly progressing, the dynamometer gave precisely the same results.

3. The disease called general paralysis of the insane, is, at no period of its evolution, an affection of a paralytic

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nature. Up to the end, the patient preserves the voluntary power of contracting his muscles, and the possibility of contracting them with force.

4. The disease must be considered as a primary cerebral affection, an interstitial encephalitis.

5. It commences in the intellectual centers, which gradually become destroyed.

6. The motor centres are not destroyed as the intellectual ones, they are only accessorilly irritated. The motor disturbances are also only of a secondary nature, they are not independent in their existence, they are always proportionate to the intensity of the cerebral disorders.

7. The direct cause of the muscular disorders is the intellectual enfeeblement and the fibrillar trembling of the muscles.

8. The fibrillar trembling seems to be due to an alteration of the muscular plasm, caused likewise by the special inflammation of the cerebrum.—The *Annales Medico-Psychologiques*, Jan. and May, 1879.—*American Journal of Insanity*, Oct., 1879.

GUNSHOT WOUND OF LEFT BRAIN.—RIGHT HEMIPLEGIA AND APHASIA.—RECOVERY.—Last June, Dr. Jno. T. Hodgen and myself. saw, at Shawneetown, Illinois, in the practice of Dr. J. T. Binkley, a surgeon of that city, a most interesting case, which, for exemption from the usual permanent consequences of cerebral injury, is entitled to a place in medical annals, along with that of the celebrated case of Pheneas P. Gage, and is suggestive either of probable vicarious function, or the possibility of the reparation of brain tissue. The essential facts are condensed from Dr. Binkley's report on the subject, to the Southern Illinois Medical Association, for June, 1880, and published in the *St. Louis Medical and Surgical Journal.*

A colored man, 23 years of age, standing six or eight inches from the muzzle of a "Parker Bro.'s" shotgun, guage 12, received from it a heavy charge of No. 4 shot. The skull was penetrated one and a-half inches anterior to the lambdoidal suture on the left side, near the posterior margin of the parietal eminence, following it two and a-fourth inches to a line drawn from one auditory foramen to the other, and about three inches above the left external auditory canal, shattering, depressing and carrying away soft parts, bone, membranes and

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brain substance. The soft parts were destroyed, three and a-half by one and a-half inches; and the skull, a space two and a-fourth by a little over one inch. The range of the gun was about forty-five degrees. This happened at 10 o'clock A. M., Feb. 23d. The man fell and remained upon the ground apparently unconscious for two or three hours, after which he was conveyed to a near farm-house, where the doctor arrived at 3 P. M. The patient was then in a cold clammy sweat, with cold extremities, a pulse of 28, respiration 20 per minute, unable to move either right extremity, or articulate, while blood and brain substance came from the wound. On the next day reaction came on and he was moved six miles —one by land and five by water. The Doctor thinks the appearance of unconsciousness was due to aphasia, as he answered questions the next day by moving his head. On the 25th, the patient's pulse was 68, and respiration 30; on the 26th they were respectively 60 and 30; on the 27th and 28th, 50 and 16; March 1st, 60 and 16; March 2d, 56 and 16; 3d and 4th, 80 and 20; on the 5th 104 and 20; 6th, 84 and 18; 7th, 80 and 20; 8th, 82 and 18. On the 9th, marked improvement set in, with respiration and pulse about normal, which continued on through the month, and on May 1st all the functions were reported as normal. On this day a piece of bone, one by three-fourths of an inch, was removed. On the 27th of May, two epiculæ, 1-4 by 5-8 in., were removed; on the following day, a piece 3-4 by 4-8 in. was removed; and on the 30th three pieces one larger than any of the former, were extracted. When these epiculæ first appeared they were wedged down like a V under the inner table of the skull. A few weeks later several small pieces and a shot, which had been driven into the brain, come to the surface with the pus and were extracted. Altogether, from ten to twelve pieces of bone and two shot were taken away.

A considerable depression, covered with integument and cartilaginous substance remains at the site of the wound. The man has regained the use of his right arm and leg, and speech. The restoration of motion was preceded by tingling sensations and acute pain in paralyzed limbs, and involuntary muscular twitching, followed by voluntary movements.

Dr. Binkley thus praises gelsemium, which he freely employed in this case. "After the adoption of it I

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invariably found all head disturbances relieved as soon as I could bring my patient under the influence of the drug."

[Dr. Binkley does not dwell upon this man's cerebro-mental state, but a careful examination by Dr. Hodgen and myself coupled with the testimony of Dr. B., satisfied us that it is good. This man has neither epileptic nor epileptoid disease, nor is he in any way impaired mentally. His natural retentive, reflective and emotional faculties continue as they were before the accident, the man being fully as intelligent as the average of his kind and station.—EDITOR.]

THE RELATIVE VALVE OF THE SYMPTOMS OF TABES DORSALIS.—From his own records of this disease, *Erb* (*Deutsch Archiv. fuer Clin. Med.*) finds the *lancinating pains*, the *analgesia*, the *ataxia*, *impotence*, and *tendency to fall* when eyes are closed, and the *absent tendon reflex phenomena*, very frequent and very common symptoms. In *17 out of 44* cases there was *early paralysis of the ocular muscles;* and in *6 out of 43*, *atrophy of the optic nerve*. *Myosis* was present *in 16 out of 28 cases*, but not early. Since the latter symptom is only frequently found in progressive general paralysis when the pupils are unequal, he regards this characteristic immobility of the pupils to the impression of light, as *pathognomonic*.

THE RELATION OF SYPHILIS TO TABES DORSALIS.—*Erb* regards as insufficiently established from his cases to form a foundation for the mosological distinction of *syphilitic tabes*, though he found a history of syphilis in half of the cases where it was sought for, and concedes that this disease may be a possible cause. [There is every reason to believe, from accumulating clinical testimony, that this protein virus is not only a possible etiologic factor, but that it produces a *typical tabes*, different from other forms only in its possible curability.—EDITOR.]

MORBID RELATIONS OF THE EAR TO THE BRAIN AND VISUAL APPARATUS.—At the recent international ophthalmological Congress at Milan, M. Bouchut presented a rare observation, showing the association of diseases of the ear with those of the brain and visual apparatus. A young girl of thirteen entered his service with otorrhœa and vertigo; the acuteness of vision was, at that time, normal. Moreover, at the base of the eye, there were hæmorrhages and a strangulated papilla appeared. Then, with the

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vertigo, there came on a muscular enfeeblement and epileptiform symptoms, with deviation of the head. The intelligence remained *intact.* The acuteness of vision faded away and gave place to amaurosis. After three months, an optic neuritis and an exsudative neuro-retinitis were added to the more frequent attacks of epilepsy and a paralysis.

The autopsies showed caries of the petrous portion of the temporal bone, the absence of all meningitis and, in the floor of the fourth ventrical, a tumor which had destroyed the origin of the optic nerve. The microscope showed that this tumor was a gliosarcoma.

AURAL REFLEX EPILEPSIA.—Dr. Katz, of Berlin, records, in *La Presse Medicale Belge*, the case of a woman, aged thirty years, who, for a year had troublesome noises in her ear, and monthly or bi-monthly epileptoid seizures, excited by impact cotton and hardened cerumen embedded deep in the auditory meatus. The noises and convulsions ceased when the mass was removed.

"BRIGHT'S DISEASE" PRIMARILY ONE OF THE RENAL PLEXUS.—Drs. DaCosta and Longstreth, of Philadelphia, (*Amer. Jour. of Med. Sciences*, July) conclude: That in Bright's disease, especially in the contracting kidney, there exists a constant lesion of the renal plexus, which, while it might be looked upon as forming part of a general process of degeneration in connection with the kidney disease, they regard as the *cause* of the renal malady, preceding the degenerative changes in the kidneys. They think the diseased ganglia furnish the clew to the alterations of the vessels of the diseased kidney, and that like changes, producing similar results, may exist in other ganglia; for instance, in the cardiac plexus, explaining the hypertrophy of the heart. Details of nine cases are given, with illustrations of the microscopical appearance of the renal ganglia. Striking pathological changes were discovered in all of the cases.

OPHTHALMOSCOPY AND BRAIN DISEASE.—The following are the conclusions of Dr. W. R. Gowers: A symmetrical hemiopic defect in the field indicates an intra-cranial cause; an asymmetrical lateral defect generally indicates a pressure on the chiasma, caused by a distended third ventrical. Complete loss of sight of one eye and loss of the adjacent half of the other field is probably of cerebral origin. A peripheral restriction of the fields usually

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results from damage in front of the optic commissure. And, in most cases of intra-ocular neuritis, damage from the visual changes. A central scotoma is observed only when there is a conspicuous lesion at the macula lutea. A chronicity of the neuritis probably may be taken as an indication of chronicity of the central disease. The converse proposition, that all forms of chronic brain disease entail chronic neuritis, does not hold good.—*Manual to Atlas of Med. Ophthalmoscopy.*

THE LOCUS MORBI OF PLUMBIC WRIST DROP.—DeWatteville (*London Lancet*, July, 1880) locates the lesion of lead palsy at the spinal origin of the seventh cervical nerves, quite contrary to the theory of Todd.

DR. CHERONI ON STAMMERING.—At the Amsterdam Medical Congress, last year, Dr. Cheroni, of Paris, maintained that stammering was not a spasmodic affection, but simply an incoördination of the multiple acts necessary for speech. Methodical treatment, carried on for three weeks, is generally attended with success. For the first week the stammerer is forbidden to speak, except at definite times set apart for practice in reading and recitation. During the second week he is allowed to speak, but carefully watched, so that he is made to articulate every syllable slowly and distinctly. Then he is permitted to speak a little more rapidly, and at the end of the third week he is cured of his fault.—*Philadelphia Medical and Surgical Reporter*, Nov., 1880.

ERYSIPELATOUS OPTIC ATROPHY.—Dr. W. A. Hardaway, Collaborator for the *Archives of Dermatology*, among a number of interesting gleanings, records from the *Archives Surg. de Med.*, Perinaud's account of eight cases of the above affection, two of them having occurred in Perinaud's own practice, and the remainder having been "collected from other sources."

FATAL TETANUS FROM VACCINATION.—Dr. Hardaway also presents an abstract reference to a case recorded in the *Southern Med. Clinic*, where death resulted as above. The vaccination had been done by a midwife, the virus having been inserted in two places.

One of the puncture sites looked normal, the other was a highly inflamed ulcer, from which the crust had been forcibly torn.

SYMMETRICAL NEURALGIA IN DIABETES MELLITUS.—Dr. Worms, of Paris, records two examples, one of sciatica

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and the other inferior dental neuralgia, observed in this disease, and concludes that this is characteristic of advanced diabetes. He thinks the intractibility and extreme intensity of the pain are as characteristic as its symmetrical character. He concedes, however, that the pain varies with the amount of glycosuria.

REMARKABLY SLOW PULSE FROM SUNSTROKE, WITH SEQUEL OF INSANITY.—At the St. Louis Medical Society, April 10th, Dr. Pollak related the history of a teamster, aged 32, who came under his care nine or ten years ago, having received a sunstroke the year previous. He was a large-framed, robust man. He suffered, after the sunstroke, from intense headaches, which were partially relieved by treatment.

The peculiar feature of the case was the slow pulse, which never exceeded fourteen beats per minute, and was often down to nine beats. There was grave cerebral lesion, which gradually developed into profound insanity. The patient finally killed his wife, and was sent to an asylum for the insane.

IDIOSYNCRASIES, ETC.

RECOVERY AFTER BEING SHOT THROUGH THE HEAD.—The *Philadelphia Medical and Surgical Reporter* records a case reported by Dr. Diez, in *El Siglo Medico*, of recovery of a patient, aged nine years, after a revolver bullet, nine millimeters (one-third of an inch) in diameter, entering at the right temporal fossa, at the point corresponding to the center of the zygomatic arch, between the external angle of the orbit and the tragus of the ear, had passed through the brain at the corresponding side, but six millimeters higher on the left side of the head. There was temporary unconsciousness, epistaxis, exophthalmos, complete blindness in the right, and photophobia in the left eye; frontal cephalalgia, and, on movement, a subjective, dull, buzzing sound; right hemiplegia. The left photophobia disappeared so soon as the ball was extracted. Suppuration occurred sixty hours after the injury. The hemiplegia disappeared on the third, the exophthalamos on the seventh, and complete recovery, including the restoration of the lost sense of vision.

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EXTREMELY HIGH TEMPERATURES AND RECOVERIES—DR. DONKIN has lately reported, in the *British Medical Journal*, the following instances of excessively high temperature, without fatal termination of the diseases in which they occurred: In the first case, convalescing from enteric fever, the temperature reached 111.6°; in another similar case, it reached 111°. Another case was one of intense pain in the ovaries, without organic disease, the temperature reached 108°. In one of great abdominal pain, it reached 115.80°. In a third case of enteric fever, with double pneumonia, it reached 113°. In necrosis of an amputated stump it reached 102°. In a case of pyonephrosis, it reached 117°. These were all females. In one case of synoritis (male), it reached 112°.

To these we may add one case of double malarial pneumonia, occurring in our own family, and reported to the St. Louis Medical Society, where the temperature rapidly rose to 110°, the patient recovered.

THE TEMPERATURE IN CEREBRAL CONCUSSION AND APOPLEXIA.—The observation has before been made of the fall of the temperature in apoplexia, but Kosurew (*Centlblt. fur Chir.*, 1880, translated into the *Canada Journal of Medical Science* for December) gives the case of a Cossack, who fell from a height, wounding the parietal tissues of the head. He was unconscious for three days, and survived only five days. During this time, his pulse was 44 in the minute, and his temperature ranged, in the morning, from 27.2° to 28.5° C. (80.9° to 83° F.), and, in the evening, from 26.5° to 29° C. (79.7° to 84.2° F.). On postm-ortem examination no fracture of the skull was found, but the vessels of the brain were found much congested, and *the substance of the organ filled with small points of hæmorrhage.*

CEREBRAL AND NEURO-THERAPEUTICS.

BI-BORATE OF SODA IN EPILEPSIA.—In his lectures on "Epilepsia," published in the *London Lancet* for February, March and April, Dr. W. R. Gowers speaks commendably of this remedy in ten or fifteen-grain doses, *ter in die*, though still retaining his preference for the potassium bromide, which latter he gives several times a day, with-

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out cessation, for several months or years, giving, every few days, a single extra dose of twenty or thirty grammes, to secure the full physiological effect of the drug. His favorite combinations, with the bromide, are hyosciamus, cannabis Indica or digitalis. This is how he speaks of borax: "In some cases it did no good, but in twelve its value was most distinct. In one, fits, which had continued on bromide and on zinc, ceased entirely on borax for three months, and then only recurred when the medicine was discontinued. In another case, the fits continued (about one weekly) during three month's treatment on bromide and on belladonna. Borax was then substituted, the fits at once ceased, and for five months the patient had not a single fit; then he had one in each of the two following months; the dose of borax was increased, and up to the present time (eight months later) no other attack has occurred. In a third case, one or two attacks occurred once a fortnight on bromide. Borax was substituted, and for five months the patient had not a single fit. The doses given have been ten to fifteen grains, twice or three times a day. It produces, in some patients, gastro-intestinal disturbance, and, rarely, a form of dysenteric diarrhœa. By others it is well borne, and one of his patients has taken forty-five grains a day, for twelve months, without the slightest inconvenience, and says that no medicine has ever done him so much good. When the bromides fail, he thinks borax certainly deserves a trial."

As an addendum to the above, it may not be amiss to add, that, while in our practice this remedy effectually suppressed an epileptoid display in a case of *petit mal*, appearing as a sequence to a *grand mal*, long kept in abeyance by a bromide and ergot course, we had to discontinue it on account of the great gastro-intestinal disturbance which resulted. Continuing the record of experience with this new remedy for epilepsia, we append the following testimony from Dr. T. W. Shaw, of Macon, Mo., to whom, in a consultation, we commended a trial of the borax as a *dernier* resort in an intractable case. The record begins July 14th, 1880, as follows:

"It is now eight days since I began the use of fifteen-grain doses of soda bi-borate with my patient." The record for August 13th is this: "Under the borax treatment his health declined very much; he lost his appetite, and his digestion was very much impaired; indeed, he got unable to walk about. Since I quit it, his general

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health and appearance have improved very much, but his ailment (epilepsia) is about as it was six months ago."

An intervening letter of July 28th states that the "violent paroxysms have ceased in the last eight days, in the last three there being only slight twitchings in one of the hands." The seizures had recurred daily before this time.

The intervention of a malarial complication was the immediate cause of the suspension of the borax in this case.

CONSTITUENTS OF TOBACCO SMOKE.—M. M. G. Le Bon and G. Noel (*Brit. Med. Jour.*) have extracted from tobacco smoke (1) *prussic acid;* (2) an *alkaloid*, having an agreeable odor, but dangerous to breathe and as poisonous as nicotine—one-twentieth of a grain destroying animal life; (3) *aromatic principles as yet undetermined*, which contribute with the above mentioned alkaloid to give to tobacco its characteristic odor. They say that tobacco smoke owes the toxic properties attributed hitherto solely to the nicotine contained in it, as much to these other substances they have discovered in it. The alkaloid pointed out seems to be identical with the compound known as collidine.

ERGOT FOR DIABETES INSEPIDUS.—Dr. E. W. Saunders, following the suggestion of Dr. Pepper, of Philadelphia, reports in a recent number of the *St. Louis Courier of Medicine*, the cure with this drug of a woman, aged 53 years, who had this disease for two years, passing from eight to ten quarts, per diem, of urine of the sp. g. of 1004. One drachm doses of the fluid extract, three times a day, effected, in three months, a complete recovery. Another confirmation of the view that diabetes is a vaso-motor neurosis.—ED.

THE MAGNET FOR PARALYSIS.—Nothnagel, in *Virchows, Archives*, May, 1880, relates the case of a recurring paralysis in the right hand of a man paralyzed in the same member six years previous by a lightning stroke, from which he had once recovered and remained well six years. Three months after the recurrence of the second stroke, Nothnagel, after failing with the usual therapeutic measures, brought back sensation and motion in three-quarters of an hour, perfecting the motility and sensibility in the part by subsequent applications, so that the recovery was complete in a few days, and the patient resumed work.

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Dr. Wm. A. Hammond, in *N. Y. Med. Jour.*, for Nov., cites "two cases of chorea which were completely cured in a few minutes; also one of speechless hemiplegia, which entirely recovered, so far as Dr. H. could perceive, but had another attack in a few days and died comatose; and an aphasic and hemiplegic patient, in whom sensibility was restored," though no further improvement followed the employment of the magnet.

DUBOISINE IN EXOPHTHALMIC GOITRE.—In this disease, Dujardin-Beaumetz administers, hypodermically, a neutral sulphate of this agent, dissolved in a little cherry laural water. The dose he uses is a fourth of a millegramme, cautiously increased, suspended for a few days every week, and not too long continued, even interruptedly. By this means he has obtained, in two cases, great diminution of palpitation and vascular throbbing. The toxic effects of the duboisine, which appear after a few days administration, resemble those of belladonna. The cumulative tendency of duboisine must not be lost sight of in its employment.

ELECTRIZATION OF THE INTERIOR OF THE STOMACH.—In cases of intractable vomiting, M. Leven practices electrization of the interior of the stomach, by means of a wire conducted to the stomach through an æsophageal tube. He has succeeded in relieving cases of vomiting in fifteen applications, which no other means had succeeded in stopping.

CHLORIDE OF AMMONIUM FOR GOITRE.—Dr. Stephens, of Quebec, reports seven cases of goitre cured by this. Six were girls under twenty years of age, and one a married woman, aged forty. The dose given was ten grains, three times a day, the tumors entirely disappearing at the end of three months.—*Can. Jour. of Med. Science.*

IDIOSYNCRACIES OF CONSTITUTION AND TOXIC EFFECTS OF NEUROTIC THERAPEUTIC AGENTS.

TWO DEATHS FROM THE CONTINUED USE OF THIRTY-GRAIN DOSES OF CHLORAL.—In the discussion on "Non-Restraint," before the Society of German Alienists, Dr. Stuler gave the particulars of two cases of sudden death

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from chloral. In one case thirty grain (gr. xxx.) had been given, with some intermissions, every day for three months. In the other, the same quantity for a week. He thought that the quality of the preparation may have had something to do with the result, and now he used Liebreich's Chloral, the effects of which were much pleasanter. Nasse advised the gentlemen present to use only Liebreich's preparation, made by Schering, Berlin.

[Dr H. H. Kane reports a number of such cases in a recent issue of the *New York Medical Record*.—Ed.]

Pain in the Ears and Tensor Tympani Spasm Caused by Strychnia.—The patient had central scotoma of the left eye and confusion of vision. He was given biniodide of mercury and strychnia. Strychnia was continued in pills 1-16 gr. three times a day, but caused pain in the head and ears, which came at the close of the meal with a beating sensation for a few minutes, against the membrane of the ear, likely due to the spasmodic twitchings of the tensor tympani muscles. It ceased with the discontinuance of the drug.—*Dr. C. R. Agnew.—Archiv. Otol.*

An Instance of serious syncope from inflation of the middle ear by Politzer's method, and of loss of hearing from a kiss upon the ear, are reported in a recent number of the *Archives of Otology*. Truly, we are becoming a nervously sensitive people.

ANATOMY AND PHYSIOLOGY.

Path of the Inhibitory and Sensory Fibbes.–Researches of *Dr. Isaac Ott.*—From an interesting article in the *New York Medical Journal*, for January, 1880, we briefly trace Dr. Ott's methods, and record the result of his experimental researches in cats: The animals were securely bound, chloroformed, tracheotomized (for the purpose of maintaining the necessary artificial respiration), their heads strongly flexed and the tissues over the posterior occipito atloid ligament, longitudinally divided and held apart. The membrane of the same region was cleared of all tissues, and then divided, and, after this, the different parts of the medulla were cut. Asorbent cotton promptly checked the bleeding. The sphincter ani was then

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examined as to the presence or absence of rythm. When Dr. Ott divided the posterior pyramids and the restiform bodies no rythm appeared, but when he cut the posterior pyramids, restiform bodies and the intermediate columns, then a rythm was noted; when he divided the gray matter transversely no rythm occurred, but a faint rythm was noted when the anterior pyramids were partly divided and the remainder crushed.

Before he reached the anterior pyramids, in making transverse sections of the intermediate columns, rythm took place.

As the fibres of the intermediate columns (and by "intermediate" he means what are usually called "lateral" columns) do not decussate, he infers that some inhibitory fibres pass down the intermediate (lateral) columns without decussating. The bi-lateral system of inhibitory fibres, then, arises in the optic thalami, passes down the crura cerebri, pons Varolii and anterior pyramids, and into the opposite lateral columns of the spinal cord through the internal half of the middle third of these columns, while others, instead of decussating, pass through the intermediate and directly into the lateral columns of the same side.

In regard to the sensory fibres, the same animals and methods were used. To irritate the skin he placed a Du Bois inductorium and needle-electrodes on the posterior extremities. Schiff ("La Pupille considérée comme Esthésiomètre," Paris, 1875), discovered that, if we irritate or pinch the skin in *some* carnivora, the pupil dilates, if the cervical sympathetic and cerebrum are intact. Section of the cervical sympathetic, cerebrum and cord at the medulla, also abolishes pupillary contractility. In the spinal cord, the fibres calling out the pupil-dilatation run in the lateral columns, and not in the gray matter as held by Schiff. By sections of the medulla oblongata, Dr. Ott proves that sensory fibres run in certain parts of it, and, as the pupil dilates in a reflex manner, that efferent fibres also run in the same parts.

The absence of the dilatation would prove either that no sensory fibres existed, or that the efferent were divided. When the posterior pyramids or restiform bodies are divided transversely, and the skin of the posterior extremities is irritated, the pupil dilates. If the gray matter is divided in a transverse manner then dilatation also ensues

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upon irritation of the posterior extremities. If everything is divided except the posterior pyramid, restiform body, and a small posterior portion of the intermediate columns is left, then, upon irritation, a dilatation ensues. If the posterior pyramids and restiform bodies are divided, and the anterior pyramids partly divided and partly crushed, then, upon irritation of the posterior extremities, a dilatation of the pupil ensues. These facts demonstrate that sensory and efferent fibres run in the intermediate columns of the medulla oblongata. The fibres of respiration also run in the same columns, for this act ceased only after division of the intermediate columns.

THE NERVES WHICH PRESIDE OVER THE GLYCOGENIE FUNCTION OF THE LIVER.—The secretion of sugar by the liver, as demonstrated by Claude Bernard, is produced under the influence of a reflex of which the centripetal paths follow the pneumogastric and the centrifugal paths pass by the syment of the cord between the sixth cervical and the first dorsal pair. In fact, the section of the cord at this level, suppressed the usual effects of puncture of the fourth ventricle upon the glycogenie function. In the pneumogastric, M. Laffont has recognized that excitation of the central end of the depressed nerve of cyon determined the increase of the saccharine secretion to the same degree as the excitation of the pneumogastric itself. In the centrifugal paths, he here determined the important role of the first dorsal pair, the section of which suspends the formation of sugar by the liver, even when the depressor nerve is excited. The first dorsal pair, as foreseen by Claude Bernard, acts as a vaso-dilator nerve; for the excitation of the peripheric end produces a lowering of arterial tension in the abdomen.—*L'Union Medicale, May 4. 1880.*

AN EXTINCT REPTILE WITH A SECOND SPINAL BRAIN.—Prof. Marsh, in his interesting paper on the "Dimensions of the Brain and Spinal Cord in some extinct Reptiles," read at the last meeting of the National Academy of Sciences, states that he found in a certain species of extinct reptile nearly thirty feet long, in the *sacral region a posterior brain, eight times as large as the encephalon* at the other end, while the brain proper was scarcely as large as that of an ordinary dog. The sacram inclosing this brain was composed of four well ossified and very strong. This phenomena was not due to disease for he found the cavity in other younger sourians.

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THE PHYSIOLOGICAL ACTION OF ERGOT.—M. Peton, of Paris, injected ergotine into the base of a rabbit's ears. In five or six minutes after, they commenced to be anæmic, and the pupils to dilate; this gradually increased, and lasted several hours. Its intensity and duration varied according to the dose of ergot given. He next divided the sympathetic in the neck of a rabbit, and dilation of the vessels and contraction of the pupil on the corresponding side followed as usual. The ergot was then injected as in the before-mentioned experiments; its administration was followed by anæmiation of the ear and dilation of the pupil.

THE ERECTILE NERVES LOCAL ANTAGONISM, ETC.—Nikolsky.—*Med. and Surg. Rep.*—In boys, according to the author, there are two nerves of erection; one issues from the first, the other from the second sacral foramen. The upper is more slender, the lower thicker, and they soon unite to mingle with the nerves constituting the hypogastric plexus. The first sacral ganglion of the great sympathetic sends to the plexus a small branch. On this slender filament we may observe small ganglia and nerve cells.

CONJECTURAL FUNCTIONS OF THE SUPERFICIAL CEREBRAL LAMINÆ.—Dr. E. C. Mann in a paper in the *Va. Med. Monthly* for May, "On the Brain, in Health and Disease," thinks that the superficial laminæ of the convolutions of the hemispheres, disseminate the impression of general sensibility, and that the deeper layers containing the larger multipolar ganglion cells originate motor impulses.

THE NEW ENGLAND PSYCHOLOGICAL SOCIETY

Held its annual meeting at the Hotel Brunswick, in Boston, December 14th, 1880, Vice-President Dr. A. M. Shew in the chair. The following officers were chosen for the ensuing year: President, A. M. Shew, M. D., Superintendent of the Insane Asylum at Middletown, Conn.; Vice-President, H. P. Stearns, M. D., Sup't of the Hartford Retreat for the Insane, Hartford, Conn.; Secretary and Treasurer, H. M. Quinby, M. D., Sup't of the Worcester Insane Asylum, Worcester, Mass.; Drs. Folson, Channing, Nims, Hallock and Tarbell were admitted to Active Membership, and D. Hack Tuke was made an Honorary Member.

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Dr. Ira Russell, of Wichendon, Mass., read a paper on "Melancholia," (which will appear in the next number of this Journal.) An animated and interesting discussion followed, in which nearly all the members present participated. Dr. Edgar Park, Sup't of the Insane Asylum at Worcester, spoke in opposition to the "Use of Opium in the Treatment of Melancholia and other forms of Insanity." Dr. T. M. Fisher related the case of a gentleman who became melancholic after the death of a daughter, by consumption. A few days after her death, while engaged in his usual business—writing at his desk—he had a sudden sensation in his head, as though he had received a blow upon it. He immediately became very much depressed, imagined he had committed a great sin; in that he had thought it was well his daughter had died, inasmuch as she had consumption and could not get well. He dwelt upon that subject continually, could not sleep, and contemplated suicide. He was placed in charge of Dr. Russell, and cared for in his 'Family Home,' and, after several months, died suddenly from an appoplectic attack. Dr. Fisher regarded the melancholia as due to an organic disease of the brain.

Dr. Earle had found opium, in many instances of great value. He could not tell, before a trial, what particular cases would be benefitted by it.

Dr Bancroft had found the influence of travel upon melancholics, before the disease had become fixed, quite beneficial. Dr. Jelly's paper upon "Moral Insanity," not being fully prepared, was deferred until the next meeting. Dr. H. P. Stearns read a paper upon the "Proper Care of Certain Classes of the Insane."

The Society voted to meet at the same place on the second Tuesday of March next.

PROCEEDINGS OF THE THIRD CONGRESS OF THE ITALIAN PHRENIATRIC SOCIETY.

Held in Reggio D'Emilia, from 23d to 29th September, 1880.

We are indebted to the distinguished editors of the *Gazette del Frenocomio di Reggio*, for a copy of that valuable periodical, devoted exclusively to the report of the proceedings of the Third Congress of the Phreniatric Society of Italy. To say that we have read it with most lively interest

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and with warm sympathy, falls very far short of an adequate expression of our appreciation of its varied, instructive and charming contents. It must be utterly impossible for any lover of national freedom, and of free scientific discussion, to rise from the perusal of this document of 130 large octavo pages, without a glowing feeling of admiration of the progress which new-born Italy is making in the walks of science and practical benevolence. In the name and on the behalf of the freemen of the Great Valley of the Father of Waters, and of all America, we tender to our illustrious fellow workers of glorious *Italia Resorta*, across the ocean which now joins, rather than separates, the two worlds, our most hearty congratulations. Had we from them no other proofs of the eminence attained by them in the range of medical science, than the present record of their work in the department of alienism and neurology, this would suffice to convince us that they are destined yet to stand—if, indeed, they do not already hold the position—in the very front rank of the grand army of successful workers and fearless thinkers.

The proceedings of the Congress covered seven entire days, without suspension even on an obtruding Sunday; but we must not overlook the fact, that on that day they were engaged in a very pious work—the inauguration of a statute, commemorative of a departed brother, whose name cannot have been forgotten by our readers.

Candor, however, obliges us to add that the evening was devoted to certain "*scientific demonstrations*," which would comport rather awkardly with the religious sentiments of their brethren on this side of the Atlantic; but why should our puritan conscience be the standard of their liberty? It is some relief to us to know that our friend, *Dr. Gray*, of *Utica*, was in attendance as an "*honorary member*." We shall hope to learn from him that he did not forego the opportunity of intimating his disapproval of the Italian mode of "Keeping Holy the Sabbath Day."

We shall now proceed to present to our readers a summary, as concise as possible, of the proceedings.

The first day, Thursday, 23d Sept., was devoted to inaugural proceedings, and was abundantly prolific in very eloquent speeches, which we would have much pleasure in presenting *in extenso*, but our available space forbids the indulgence. We therefore confine ourselves to a few passages from the speech of *Senator Verga*, which,

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we doubt not, will find a sympathizing response from all the patrons of our JOURNAL.

ABSTRACT FROM THE SPEECH OF SENATOR VERGA DELIVERED AT THE OPENING OF THE CONGRESS.

"I would here note the great difference which was manifest between the testimonials of admiration, veneration and affection, truly solemn extraordinary and impressive, rendered by the whole Italian nation, yea, by the whole world, to a king branded with anathema, and the calm, modest, and I may well say, official honors, which a few days after marked the demise of a holder of the keys of both heaven and hell,—a judge of both the living and the dead, when, imprisoned in his own ideas, rather than in the apartments in which he had shut himself up, he closed a life fortunate through a very long reign, and not deprived of those pomps which are dear to Italy. * * * * * * * * * *

It is not necessary that I should call to your remembrance, learned colleagues, what was the state of Phrenlatric science through all that time in which men who arrogated to themselves the representation and the prerogatives of Divinity, measured out with despotic hand, to knee-bent humanity, liberty, knowledge, and at length both thought and speech, how long and irksome a sojourn did our science pass in the beclouded and desolated fields of animism, when a scientific and philosophic physician, who dared to utter a word against the dominant superstition, was not sure to end,—or rather was sure not to end his days in his own bed!

I do not think that I exaggerate when I say that if to-day we have a Phrenlatric Society in Italy, in which the most daring explorers of that Arctic sea, the human brain, love to enrol their names,—a society distasteful no doubt to the over timid and orthodox and periodically celebrating its congress, without dread of opposition or animosity; for this our gratitude is due to that grand king who has saturated Italy with liberty and to the son who faithfully follows in the footprints of his father.

Permit, then, that I, free from all suspicion of blind enthusiasm for monarchy and jealous as any other ever has been, as to the independence of our solidarity, exclaim in your presence: Glory eternal to Victor Emmanuel, new type of a constitutional king, who, with equal zeal has promoted civil and democratic profession! Why do the municipalities of Italy to-day rivallously strive to erect to him monuments worthy of his merits, when no monument can ever equal that which he himself prepared with his own hands in Italy, restored by him to unity, liberty and strength,—this Italy, greedy for light, and panting to resume her place at the head of European civilization!"

After the delivery of the various speeches the Congress set energetically to work.

Dr. Lolli, of Imola, was elected President for the third time; *Prof. Tamburini* was elected Vice-President; *Prof. Morselli*, Secretary; and *Drs. Seppilli* and *Riva*, Vice-Secretaries. The *emeritus* Secretary of the Society, *Dr. Biffi*, read the *moral* and *economic* report of the Society

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for the last triennial period, in which he made an affective commemoration of the members who had been removed by death in that time, reminding the assembly of the genius and virtues of the lamented *Bonacossa*, *Girolami*, *Berti*, *Ponsa*, *Palmerini*, *Corbetta* and *Federi*; and of the honorary members, *Roller* and *Fleming*.

Inauguration of the Phreniatric Exposition.

The opening of the Congress having been concluded, the members, accompanied by the Deputy *Fornaciari*, the Syndic and various physicians and gentlemen of the city proceeded to visit the *Phreniatric Exposition* arranged in the hall of the theatre *Arioste*.

This exposition, initiated by the Directors or our asylum, is the first yet offered in Italy, and, considering that it has only been a first attempt, it has been quite successful. The principal asylums of Italy, in addition to our own, contributed to the specimens of industry submitted; besides, numerous manufactures of scientific instruments.*

We have great pleasure in transcribing from this report, the following passage:

"*Dr. Gray*, of *Utica*, presented to the Italian Phreniatric Society, of which he is an honorary member, an *Album* containing about 30 specimens of photography, representing various sections of diseased medulla spinalis, and some others of diseased lung. These were of about 200 diameters enlargement. The committee does not presume to speak of their merits, leaving this duty to one who is more competent to the task, the illustrious *Prof. Golgi*. The views are now in the Exposition, and will remain, according to custom, in the Asylum of St. Lazarus (Reggio)."

Second Session—*Friday, 24th September, A. M.*

The subject of the "*Modifications of the Statute and Regulations of the Society*" was considered (Relator, *Biffi*).

Drs. Michetti, Morselli, Grilli, Capelli, Tarchini, Meneucci, Fiordispini, Verga and *Biffii* took part in the discussion.

The amendment of the 14th article, that the number of honorary members shall not exceed 12, who may be admitted to the Congress, &c., &c., was adopted.

Afternoon Sitting.

1st. Morselli read a communication on "The Geographic Distribution of Insanity, Epilepsy and Idiocy in Italy."

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* A minute description of the articles exhibited is given in the special report of the visiting committee, appointed by the President.

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2d. Verga read a communication on the "*Causes of Insanity in Italy*," deriving his statistics from the asylum reports of 1877, from which the following proportions appeared to result: *Pellagra, 8.88 per cent.; diseases of fœtal life, or presently after birth, 7.77; epilepsy, 6.68; sexual disturbances, 6.94; alcoholism, 3.92; venereal abuses, 3.73.

3d. *Venturi* read a communication on "*Pallagrous Typhus*," in which he endeavored to distinguish the several forms ordinarily comprehended under this peculiar designation.

4th. *Riva* communicated the results of his researches, in the asylum of *Reggio*, on the "Course of the Temperature in *Progressive Paralysis*" (Paresis).

5th. *Seppilli* communicated his researches in the asylum of *Reggio*, on "*Reflex Tendon* in the Insane."

6th. *Morselli* read a communication from *Dr. Frigerio*, on the "*Anomalies of the Cerebral Vessels in the Insane.*"

In the evening, Prof. Lazzaretti and eight other members met to consider the basis of an *Italian Society of Legal Medicine*; and *Prof. Tambassia* was requested to frame the project of a statute.

Third Session—*25th September.*

The president named a committee to visit the House of Mendicity.

Grilli reported on the subject of "*Moral Insanity*," proposed at the last Congress, in which he sought to reconcile the diverse opinions on the question.

A discussion followed, in which *Verga*, *Tamassia*, *Fiordispini*, *Ioselli*, *Morselli* and *Grilli* took part. Verga took occasion to relate, briefly, a communication sent to him by Dr. Galli, on the "*Analytico-Comparative Study of Moral Fools and Delinquents.* The subject was postponed till the afternoon sitting.

Afternoon Sitting.

The discussion on "*Moral Insanity*," was resumed The President, finally, in view of the conflicting opinions expressed, named a committee, charged with the studying of the conclusions of Dr. Grilli's paper.

2d. *Franzolini* related the first case of *Oophorectomy* executed in Italy, which had resulted successfully.

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*The above figures account for only 38 per cent of the total cases. They may be approximately correct as far as they go, but they cover too small an area to be regarded as of any scientific or practical value.

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3d. *Verga* gave a lecture on the "Relations of Phreniatria with Jurisprudence," showing what should be the position of the medical alienist before the Tribunals.

4th. *Verga* made a communication on the "Relation Between Magnetic Perturbations and the Disturbances of the Insane."

5th. *Seppilli*, on behalf of *Dr. Riva*, reported the results of researches in the Asylum of Reggio, on the use of "*Hyosciamin* in Mental Alienations."

6th. *Raggi* communicated his "*Citometric Studies* on the Insane;" he also called attention to the therapeutic value of intra-peritoneal *transfusion of blood* in cases of mental alienation connected with oligæmia.

Fourth Session—*26th September.*

This day was wholly dedicated, by the members of the Congress, to the Asylum of *St. Lazarus*. It was divided into three parts:

1st. The inauguration of the bust of *Carlo Livi*.
2d. Visit to the Asylum.
3d. Scientific demonstrations.

We dare not venture on anything like a full reproduction of the proceedings of this glorious day, rendered, as it must have become, forever dear to the memory of all who had the privilege of participating in its solemnities. The eulogistic tributes offered to the memory of the lamented *Carlo Livi* were exquisite specimens of Italian oratory, well calculated to show that the present race are no degenerate descendants of the men of the Ciceronic age.

Before proceeding to the spot where the veiled statute of *Livi* awaited the procession of the Congress and the multitude of the magnates and citizens of Reggio, the Medical Superintendent and his assistant received the members of the Congress in the hall of *Gallani*. On their entrance, the orchestra of the asylum intoned the Royal Hymn, after which the alumni of the choral school sang a hymn, written expressly for the occasion by the talented poet, *U. Poggi*.

We dearly wish that we could render into English, without detriment to its native beauty and pathos, this simple and most touching little melody. We venture to present it as nearly true to the original as our defective knowledge of the musical Italian tongue enables us to give it. Perhaps some reader, gifted with poetic genius and

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fine taste, will favor THE ALIENIST AND NEUROLOGIST with a version which will be more pleasing; if so, the present delinquent pledges himself to be very lenient in criticism:

CHOIR OF PATIENTS.

Light immortal of the soul
Why hidest thou thyself,
As the sun veiled by autumnal mists,
Or by the dense cloud, whence
The horrid lightning darts?
Ah! without this were mortals not
Already but too prone to stray?

Why, as a harp that fails to give response
To the hand of the skilled master,
Does the troubled brain, that grand
But fragile instrument of the hidden sense,
Give forth only discordant utterances?
Was, then, this deep misery
Decreed for us in Heaven?

Decreed in Heaven? No, no, mysterious
Are the ways of nature;
The strength of thought,
Will thought's weakness succor,—
For, well can love and art
Retune the now disordered cords;
And soon from every part
Will the sun every cloud disperse,
Then, in the brightness of his rays serene,
Will the soul again rejoice.

The assembled multitude having reached the tomb of *Livi*, listened with deep interest to the eloquent speeches there delivered; but of these we can offer only limited excerpts.

ABSTRACT FROM THE SPEECH OF PROF. TAMBURINI, ON THE INAUGURATION OF THE BUST OF CARLO LIVI.

"You, gentlemen, assembling here to-day, may find us, perhaps, proud, of our institution; but it is not of our own work that we are boastful: it is only of that of men who were, to many of you, friends and companions in the battles of life; to us, venerated masters; to their afflicted patients deprived of reason, guides, comforters and preservers; to our science, a lustre and an honor, and to this institution its very life and soul. To it they dedicated the best part of their existence; for it they spent their most vital forces, and in the fervor of those conflicts inevitable to every potent initiative, and in that inexorable devotion with which they labored for the good of others, they fell prematurely in the heat of the action, as warriors who, in the mingling of the hosts and on the brink of victory, fall fighting, facing the foe.

The rendering of honor to these masters of science and self-abnegation is a sacred duty, and at the same time a comfort and an

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encouragement to those who place faith in their example. Such an example is the most potent spur to good work; it is the guide, the inspirer and the director of every good deed. The images of these great ones kindle that resistless flame which impels men to the accomplishment of great enterprises; the memory of the grandeur of these spirits elevates the level of every character, and blunts every ignoble sense and thought. They speak to us from the tomb a powerful language, which searches out the most sensitive fibres of our hearts.

In three names, illustrious colleagues, are summed up in the history of this institution: *Antonio Galloni, Ignazio Zani, Carlo Livi.* On the 16th of April, 1871, through the exertions of Zani. was celebrated the solemn dedication of the bust of the illustrious founder of this hospice. On the 10th of September, 1876, *Livi* inaugurated that of the spirited reformer of the asylum. The inauguration of the marble which recalls the dear paternal image of our beloved master, has been reserved for this day, which is rendered more solemn and sacred by your presence; and our tribute of affection and veneration is thus rendered yet more solemn, as in your minds the remembrance of this day's visit to our asylum will ever be conjoined with that of the homage rendered by you to science and to the heart of him who was, whether as master or companion, the object of affection and admiration to us all."

It is with profound regret that we are prevented by our limited space from reproducing the whole of *Prof. Tamburini's* brilliant and touching oration, honorable alike to his head and his heart. We must, however, present to our readers his pathetic and very appropriate peroration:

Gentlemen:—In the press of feelings which in this solemn moment throng in upon my mind, and in the deep commotion which I feel from the lustre shed on this asylum by your presence, permit me to conclude by rehearsing the words uttered by Livi before the bust of Zani: "the memory of him is not perpetuated alone on this simple marble, for it lives, and will ever live, engraved on the hearts of us all, so long as genius and virtue shall be worshipped in this land."

After Tamburini the Deputy *Fornaciari*, President of the Administration of the Asylum, spoke as follows:

"I thank you, illustrious gentlemen and gentle ladies, for having assembled here to do honor to the memory of one who, by his wise counsel and his great exertions, did so much for this institution. I could add nothing to what has been so exquisitely well said of the scientific merits of Carlo Livi by his worthy pupil and successor, yet I will speak to you of his works for the benefit of this asylum, because, in the visit which you will presently make, you will have frequent occasions for verifying with your own eyes, the results of his intelligent activity, for everything here speaks of him.

It may suffice that I merely say, that from him came the word of order for the reforms introduced into this asylum in the past ten years. It was he who, in 1870, said to us, "Galloni left the Asylum of Saint Lazarus on a par with the science of his time;" it must now be brought up to the

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science of to-day. And it fell to him—Oh! the vicissitude of human affairs—to accomplish a good part of those reforms; but he could not see the fruits, for an immature death snatched him from us!

That which *Livi* did for this asylum was not the work of his mind alone, but even more of his heart, which was ever prompt and open to everything lovely and good.

Love of science, love of his country and his family, a most lively affection for his friends and his patients—these were the sentiments which had sovereign sway in the mind of *Livi*, while a conscious dignity beamed from his ever bright and cheery aspect.

Well of him may I say with the poet—

"Oh, if the world had known the head he had,
Much as it praises, it would praise him still more."

Pardon to me the belief, that while we gratefully and in silent commotion stand here admiring the clear resemblance of *Carlo Livi*, his lovely spirit hovers, as a benignant genius, over his dearly beloved asylum.

We find it impossible to devote to the important proceedings of the remaining sessions of this congress, that measure of space which they so well merit, and which we would so gladly give to them. Suffice it to say every day was redundant in able and valuable work, the details of which well indicated the position reached by Italian alienists in the specialty so richly adorned by them.

As was naturally to be expected, such a gathering of congenial spirits must not break up without a memorial festivity; and sure enough they had one, on the last evening of their assemblings. It went off as a splendid "flow of reason, and feast of soul." The most conspicuous as certainly the most versatile, of the contributors to the enjoyments of the night was the venerable *Senator Verga*, whose genius would seem to be as multilateral as his humor is playful and quaint. This genial old soul treated his auditors to a poem of 79 stanzas, and two culminators, mainly devoted to the praises of Italian wines, in the recital of which he certainly "suited the action to the words" with a grace and a gusto which might have afforded texts to a dozen of our American temperance spouters, for a brace of hundreds of deep-toned lectures. But be it entreated of our gifted declaimer, that they will not believe *Senator Verga* drank one-quarter so much as he pretended to do.

We shall now close our notice of the auspicious proceedings of this third congress of Italian alienists with an English rendering of the closing verses of *Senator Verga's* post-prandial poetic effusion:

Years weigh me down, my chest is dead tired,
Quite dry is my throat, and short is my breath:
Fast then, and freely.

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Send the wine 'round the board,
But to me offer only the juice
Of our own Reggian grapes.

Drink we then, without any fear,
Sine pondere et sine mensura,
Long life to our hosts. [*drinks*]

How delicious! My thirst is clean gone,
And I feel all my inwards refreshed,
I'm quite a new man.

All my forces now marshal afresh;
Ah! sure wine's the right sort of milk
To nourish old age.

Drink it off, and fear not a bit
That your veins will ever inflame,
Or pylorus or liver.

Why! I, too, am a—what must I say?—
Doctor futurus, a flower in the bud;
I'll be grand when I bloom.

Science now has made solid the fact,
That it's quite a mistake to believe
Alcohol stimulates.

From of yore being hostile to life,
It has turned a new leaf, and reads now:
Potio antiphlogistica.

It is always in order to drink
To the honor and glory of Congress,
And science, and so forth.

Also, principally, as every one knows,
It behooves your jolly president
To drink to *omnibus*. [*drinks*]

Drink we all, to king Humbert and Galivardi,
Both, with us sympathetic, we know;
Yes, both and all three.

Vivant quoque vesanorum
Curatores, atque illorum
Bene resta hospitia.

Vesani ipsi vivant, unde
Stat et alitur abunde
Nostra congregatio.

Long life to all, both Jews and Christians,
And to those poor Mussulmans,
Ter quaterque miseri!

Whose law, profane and tyrannous, forbids
Wine's refreshing cup to touch their lips.

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PERSONAL TESTIMONY TO THE CHARACTER OF THE PAINS OF LOCOMOTOR ATAXIA.—Xavier Aubryet is just dead of locomotor ataxia, and thus he spoke of its fulgurant pains: It seemed as if a torturer had him in a rack and was dislocating his joints. At other times, he felt himself being scalped; again, being run through a rolling mill. "Death will only unscrew me," he used to say.

Heinrich Hein also suffered and died of locomotor ataxia, which may account somewhat, perhaps, for the melancholy and satirical style of his writings. Thus he speaks of his fate in one of his sonnets:

"Die Welt war mir nur eine Marter-Kammer, Wo man mich bei den Füszen aufgehangen, und mir gezwickt den Leib mit glühenden Zangen und eingeklemmt in enge Eisen-Klammer."

[To dwell in a chamber of torture my lot, where I'm hung and swung by my feet, my body was twitched with tongs red-hot, and squeezed with an iron cleat.]—J. T. W. —*Cin. Lancet and Clinic*, Jan. 15, 1881.

EDITORIALS.

RETROSPECT AND FORECAST.—As we look back over the old year and note the rapid progress made, and general interest taken in neurological research, and look forward to the year before us, the dawn of a new era, in which the study of neurology shall be universally regarded as indispensable to successful general medicine, seems to us clearly discernible.

Neural pathology must soon largely supplement and, in many instances, supplant the vascular, in general medical thought, just as the more scientific vascular took the place of the cruder humoral pathology. The blood is the life, but its vitality and movement depends largely upon the healthy states of the nervous system, especially of the vaso-motor.

Though in the organism the blood and the nerves are inter-related and mentally dependant, the study of nerve influences and resultant vascular activities, largely constitute the phenomena of disease as we discern them in the living organism, whilst their sequences are mainly revealed in gross changes of structure, and the cadavor shows us the ultimate results, of precedent nerve and vascular activity, as well as those changes called chemical, which take place when the influences of the nervous system are wholly withdrawn. The nervous system is also the life of the organism.

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Instead of a few brief paragraphs, pages ought to be given, and we may some day devote them to an elaboration of the relation of the nervous system to general medicine. But we content ourselves now with the above hint on the tendency of the times, and from it point a moral namely: Take the ALIENIST AND NEUROLOGIST and place yourself *in rapport* with the progress of the age in practical medicine.

OOPHORECTOMY FOR NEUROPATHIC CONDITIONS.—Probably no graver subject ever presented to the more thoughtful and maturely experienced surgical mind than that of the kind and degree of neuropathic disorder, which ought to constitute an absolute justification and demand for ovarian exsection, and it may safely be asserted that no one without a wide range of observation of the neuropathic affections of women should attempt a decision of this important question in surgery.

Given a diseased ovary and a conjointly existing cerebral or cerebro-spinal affection, and it is quite natural for the quick and vigorous young mind to conclude that Battey's operation is the thing demanded, yet a maturer view of the field of neuropathology, based on a wider range of observation, would reveal the fact always well to keep in view when the surgical unsexing of a woman is contemplated, that a majority of all women afflicted with serious cerebral or cerebro-spinal disease, like the opposite sex when similarly affected, inherit a neuropathic diathesis, which cannot be exterminated by surgical methods applied to the present generation. Had a Battey spayed the mothers and castrated the fathers of many of the present generation, it would have been a good, but rather radical prophylaxis of much of the neuropathic misery now in the land; but, unfortunately, such a proceedure cannot be made retroactive.

It must be borne in mind, that where the neuropathic diathesis is marked, and a cerebro-mental disease supervenes, it is quite common to find associated morbid states of the generative organs, which disappear *pari passu* with the cure of the cerebral condition. Coincident ganglio-pathic states exist beyond the ovaries and uteries which the knife cannot reach, and which improves as the general nerve tone recovers. The enlarged ovary and displaced fundus; the prolapsed, or congested "os;" the badly acting heart, the tender spine, and other *foci* of morbid expression, often disappear, when the head derangement departs, under constitutional methods.

The extirpation of one *locus morbi*, while it sometimes causes the manifestation of a remote affection to cease, is also sometimes followed by the selection of another peripheral spot in which the diathetic condition displays its morbid activity.

While diseased ovaries may act as a peripheral excitant of central morbid states, they are quite as often the sequences of central conditions, begun in the economy before the beginning of ovarian evolution, or latent only until the beginning of the ovarian development.

A few years ago, the great number of insane persons, male and female, who were given to masturbation, led to the conclusion that this vice was the main cause of a great majority of cases, but more diligent inquiry showed that many insane persons became masturbators after the fact of insanity.

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