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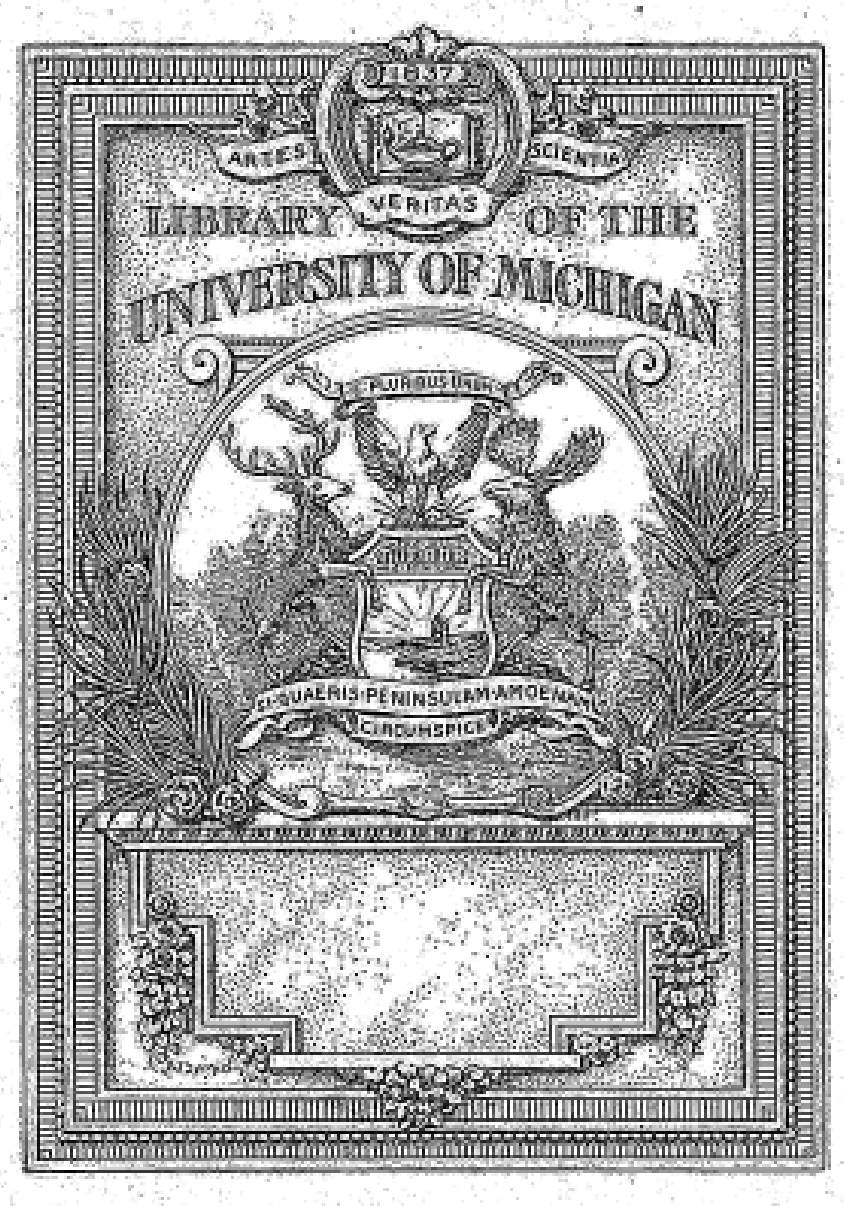

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THE

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.

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

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ORIGINAL CONTRIBUTIONS.

CORTICAL EPILEPSY.*

EXPERIMENTAL RESEARCHES—SYNTHETIC REVIEW.

By GIUSEPPE SEPPILLI, M. D., Imola, Italy.

AMONG the more important results obtained in late years, from the experimental explorations of the brain, is that of having established the fact that epilepsy may be produced artificially by irritation of the cerebral cortex. The first knowledge of this fact dates from the time of the well-known experiments of Hitzig and Fritsch (1870), which have signalized the commencement of an era, the most fruitful and the most memorable in the physiology of the brain. In the work published by these two observers on the electric excitability of the brain, we find it stated that in dogs electric excitation of the cortex gave place to well-characterized epileptic attacks, which, beginning in contractions of the muscles corresponding to the cortical motor centre stimulated, extended first on the same side of the body, and afterwards on the other side.

Some years afterwards Hitzig tried to establish, in a more precise manner, the relation between cortical excitation and the genesis of epilepsy by effecting on dogs lesions limited to the motor zone, and he observed that

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in some of those which survived the operation, true epiletic attacks were developed.

The opinion of Hughlings Jackson, based on clinical observation, that in men also certain convulsive forms have their origin in the cerebral cortex, led Ferrier to make a series of experiments, from which he concluded that the excitation of the cortical motor centres provokes epilepsy.

In Italy, the subject of cortical epilepsy has been profoundly studied by Albertoni, who has sought to determine the conditions and the genesis of the epileptic attacks; and by Luciani, whose theory of the seat and origin of epileptic convulsions has been accepted by many able physiologists, and has found several applications in the clinical field.

Among those who have specially engaged in the study of cortical epilepsy, and who have sought, whilst taking departure from different points of view, to determine the part taken by the cerebral cortex in the genesis of the epileptic attack, we must mention Bubnoff, Heidenhain, Franck, Pitres, Unverricht, Rovighi, Santini, Danillo and Rosenbach, whose labors have cast a clear light on the mode in which we should interpret the mechanism of epilepsy of cortical origin, whilst, taken in their entirety, they give us an exact and complete idea of the phenomena that characterize an epileptic attack, experimentally provoked, and of the mode in which it begins, extends and runs through, as well as the varieties which, according to circumstances, it presents.

Cortical epilepsy is a subject of great interest, not so much because of the physiological questions which it raises, as of the immediate applications which it may present to the physician at the bedside of his patient. We shall, therefore, fully discuss it in this work, in which we purpose, first, to examine the conditions requisite for the production of artificial cortical epilepsy in animals, and the mode of provoking it; we shall then analyze the access of cortical epilepsy and the causes which modify

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it; lastly, from the basis of the facts, we shall see what is the functional significance of cortical epilepsy.

FIRST. The disposition to cortical epilepsy varies much in different classes of animals; it is absent in the batrachia, in reptiles and birds, but it is present in the mammifera. By exciting, with a very strong Faradic current, the cerebral hemispheres of frogs, toads, chickens or pigeons, we do not succeed in provoking any epileptic access. Only some of the mammifera are predisposed to present cortical epilepsy. Albertoni observed that the sheep, the goat, the ass and the horse are not susceptible of having partial epilepsy; whilst in cats, dogs and monkeys it is very easily provoked.

But even animals of the same species do not present an equal predisposition to cortical epilepsy. Experiments have shown that in some dogs, even when not narcotized, it is impossible to provoke an epileptic attack, whilst in others, on the contrary, very slight excitations are followed by convulsive attacks, and again, in some others, strong and prolonged excitations are required to produce epilepsy. Again, certain monkeys are more predisposed than others to artificially provoked epilepsy. It is further to be observed that the same experimental conditions being given in many animals of the same species, or of different species, epileptic convulsions with the same characters are not always obtained. In some animals they continue localized, whilst in others they have a tendency to become diffused. It is, therefore, proper to note that the predisposition to the diverse forms of epilepsy (peripheral, toxic, cortical) is variable in animals; in the guinea-pig, for example, it is very easy to provoke peripheral epilepsy, but not the cortical; in the dog, which is much predisposed to cortical epilepsy, it is very difficult to produce the peripheral.

The degree of the excitability of the cerebral centers has a great influence in the production of epilepsy. It is very variable in the dog, and it may be diminished or abolished, or notably exaggerated under the action of

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various causes. The facility of provoking epileptic attacks stands in relation to the state of excitability of the brain that is subjected to the stimulus. We shall now proceed to enumerate the principal causes which tend, more or less, to modify the cortical excitability:

(*a.*) *The age.*—From the researches of Soltmann and Tarchanoff it is known that the brain of dogs, cats and rabbits, newly born, is altogether inexcitable. Albertoni could not, in a dog thirteen days old, provoke either movements or epileptic convulsions by Faradization of the brain, whilst in another, twenty-two days old, excitation on the right hemisphere brought on a complete epileptic attack. It is held by some observers that it is easier to provoke epilepsy in young than in adult animals.

(*b.*) *Anæsthetics.*—The state of narcosis, to which the animals are usually subjected by means of chloroform, ether or morphia, has great influence in diminishing the state of excitability of the cerebral cortex. If the chloroform narcosis is very profound, the cortical excitation may be rendered absolutely ineffective. Having been present at the numerous researches of Luciani and Tamburini, in the asylum of Reggio, on the brain, I often had occasion to observe this fact, and to see afterwards that in proportion as the narcosis went on decreasing the excitability of the cortex of the brain returned. Hitzig observed that with strong doses of ether, he was able to obtain cessation of the movements which had been provoked by galvanizing the excitable zone of the brain. Morphine, also, when administered in a rather full dose, produced the same effect. But when these substances are cautiously given so as not to induce in the animal to be operated on a profound degree of narcosis, their paralyzing action on the cortical excitability, if indeed it appears at all, is only transient.

(*c.*) *Bromide of Potassium.*—Albertoni instituted a series of researches most interesting in the study of the action of divers medicinal substances on the excitability of the cerebral cortex. Having laid bare the motor zone in the

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dog and in monkeys, he fixed on the lowest degree of current necessary to provoke an epileptic attack. He then administered the medicament, and as soon as signs of its action began to appear, he examined anew, in the same way, the excitability of the brain by laying bare the other motor zone. In this way Albertoni discovered that the bromide of potassium is capable of considerably diminishing the electric excitability of the brain, and of withdrawing the possibility of production of epileptic attacks by means of excitation of the cortex. Rosenbach has recently confirmed these facts.

(*d.*) *Perfrigeration.*—The epileptogenous faculty of the cerebral cortex may be diminished or altogether abolished by the local application of some substances which produce a great and rapid lowering of the temperature of the brain. Franck and Pitres found that whenever the cerebral cortex was cooled down by means of etherization, prolonged for some minutes, the excitation of the cortex no longer provoked convulsive attacks. They assured themselves that the ether does not act by chemically altering the cerebral substance, as they obtained the same effect when they protected the cerebral cortex from contact with the ether, by means of a thin fold of caoutchouc. On the contrary, however, Marcacci states that local anæsthesia of the exposed cortical centres, obtained by the pulverization (spray?) of ether, does not modify the cortical excitability.

We know not how to explain this difference in the experimental results of the authors cited, unless by admitting that in the experiments of Marcacci, the perfrigeration of the cortex was not pushed to so intense a degree as in those of Franck and Pitres; or by supposing that the cerebral cortex does not in all animals equally feel the local anæsthetic action of cold. This would seem to find confirmation in the observation of Unverricht, who, in making his experiments on dogs, found that in some of them, despite an enormous lowering of the temperature, the excitability of the brain persisted to such an

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extent that he was able to provoke a true epileptic state, whilst in the majority of them the cooling of the cerebral cortex rendered it altogether inexcitable.

(*e.*) *Anæmia.*—In animals which, during the operation, have lost a considerable quantity of blood, the electric excitability of the brain usually descends to a very low degree, or it is completely abolished, so that we do not succeed in provoking epileptic attacks. Sometimes, however, the cortical excitability does not undergo any diminution. The ligaturing of all the arteries which go to the brain does not, in some, in the least modify the electic excitability of the cortex, but in others it diminishes it—[Minkowsky.]

Orschansky studied how the electric excitability of the cerebral cortex behaved in dogs, in which abstraction of blood was made from the femoral artery. When the quantity of blood abstracted was about one-seventh of the whole mass, the cortical excitability was not modified. The withdrawal of about one-fifth of the mass caused augmentation of the excitability. If the loss of blood is still greater, the excitability of the cortex diminishes. When the quantity lost is about three-fifths or two-thirds of the mass, the excitability disappears entirely in a few minutes. Slow abstractions produce slight modifications of excitability, but rapid abstractions modify it considerably.

(*f.*) *Asphyxia.*—Arrest or momentary suspension of respiration rapidly produces inexcitability of the cerebral cortex. It is easy to verify this fact in an animal that has undergone tracheotomy and breathes through a tracheal canula. As long as the respiration is free, it is easy to provoke convulsive attacks by exciting the cortex, but this part does not respond to the stronger stimuli, when the animal is hindered from breathing by closing the mouth of the canula—[Hitzig.]

(*g.*) *Alcohol.*—Danillo is the only one who has studied the influence of this substance on the function of the motor zone of the brain, and over the attacks of corti-

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cal epilepsy. His experiments were made on dogs in which he injected into the blood of the saphena vein a strong dose of alcohol, at forty-five degrees (from forty to sixty grammes for each animal). He found that alcohol thus administered diminished rapidly the excitability of the motor region of the brain, even to its complete abolition. The action of alcohol on the motor functions of the brain would therefore seem to be analogous to that of anæsthetic agents.

(*h.*) *The Essence of Absinthe.*—This substance also has been experimented with on a large scale, in dogs, by Danillo, who found that by administering it in repeated small doses, by various injections, the excitability of the cerebral cortex was so much increased that a trivial excitation of the motor zone sufficed to provoke a very strong convulsive attack. The essence of absinthe has, therefore, close analogy to strychnia, which also possesses the power of considerably exaggerating the excitability of the brain, and consequently of rendering more facile the production of epileptiform accesses, and their symptomatic manifestations more violent.

(*i.*) *Atropine, Cinchonidine, Picrotoxine.*—According to the researches of Albertoni, atropine augments the excitability of the cerebral cortex, and the continued use of it does not take away or diminish the possibility of producing epileptic attacks by cortical excitation. Chirone and Curci explain the epileptogenous effect of cinchonidine as an action by this substance on the cortical centres. Rovighi and Santini have arrived at the same conclusion, from their experiments with cinchonidine, made under the direction of Prof. Luciani, and they believe that the epileptogenous action of picrotoxine should be explained in the same manner.

(*l.*) *Encephalitis.*—Phlogosis of the cerebral cortex is a condition very favorable to the exaggeration of its excitability, provided, however, that it is not of such a degree as profoundly to disorganize the tissues in which case the excitability is wanting. Cortical excitability,

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consequent on an inflammatory state, may be so much increased that, as Franck and Pitres have observed, even mechanical stimuli, such as simple contact, stroking, or the pressure of a sponge, suffices to provoke an epileptic access.

SECOND. The most efficient and certain means for stimulating the cerebral cortex, in order to provoke an epileptic access, is electrization. We may employ either the continuous electric current or the induced, of variable intensity, according to the degree of excitability shown by the animal, and also according, as we shall see further on, to the point of the cortex where the electric stimulus is applied.

Mechanical and chemical excitations applied on the cerebral cortex do not usually provoke any immediate effect; we may cut, squeeze, strongly stroke with sponges, or profoundly cauterize the cortical substance without provoking thus either a partial or general epileptic access. In some cases it has, however, been observed that mechanical excitation of the cortex may give place to epilepsy. Franck and Pitres relate the following experiment: On a large dog they laid bare, by trephining, the left motor zone, and they placed over this part a bit of tinder (lighted ?). A few seconds after, with out any provocation, the animal was seized with a most intense general convulsive attack. The convulsions succeeded each other at short intervals, and a true epileptic state was produced, under which the animal died.

Whilst it is a rare or exceptional fact that mechanical stimuli applied over the cerebral cortex, immediately produce epileptic convulsions, it is on the other hand observed rather frequently, that epilepsy at some later time follows brain injuries. When the motor zone of a dog is laid bare on one hemisphere, and the animal is allowed to survive, it readily becomes subject to spontaneous epileptic attacks, after complete cicatrizing of the wound. Hitzig and Luciani specially availed themselves of this very method for the study of epilepsy of cortical origin.

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The dog, the monkey and the cat are animals in which cerebral injuries readily produce an epileptogenous action; it is not the same with rabbits and guinea-pigs, in which Franck and Pitres never saw epilepsy supervene, even for several months after they had made on them partial lesions of the cortex.

THIRD. A very important question presented to us in the study of cortical epilepsy, is that of learning whether the cerebral cortex is capable of developing a partial or general attack of epilepsy, whatever may be the point at which it is excited. Albertoni, as is known, assigned an epileptogenous property exclusively to that part of the cerebral cortex which corresponds to the postcruciate convolution, where the motor centres of the limbs of one side exist. Only these points of the cortex would therefore, have the property of provoking epilepsy when they are stimulated.

Luciani and Tamburini modified the idea of Albertoni by demonstrating that the whole of the motor zone, in which the centres for the limbs, for the face, the trunk and the neck are comprised, is an epileptogenous zone, for by electrically exciting single centres, epileptic accesses, more or less diffused, can be produced. But this epileptogenous property is not equal at all points of the motor zone. According to Luciani and Tamburini it is found in the dog more developed in the centres for the movements of the upper jaw and the face, than in the centres for the motions of the limbs.

The cerebral cortex of the motor zone is not the sole region in which epileptic accesses may be provoked. Luciani and Tamburini saw developed, several times, convulsions in dogs by means of intense and prolonged Faradization of the convolutions of the sensitive zone. Rosenbach, Franck and Pitres have observed the same. This, however, does not prove that all the parts of the cortex have the property of provoking convulsions when they are stimulated. Several experimental researches clearly show that the epileptogenous property resides

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exclusively in the motor zone, and that if other parts of the cortex when stimulated provoke epilepsy, this happens because the excitement is propagated to the motor zone. The facts on which we rest for admitting with Luciani and Tamburini that the epileptogenous function of the cerebral cortex pertains exclusively to the motor zone are the following:

First.—After the destruction of the psycho-motor centres, excitation of the intact occipital convolutions cannot provoke any attack—[Franck, Pitres and Rosenbach]. The same result is obtained if, instead of destroying the motor zone, we separate it from the posterior parts of the cerebrum by removing an intermediate zone of the cortex.—[Danillo.]

Second.—If the posterior convolutions are removed, and the intact motor regions are excited, convulsions are readily produced, just as though the hemisphere had not been touched—[Franck and Pitres.]

Third.—A weak electric current, which being applied to the motor zone gives place to an epileptic attack, is quite unfelt on the cortex of the occipital lobes. In order to provoke, from this region, an epileptic convulsion, an electric current much more intense and prolonged is required than for obtaining a convulsion by excitation of the motor zone.

Physiologists have devoted much attention to the inquiry whether the epileptogenous property of the motor zone pertains exclusively to the cortical substance, or is participated in by the medullary substance. Franck and Pitres, from a great number of experiments, found that direct excitation of the white fibres of the centrum ovale, corresponding to the motor zone, is incapable of provoking convulsive access, though it may give place to simple movements analogous to those produced by excitement of the motor cortical centres. Here we are not to believe in a state of exhaustion of the animal, consequent on the operation from which the white substance is rendered inexcitable, since it is observed in the same animal, that whilst stimulation of the white substance of the centrum

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ovale is incapable of provoking convulsions, excitation of the conserved grey substance, whether upon the same hemisphere or the opposite one, readily determines epileptiform convulsive attacks.

But in order that excitation of the medullary substance shall not appear to provoke epilepsy, it is necessary that the cortical substance of the motor zone be completely destroyed; if any points of this zone remain intact, the current, by diffusion from the medullary substance on which it has been applied to the cortical substance, readily produces epilepsy.

Rosenbach has observed that an intense and prolonged excitation of the medullary substance develops an epileptic attack, when the destruction of the cortex of the motor zone is not considerable; but on the contrary, if the destruction of the psycho-motor zone is complete, then the excitation of the medullary fibres, thus stripped, does not give place to any epileptic convulsion.

The results of the researches of Bubnoff, Heidenhain and Albertoni do not accord with those above cited from Franck and Pitres, as they show that excitation of the white substance, after removal of the cortex, may give place to epilepsy. This difference in the effects of excitation of the medullary substance leads us to suppose that the experimental conditions have not been identical; it is probable that in the experiments of Albertoni, Bubnoff and Heidenhain, the destruction of the cerebral cortex was not so profound as in the researches executed by the two French physiologists, so that irritation of the remaining portions of the cortex, by diffusion of the current, could not be avoided. Nor can we suppose that the effects obtained by the former from exciting the medullary substance should be attributed to the greater intensity of the electric current, since Franck and Pitres assert that they always found that even the strongest electric excitation of the sub-cortical white substance did not produce convulsive attacks, when the corresponding grey substance had been destroyed.

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Partial destructive lesions of the grey substance of the motor zone provoke, in the neighboring parts of the cortex remaining intact, an irritative state, by which their excitability is so exaggerated, that intense convulsions are produced by the very slightest stimuli.

From the researches of Franck and Pitres it becomes evident that the hyper-excitability of the cortical motor centres, which accompanies light phlogoses of the convolutions, is not in relation with the concomitant hyperæmia, but rather with the nutritive disorders of the nervous elements, as they observed that active hyperæmias of the brain, experimentally provoked by section of the cervical sympathetic, or by removal of the superior cervical ganglion of one side, and also passive congestion obtained by ligation of the great veins of the neck, did not produce appreciable modifications of the cortical excitability.

Fourth. Hitherto we have been occupied with the principal conditions that modify in animals the predisposition to provoked cortical epilepsy, as well as with the stimuli adapted to cause development of the access, and the differing epileptogenous faculty inherent in the various cortical regions. We shall now proceed to study in what manner the access of cortical epilepsy presents itself, how it is initiated and becomes generalized, and by what phenomena it is principally characterized. We may hold it, as a general law, that the access of cortical epilepsy is always initiated in the muscular group which corresponds to the excited cortical motor centres. This is a part to which Luciani and Tamburini have called special attention, on which all observers are now found in accord, and whose importance is considerable in view of the clinical applications it may have.

The form of an epileptic access of cortical origin is variable. The convulsion at one time remains limited to one group of muscles (monospasm), at another it is diffused through the muscles of a single circle of the body (hemispasm), or to the muscles of both sides (general epilepsy).

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The different mode taken by the convulsive access in extending itself, depends chiefly on the intensity and duration of the stimulus. The more prolonged and energetic is the electric excitation, the more readily does the epileptic convulsion become general; on the contrary, by very slight excitations the convulsion may be limited to those muscles whose centre has been stimulated.

The epileptic access follows, in becoming diffused, an order almost always corresponding to the anatomical disposition in which the motor centres are found in the cerebral cortex. To become convinced of this fact, which is of the highest importance with regard to the functional significance of cortical epilepsy, it is sufficient to read attentively the experiments of the authors, who have occupied themselves with artificial epilepsy. An attack of hemiplegia which had been provoked in a dog by exciting, on the left, the cortical centre for the closing of the palpebræ, was first manifested in clonic contractions of the right orbicular muscle, and the elevator muscles of the angle of the mouth on this side; then the convulsion gradually extended to the right ear, and to the muscles of the ocular bulks (nystagmus, mydriasis), to the muscles of the jaw, which was closed with great force, and to the muscles of the tongue; the head was forcibly drawn to the right, and bent towards the shoulder; the convulsive movements spread afterward to the fore leg, and to the hind leg of the right, and here it stopped. During the access, saliva ran very abundantly from the mouth, and the close of the fit was signified by discharge of fæces and urine.

If the reader will take a look at the figure of a cerebral hemisphere, on which the excitable areas of the cerebral cortex are shown, it will not be difficult for him to become pursuaded that the mode of diffusion of the attack, in the case we have given, corresponds with the topographic distribution of the motor centres. The convulsive access is propagated, as if the excitement, setting out from the motor centre of the orbicularis, is

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carried in a direction toward the centres for the muscles of the jaw and of the limbs, and in the other direction to the motor centres of the ear and the eye. The same consideration may be held of all convulsive accesses, whatever may be the muscular groups in which they are initiated. Therefore, we may conclude with Unverricht (who is in this imperfect accord with what had first been established by Luciani), that there enter into convulsion, one after the other, only those muscles whose centres are neighboring in the cerebral cortex. "Never," he observes, "is it seen, for example, that the convulsive motions of an extremity succeed to those of the ear, without the orbicular muscles participating in the convulsion—the centre for the latter being found between the auricular centre and the centre for the limbs."

Sometimes the excitement of a cortical centre is more promptly diffused in one direction than in another, *e. g.*, excitement of the centre of the orbicularis is diffused to the muscles of the upper limbs before the muscles of the tongue and the jaw. But much more important, than the course taken by the convulsions on one side of the body, is the mode of propagation of the epileptic attack from one-half of the body to the other. Unverricht is the person who has made the most numerous and accurate researches in this relation, and he has arrived at the following conclusions:

The attack of epilepsy always invades the other half of the body in a strictly regular and typical order, whatever may have been its point of departure on the side first affected. The convulsion commences on one side in the inferior extremity or in the orbicularis, and it passes into one side of the tongue or into the muscles of the jaw. It is always propagated first into all the muscles of the corresponding half of the body, and afterwards it extends into the other side following an ascending direction, because of which the lower extremity is first struck by it, and then gradually the other groups of muscles situate in the superior regions. If, for example, the centre

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for the right lower extremity is excited, the trunk and the neck are seen to be first curved in an arc turned to the left; next convulsions in the upper extremity are shown, and in the muscles of the jaw, the face and the tongue on the right. The muscles of the left side of the body enter into convulsion in the same order as those on the right, excepting that the diffusion is much more rapid, and the convulsions are more tonic.

If, however, instead of the motor centre for the inferior extremity, in the left cerebral hermisphere, we excite the region in which the bilateral movements of the ocular bulbs have their origin, it will then be seen that the convulsion in the right side is propagated in a descending direction from above downward, but on the left side it extends, as in the preceding case, from below upwards, making a sort of circuit of the body. In short, whatever may be the course, ascending or descending, followed by the convulsive access in propagating itself in the side opposite to the motor centre excited, the direction taken by the convulsion in its diffusion on the other side, that is the one corresponding to the stimulated cerebral hemisphere, is always ascending.

Franck and Pitres wished to apply the graphic method in the study of the mode of extension of convulsions of cortical origin. They laid bare in dogs the motor zone of one side, and then placed in relation with a graphic apparatus each tendon of the extensor muscles of the two fore paws and the two tendons of Achilles. In this way they were enabled to discover that by strongly exciting the centre for the right front limb, the convulsive attack succeeding, extended in the following order: 1st, In the right fore leg. 2d, The right hind leg. 3d, The left hind leg. 4th, The left fore leg. In this experiment we have a confirmation of what we said regarding the rule which the epileptic attack observes in passing from one side of the body to the other, and thus becoming general.

The duration of each epileptic access varies from some seconds to two minutes; the access which follows a single

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cortical access is almost always unique, and in order to reproduce it, the excitation has to be repeated. If the cerebral cortex of an animal is several times in succession repeated, the accesses succeed each other with an always greater intensity, and in more rapid course. But sometimes the convulsions are spontaneously repeated at short intervals, without the requirement of repeating the excitation of the cortex. The animal falls into a true epileptic state, under which it most usually becomes exhausted and dies.

In the first periods of the epileptic state, Unverricht made the interesting observance that the convulsion, in repeating itself, sometimes commences on that side of the body in which it had terminated. If, for example, an epileptic access, which having set out from the right orbicularis, has made the round of the body, having gradually descended in the right side and ascended through the left, it is frequently seen that it revives in the muscles last engaged in convulsion, that is to say, in the orbicularis and the muscles of the ear of the left side, and then is diffused in inverse direction, descending on the left side, and ascending on the right, where it terminates in the orbicularis and the ears.

In addition to this form of the epileptic state pointed out by Unverricht, he has described another, which is observed in the first periods of the epileptic state, and is called by him relapsing. When the first access has terminated, a second, a third, a fourth, are seen to arise, the point of departure of which is always the one and same muscular group, and then the convulsion becomes general. This fact shows that there exists in the cerebral cortex a determined point, under a state of chronic excitement, from which the fresh accesses always set out, whilst in the oscillating form there is present a diffused disturbance of the equilibrium of the gangliar cells, which have been altered by simple functional excitement of neighboring groups.

It is interesting to note that, as well in single epileptic

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accesses as in the epileptic state, all the muscular groups do not always participate with equal intensity in the convulsion, but rather, in certain cases, some muscles remain quite unaffected. Thus, under an epileptic access which includes the face and the limbs of one side, it is frequently observed that the muscles of the jaw take no part, or only a trifling part, in the convulsive cramp of the other muscles. In some of these cases, by exciting electrically the cortical point corresponding, we discover their slight excitability. [Unverricht.] This part is very important, as it shows that the cerebral cortex of the motor zone may undergo, only partially, a modification of excitability; it accords with what we have said respecting the variable excitability of the motor points of the cortex, by reason of which a strong excitation of a given centre does not provoke any epileptic access, whilst even a slight one of another centre brings on a convulsion.

By the aid of the graphic method, Franck and Pitres analyzed the muscular phenomena of the epileptic access of cortical origin. They observed that the complete access consists of two successive phases: one tonic or tetanic, and the other clonic or spasmodic. Sometimes the myographic characters of the access are incomplete and abnormal. The tonic phase may thus be wanting, and, therefore, the epileptic attack is manifested in clonic convulsions only. Instead of gradually increasing in force, as is most commonly observed, the convulsive movements may present with oscillations of much amplitude immediately after the tetanic phase. For an exact description of these and other modifications of the epileptiform muscular phenomena, we refer the reader to the work of Franck and Pitres, in which there are given some graphic figures that show them very clearly.

According to the researches of Unverricht, the temperature of the body, in isolated epileptic accesses of cortical origin, is raised 1° to 2° centigrade. In the epileptic state he observed it up to 44.5° (112° F.), and this went yet a few tenths higher, after which death took place.

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The phenomena presented by animals at the close of epileptiform accesses are deserving of special interest. Sometimes they pass into a state of violent agitation, they run impetuously as if impelled by some irresistible force, dashing against objects, and they appear to be hallucinated. In a dog, operated upon by Luciani and Tamburini, the epileptic accesses were followed twice by a state of fury. In another they saw the access followed by a sort of maniacal state, in which the animal ran furiously hither and thither through the room, knocking his head now on one side and then on the other. A cat operated on by Luciani was seized at the close of the epileptic convulsion with a sort of impulsive mania, which caused her to run as if insensate, without looking what direction she took. Being one day seized with a maniacal access, she jumped into a tub of water, and on another occasion she leaped into an oven that was still hot. In some cases the animal, after the convulsion ceases, falls into a state of exhaustion, is broken down and reacts feebly to stimuli, it stands with difficulty on the feet, for in the muscles of the limbs there succeeds to the spasmodic state, a paresis which is shown more intensely on the side of the body opposite to the cerebral hemisphere operated on. It is very easy to verify the exhaustion of the excitability of the cortical centres, immediately after stimulation of them has provoked an access of epilepsy. This fact I have often observed in the animals on which Prof. Luciani and Tamburini provoked epilepsy by exciting the cortex. Franck and Pitres after provoking in a dog four epileptic accesses by exciting the right motor zone, failed to produce any muscular reaction, even by stimulating the sigmoid gyrus with an electric current that was painful to their fingers; the motor region had become completely inexcitable. Ordinarily the loss of excitability following accesses of epilepsy, is not complete; it, however, reaches a degree sufficiently observable, but if the animal is allowed to repose, it passes off in the course of an hour or an hour and a half.

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FIFTH. The animal, on which success has been attained in provoking epileptic accesses by irritation of the cerebral cortex, are subjects of research very favorable for the study of the different factors which have more or less influence in modifying the course of convulsions already in progress, in the way of diminishing their intensity or of arresting them.

It has been observed that anæmia has no influence on the evolution of the convulsive attack, when once it has commenced. If the carotids of an animal in an epileptic state are cut to let blood flow, the clonic cramp of the muscles does not cease. Ligation of the two carotids and the two jugulars does not arrest the epileptic attack. The mass of arterial blood in the brain may be reduced to a minimum quantity, without impeding the manifestation of epileptic phenomena.

Accumulation of carbonic acid in the blood diminishes the intensity of cortical epilepsy. By compressing the trachea of an animal under an epileptic state, the clonic contractions of the muscles in convulsion continue for a short time, but afterwards they cease by little and little, whilst dyspnœic phenomena enter on the scene, and are followed by death. If the compression of the trachea be withdrawn, and, in case of its need, artificial respiration be employed before death happens, the animal may revive, but it very soon falls into the convulsive state. Unverricht observed that accumulation of oxygen in the blood does not moderate the epileptic state; in many cases, indeed, a continuous succession of the accesses was observed, that is, an absolute absence of intervals between the convulsions.

Inhalation of irritating vapors (ammonia, acetic acid), irritation or cutting of the cervical sympathetic, the application of strong cutaneous excitements, as punctures, cauterization, and the cold douche, according to Franck and Pitres, do not arrest an already commenced attack in its course, nor do they sensibly modify it in its evolution.

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The principal means which have the property of diminishing the duration and intensity of the attacks are morphia, chloral and ether. Morphia administered by venous injection acts only in very large doses, and it is generally fatal. Ether, given by inhalation, completely arrests the convulsive state. Chloral has the same action, even in small doses; 0.20 injected into the femoral vein of a dog that was in the epileptic state arrested totally the convulsions—[Unverricht.]

Atropine, the utility of which in the case of epilepsy has been so much vaunted, possesses, on the contrary, according to the experiments made with it on animals rendered artificially epileptic, no antispasmodic virtue. Indeed, from the researches of Albertoni, it is shown that it favors the development of the epileptic attacks, because it augments the excitability of the cerebral cortex. In some dogs, Unverricht, after the administration of atropine, provoked convulsions by cortical electric excitation, though previously it had failed to produce them.

As to the application of the Faradic or galvanic currents on the brain, during the presence of the attack, it has been found that the convulsions become so much the more intense, the more energetic has been the current employed.

The course of convulsive attacks, consequent on excitation of the cortical motor zone of the brain, like the attacks caused by the action of absinthe, is arrested by the intravenous injection of alcohol—[Danillo.]

Sixth. After having examined, hitherto, the conditions necessary for the development of epilepsy by excitation of the cerebral cortex, by what stimuli the convulsions are provoked, what course the epileptic attack holds in its inception and extension, and the means by which it may be modified, we have now reached the moment when we should take into consideration the pathogenesis of epilepsy, of cortical origin, and its localization.

The numerous experimental researches which have been

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instituted, with regard to cortical epilepsy, have brought into relief several facts which concur in demonstrating that the point of departure, the central organ, the anatomical seat of the epileptic convulsions, is represented by the motor centres of the cerebral cortex. This doctrine, warmly contended for by Luciani, on the basis of experimentation, is now shared in by almost all the authors who have been occupied with the study of cortical epilepsy, among whom it may suffice to name Heidenhain, Munk, Wernicke, Rovighi, Santini, Unverricht, Rosenbach and Danillo. The principal arguments favorable to the admission of a cortical genesis of the epileptic attack, whether partial or general, are:—

(*a.*) The epileptic unilateral convulsions provoked by irritation of the cortex, share on the side of the body in which they are developed, those muscular groups whose cortical motor centres have been destroyed. In the work of Luciani we find recorded two experiments which we are pleased here to relate in a few words. A dog, the whole of whose motor zone on the left hemisphere had been destroyed, with exception of that part which contains the centres for the muscles of the tongue, the face, and the mouth, became subject to repeated epileptic accesses, limited exclusively to these muscles, and of such intensity as to cause his death. Another dog, operated on in the left motor zone, whose cortical centres for the limbs were destroyed, was seized with convulsions of the jaw, with movements of the head, and now and then of the muscles of the right half of the face. Luciani cites, besides, an experiment by Franck and Pitres, which relates to a dog that, after removal of the centre for the left fore leg, presented an access of partial epilepsy, characterised by convulsive shakings in the left hind leg and in the left side of the face, whilst the fore leg remained flaccid and immovable throughout the entire duration of the access.

(*b.*) After the destruction of the whole motor zone of one side, excitation of the medullary substance lying directly towards the base of the brain and the bulbo-spinal

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centres, is not capable of provoking convulsion on the opposite side.

(*c.*) After extirpation of the cortical zone of both sides, excitation of the white substance does not provoke the epileptic attack. This fact, which was first demonstrated by Bubnoff and Heidenhain, meets, to a hair, the just remark made by Morselli, in the Phreniatric Congress at Reggio, to Luciani, to whom he observed, that in order to give a decisive proof of his theory, it was necessary to show that an animal totally deprived of the motor centres on both sides, no longer falls into an epileptic access, whatever may be the excitations brought to bear on it. But there is more yet. Unverricht made the very important observation that in some dogs, on which the cortical excitement produced a complete epileptic attack, extending to both sides of the body, by removing the whole motor zone of one side, *e. g.*, the left, with exception of the centre for the orbicularis, and then exciting this centre, a convulsive attack was obtained, which was limited to the right orbicularis, without participation in it by the muscles of this side, but the access was afterwards diffused into the whole of the left side of the body, where it commenced in the hind leg, and ended in the muscles of the tongue and the face.

(*d.*) In the initial phase of the epileptic attack of cortical origin, extirpation of the motor centres which have been previously excited can arrest the access. Heidenhain, in certain cases, succeeded by the prompt extirpation of the whole motor zone of one side, in arresting the convulsion on the opposite side of the body. Munk obtained the same result by cutting away the excited cortical centre.

(*e.*) The convulsive access provoked by epileptogenous substances, such as picrotoxine and cinchonidine, is modified in animals whose cortical motor centres are mutilated on only one side of the brain. From several experiments made on dogs by Rovighi and Santini, under the direction of Luciani, it was found that the isolate contractions in the muscles of the face, the trunk and the limbs, which precede

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the general epileptic attack, either from picrotoxine or cinchonidine, are not manifested in an equal and symmetrical manner on the two sides, but very weakly on the side opposite to the destroyed cortical zone. Now, as the two above-named authors justly remark, if the initial convulsing effects, determined by the picrotoxine and the cinchonidine, are less manifest on the side of the body opposite to that of the destroyed zone, this signifies that in this zone are contained the motor centres, which are the first to feel the convulsing effects of these two poisons.

All these facts are of themselves so eloquent as to induce, even in the most incredulous, the persuasion that there exists an intimate, immediate relation between the cortical motor zone and the epileptic access produced by excitation of the cerebral cortex, and that the motor zone is indispensable for the generating of the convulsive access.

Several objections have been made to the doctrine which places the seat of epilepsy in the motor-zone of the cerebral cortex. In a lively discussion which was set on foot respecting this subject in the Phreniatric Congress at Reggio-Emilia, the distinguished Prof. Vizioli remarked, that the fact observed by Luciani, that dogs operated on, not in the motor zone, but in the sensitive zone, also presented epileptic convulsions, is in contradiction to the cortical theory of epilepsy. Since, he added, it is no longer a motor centre irritated that avails to pcoduce the epileptic attack, but it can be provoked also by a part exclusively sensitive. Very well, this fact, as Luciani himself well observed, is not in the least opposed to the doctrine of epilepsy maintained by him. The excitation may set out from any point of the cortex, distant from the motor zone, and it is by its diffusion to the cortical motor centres that the epileptic access is developed. In order to combat the cortical genesis of epilepsy, we should be able to demonstrate that animals, in which the epileptic access is provoked by exciting a cortical point situate behind the motor zone, also fall equally under the access after destruction of the motor zone. Instead of this, the experiments of

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Rosenbach and Danillo show that the very opposite is verified. If on a dog the whole of the motor zone of one side is destroyed, or if a strip of the cortex between the motor region and the posterior region of a cerebral hemisphere, be taken away, and the occipital lobe be then excited by an electric current, no epileptic access is provoked. On the other hand, if the cortical region situate behind the motor zone be destroyed, leaving this zone intact, excitation applied on its motor points determines the development of epilepsy. Further, extirpation of the posterior part of the cerebral cortex, effected when the convulsive attack has already commenced, does not interrupt it, but this happens if at opportune time the motor region is destroyed.

One of the strongest arguments that have been advanced by the opponents of the cortical doctrine of epilepsy as it has been conceived by Luciani was, that in order to place it beyond contradiction it must be demonstrated that, not only in the inception but also in the diffusion of the epileptic attack, the cerebral cortex has an essential part. As it is admitted that direct excitation of the motor centres of one side provokes convulsion in the opposite side of the body, it must also, by consequence, be admitted, that when this convulsion invades the other side also, the direct excitation is diffused from the motor zone primarily stimulated, to that of the opposite side. But from the experiments of Albertoni and those of Franck and Pitres, it results that the extension of the epileptiform convulsions does not stand in necessary relation with the conservation of the cortical centres; for complete, bilateral, epileptic accesses may be provoked by exciting the motor zone of one side, after having previously destroyed the motor zone of the other side. We have, however, reason to hold, that these experiments do not absolutely exclude the idea that the diffusion of the epileptic attack depends on the excitation of the cortical motor centres of one side passing to those of the other side, for the whole of the motor zone of one side had not been destroyed, but only a part of it. Besides we have the experiments of Heidenhain, showing

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that after bilateral destruction of the motor-zone, epilepsy is no longer provoked, whilst by exciting the medullary substance of a hemisphere from which the motor zone has been previously removed, convulsion is provoked on the same side with the stimulus, because the excitation is, as Heidenhain admits, carried over into the intact motor zone. These experiments would therefore demonstrate that the cerebral cortex is indispensable alike for the development and the diffusion of the epileptic attack.

Unverricht, who has very profoundly studied the phenomena of the epileptic attack of cortical origin, concludes from his researches that the intactness of the cortical motor region is a necessary condition for the development of a complete epileptic attack, and he calls attention to a fact, which at first view might induce some doubts as to the participation, by the cerebral cortex, in the mechanism of the convulsion. He observed in certain cases in which the convulsion was limited to one side of the body, *e. g.*, the left, that the limbs of the right either remained tonically extended, or participated, with the same rhythm, but in a feebler degree, with the movements of the limbs on the left. That in these cases we have an accidental phenomenon, and not a true convulsive attack, laying hold of muscular groups on both sides of the body, seems to be shown by this fact, that the typical progression of the epileptic convulsion is not altered. In fact, in proportion as the convulsion is diffused cotemporaneously to the limbs of the side opposite to the excited motor zone, it is seen that the limbs of the other side also become subjected to slight muscular movements; the convulsive attack extends on this side also, commencing in the inferior (hind) limb, and in the meantime secondary muscular contraction may be observed on the other half of the body, which had been previously more forcibly struck by the convulsive attack. These secondary contractions are not at all modified by the extirpation of the cortex, and they continue even after hemi-section of the spinal marrow, consequently it is to be admitted that they are produced by a diffusion of the

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excitement into the inferior gangliar groups. They cannot be placed on a par with the epileptic convulsions, because, in order to be consistent, the centre of epilepsy should then be sought in the medulla spinalis also. "The essential part of the epileptic attack," says Unverricht, "consists in the primary muscular contractions, which have a typical course round the body, and to their production the cerebral cortex is indispensable."

But even admitting that in epileptic convulsions of cortical origin, the excitement is diffused from the cortex into the inferior nervous centres, not the less on this account is the importance of the cerebral cortex in the genesis of the convulsions. If, in a dog poisoned by picrotoxine, the motor zone of one side be removed, the convulsions which are produced, conserve, in the muscles corresponding on the sound side, the character of epilepsy proceeding from excitement of the cortex, that is, in being prevalently clonic, whilst in the muscles that depend on the mutilated cerebral hemisphere, they have a tonic form, as is observed to result from a bulbo-spinal excitation, and they are besides less intense. Furthermore, that the cerebral cortex is an essential element not only in the initial movements of epilepsy, but also in those succeeding in the attack, is demonstrated by the fact that extirpation of the cortical motor centres causes cessation of the convulsion in the corresponding muscular groups. Thus, opportune experimental conditions being had, it is easy to provoke an almost general attack, in which, by previously extirpating their corresponding centres, the muscles of a region of the body, *e. g.*, the face, the jaw, or a limb, will remain unaffected.

We should therefore hold, that in both the genesis and the subsequent generalization of the epileptic access, the cerebral cortex has an essential, we would not say an exclusive participation, because we have not sufficient proofs that the subcortical centres do not also take part in the access. As an argument against the doctrine that the bilaterality of the epileptic access, produced by unilateral

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excitation of the cortex, depends on the passage of the excitement to the cortex of the other hemisphere, it has been stated that section of the corpus callosum does not prevent the generalization of the access. Franck and Pitres made, on a cat, a complete longitudinal section of the corpus callosum, and then by the motor convolutions of the right hemisphere they provoked an immediate, general and violent convulsive attack.

It seems to me that such experiments do not suffice to invalidate the theory of the cortical genesis of epilepsy, since they presuppose an anatomical fact that has not yet been demonstrated, that is, that the commisural fibres of the corpus callosum are uniquely and exclusively the parts of communication between the cortical centres of the two cerebral hemispheres in animals. Besides, when section of the corpus callosum is made on an animal, the experiment becomes too complex, nor can it be excluded that the general convulsive accesses, which may be provoked immediately in it, by stimulating the motor centres of one side instead of depending on this excitation, are the direct consequences of the extravasation of blood into the lateral ventricles, consequent on the cutting of the parts, since we know that ventricular hemorrhages very readily follow general convulsive phenomena.

The doctrine of Luciani on the pathogenesis of epilepsy has been combated by Franck and Pitres in their latest work. These two authors believe that Luciani has fallen into a double error in holding that epilepsy, whatever may be its origin (toxic, cortical or peripheral), results always from an abnormal excitation of the cerebral cortex, and in concluding that the cortex is the central organ of the convulsions, resting on the simple fact that the convulsions succeed to the cortical excitation. As regards the first of these objections, urged by the two French observers, against Luciani, it does not really appear that they are of much importance. From the moment that Luciani *posited* the assemblage of the cortical motor centres as a *sine qua non* condition in the development

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of epilepsy, it was very natural that he should admit an identical pathogenesis for epileptic convulsions produced by diverse causes. It would, indeed, be in open contradiction of his theory to have admitted the contrary. The fact of epileptic convulsions being variable in form, according to their determining causes, does not exclude the idea that they depend chiefly on abnormal excitation of the cortex. The greater or less extension of this excitation in the cortical centers, its variable intensity in individual centers, the different mode in which it is diffused, and the different excitability of cortical points, may give us a reason for the various forms presented by the epileptic access. Pitres and Franck have reproved Luciani for not having taken into account of the experiments which show that animals deprived of their cerebral hemispheres may still be subjects for convulsive attacks. It appears that the discussion which took place at the Phreniatric Congress, at Reggio, respecting the pathogenesis of epilepsy, was not known to them. In this discussion Luciani replied with precision to this objection, which was then made by Albertoni, Silvestrini and Chirone. Luciani asks: "With what propriety can we baptize as epilepsy convulsions that follow excitations of the bulb, after removal of the cerebral hemispheres, when they have not the most important character of epilepsy, to-wit: the complete or almost complete suspension of consciousness, which can depend only on functional disturbance of the cortex, and the other character also of the epileptic access is wanting, that is of convulsions at the first localized in certain groups of muscles, and afterwards becoming general (?) Indeed, in his memoir on the pathogenesis of epilepsy he cites the accurate researches of Cwsjanikow, by which this Russian physiologist has demonstrated that there exists in the bulb a centre of reflex general cramps, from which it is not surprising that there may be obtained general convulsions, uniquely dependent on reflexes aroused by excitation of the bulb, but which have not, however, any analogy to convulsions of epileptic character.

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As regards next the other assertion made by Franck and Pitres, that Luciani had based the cortical pathogenesis of epilepsy solely on verification of the fact that the convulsions succeed to the cortical excitation, we must declare it incorrect. Luciani only availed of this argument in a secondary way, and instead of founding his doctrine specially on the fact diligently observed and described by him, that in sequence to partial destruction of the motor zone epileptic convulsions may be developed, which prevent this characteristic, that is, of being limited only to groups of muscles whose cortical centres have been spared in the operative act.

The facts we have related, and particularly those of Unverricht and Heidenhain, regarding the mode of origination and extension of the epileptic access, seem to us to be very valuable, as warranting the acceptance, in the present state of our knowledge of the doctrine of Luciani on the genesis of the epileptic attack. We must merely at the present say, that it seems to us a little too exclusive, as we shall show in a future work by us, on cortical epilepsy, studied clinically, limiting ourselves in the meantime to a brief record of a case of much interest, and which is perhaps unique in the literature we have had the opportunity of perusing. It is that of a woman of thirty years, who became epileptic at the age of twelve, after, as appeared, a cerebral disease. She presented left bodily hemiatrophy, very conspicuous in the upper limb, and she had convulsive attacks, sometimes general, at other times partial, which had the characteristic of being initiated in the left arm, and becoming then diffused over all the same side. The left arm was affected with incomplete paralysis and contracture, the lower limb of the same side was paretic. She remained several months under our observation, and she died of diffuse miliary tuberculosis. In the autopsy I found complete destruction of the so-called motor zone of the right cerebral hemisphere. The two ascending convolutions, the feet of the three frontal, and those of the two parietal, and the paracentral lobule were totally destroyed, and in place of

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them there existed a fibrous tissue, resistent and of spongy aspect, with small cavities full of serum and of a substance having a mucous appearance, which being examined in very thin cuttings under the microscope, presented no cellular element, but many sclerosed vessels, masses of pigment, fatty granulations and many amylaceous corpuscles. The medullary substance also, corresponding to the convolutions mentioned, was transformed, in its whole thickness, almost as far in as the ependyma of the ventricles, into a compact fibrous tissue. I further observed descending degeneration of the whole of the left pyramid.

It is unnecessary to spend many words in demonstrating that this case cannot be reconciled with the cortical theory of epilepsy. We had met with a left hemiplegia, which had led us to suppose that the right motor zone was conserved in part, at least; but on the contrary we found it, on section, totally destroyed throughout.

This case leads us to the hypothesis which is logically linked with the doctrine of the functional compensations of the brain. Luciani and Tamburini, in their researches on the motor centres, have admitted, in explanation of the disappearance of paralytic phenomena, after extirpation of the cortical centres, that the basilar ganglia may have a psychomotor function, differing only in degree from that of the cortex, but in the absence of the latter, it is developed and augmented, and thus favors the improvement of paralytic states.

Now, as epilepsy may be considered as the effect of a functional exaggeration of the motor apparatus of the brain, it is, in our belief, legitimate to suppose that basilar motor centres, when they supply the function of the destroyed cortical motor centres, may acquire, as these, the epileptogenous property, by exaggerating their proper function in such a manner that in the case of absolute want of the motor zone, they may become points of origin and of diffusion of an epileptic attack limited to the opposite side of the body. We would thus explain, in the case cited, the existence of a partial epilepsy, with the complete want of the motor zone.

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The Insane Population of the United States.

By W. E. Sylvester, M. D., Willard, N. Y.

NOT unfrequently an asylum officer is asked his opinion regarding the increase of insanity in this country; and, though sad may be the fact, he can only admit that the number is rapidly growing larger.

For various reasons it is impossible to ascertain the exact number of our insane population; but from information furnished by the United States census office and asylum superintendents and that gathered from other sources, we shall be able to obtain a general idea of the prevalence of insanity in our midst at the present time. We must accept all estimates of the number of insane as merely approximate, but it is probable that this portion of our population will number one hundred thousand persons.

The census shows that twenty years ago the number was only 24,042. In 1870 it had reached 37,432, and in 1880 we are called upon to provide humane treatment for 91,959 lunatics. From 1870 to 1880 the increase of insanity was over 100 per cent., while that of the total population was about 26. These figures do not represent an actual increase, but during this period a large number of insane persons, previously concealed, were brought to public notice by more thorough investigations.

The proportion of insanity is greatest in New England; while the increase has been most rapid in the Western States.

In this country, aside from several large county asylums, there are eighty State and forty private institutions for the care of the insane, with a capacity for about 40,000, but accommodating 53,192; thus leaving probably 45,000 to be cared for elsewhere.

In looking over the reports from asylums, one finds an almost universal cry for more room.

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We will give briefly, as far as we have been able to learn, the present distribution of our insane population.

In New England we find Maine with about 1,542 lunatics, of whom 1,000 are crowded into the single asylum that was originally intended for only 500. However, the building of a new hospital for the insane is under advisement by the legislature.

New Hampshire has 1,056 insane, and cares for 312 of them in the State asylum, which can accommodate 325.

Vermont has 1,015. In the one asylum there are 369 patients, which number can be increased to 400 without overcrowding.

In Massachusetts we find the number of insane to be 5,700. Of these, 3,657 are in the fourteen asylums scattered over the State.

Rhode Island, with one State and one private asylum, has about 700; of which 525 are in institutions.

Of 1,723 in Connecticut, about 1,000 are cared for in hospitals for the insane. The State asylum is somewhat overcrowded.

New York shows the enormous insane population of 15,000. In this State we find thirty-five institutions for the care of these unfortunate people, accommodating 11,343 patients; while it is claimed that there are 4,000 provided for at home.

The insane cared for in institutions are divided as follows:—

State Asylums, - - - - - - - - - -	3,647
City Asylums, - - - - - - - - - -	5,016
County Almshouses, - - - - - - -	1,869
Private Asylums, - - - - - - - - -	558
State Asylum for insane criminals, - -	144
State Asylum for insane emigrants, -	109

The counties of Kings and New York contemplate building additional asylums for their chronic insane.

The returns from New Jersey give the number in that State as 2,405. The two State asylums contain about

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1,400; the five county institutions care for 710, and the remainder are with friends and in the almshouses.

The lunatics in Pennsylvania number 8,304. In the eight asylums, with a capacity for 4,000, there are 4,739 patients.

Delaware has about 200, and the majority are provided for at home.

Maryland claims about 1,900, and has 915 of them in the various asylums and retreats, 200 in almshouses, and 731 at home.

The District of Columbia has 938 insane people. Of this number 860 are in the Government Hospital for the Insane. The census of this institution, which is 1,155, also includes the insane of the United States army and navy, and of the Marine Hospital service.

Virginia comes next on our list with 2,411; and provides for 1,098 in asylums, 102 in almshouses, and the remainder at home.

West Virginia has about 985 lunacy cases. For want of accommodation the asylum is obliged to refuse many applications for admission. These applications are filed away and taken up for consideration as vacancies occur.

The number in North Carolina, as given by the last census, is 2,028. Here there are three asylums with 640 patients.

Out of 1,112 in South Carolina, 425 are cared for in two asylums.

In Georgia we have about 1,800 of these dependent persons; 1,218 of whom are in the only asylum. This asylum has under progress of construction a detached block to accommodate 250 more.

Florida, with an insane population of about 253, has 167 in the asylum.

The Alabama Insane Hospital, having a capacity for 750, has 613 cases out of 1,521 in the State.

Mississippi has 1,147. The present asylum is full, and another, soon to be finished, will have accommodations for 250.

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About one-half of the 1,002 insane in Louisiana are in the various asylums.

The census returns give the number in Tennessee as 2,404. This State has one asylum in operation, and another in course of erection.

Kentucky adds 3,000 to the number. Of these 1,800 are in asylums, and the remainder at home and in almshouses and jails.

Next we have Ohio with 7,286, and about 3,500 in hospitals for the insane.

Indiana follows with 4,000, and the present asylum capacity is about 1,400. The three asylums now being built, when completed, will accommodate 2,100 patients

Illinois has 5,500, and complains that the asylums are overcrowded.

Michigan, with her 3,000 insane, makes the same complaint. Here we find two State asylums in operation, and two more in process of erection.

Wisconsin's 2,800 cause the cry of overcrowding to be still heard.

Minnesota probably has 2,000, and accommodates 1,100 of them in the two asylums.

In Iowa we find an addition of 3,000 to this portion of our population. The capacity of the present asylums is being increased to give room for 300 more patients, and a new hospital is about to be built.

The number in Missouri is 3,310, and the great majority are cared for at home.

Arkansas has one asylum, accommodating at present 250 patients; but the exact number of insane in the State is not definitely known.

Of the 1,564 suffering from some form of mental disease in Texas, 550 are in the asylum. Another asylum, with room for 350 patients, will soon be completed.

Kansas provides, in two asylums, for 690 out of a total of 1,297.

Nebraska has 450 lunatics, and the asylum shelters 330 of them.

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The capacity of the Colorado Insane Asylum is for 225. We find 117 cases there, which probably is nearly all of this class in the State.

Nevada's insane number about 160, and are all in the asylum.

In California it is impossible to give a reliable estimate of the number of insane in the State outside of asylums. In the State asylums there are 2,650 patients, being many more than they were intended to accommodate.

Last of the States comes Oregon with about 378, and nearly all of them are in the asylum, which has room for 412.

As near as we have been able to ascertain the number of insane in the various Territories are as follows:

Arizona,	21	New Mexico,	153
Dakota,	75	Utah,	151
Idaho,	16	Washington,	140
Montana,	59	Wyoming,	4

In many of the Southern and Western States politics enter largely into the management of all institutions, and such a system of frequent changes cannot be productive of the best administration; particularly in asylum service where a special course of experience and study is required.

From the South, where many of the insane are kept in jails and poorhouses, we hear pitiable stories of their treatment.

It is a great satisfaction to see that the public is beginning to regard an insane person as one suffering from a disease, and to view asylums as hospitals for the alleviation or cure of such ailment; instead of considering the lunatic as a convict fit for the ball and chain, or a gloomy cell in the dark attic of some private dwelling; and the asylum as a place worse than the Prison of Chillon.

With the advancement of scientific knowledge, let us hope that the people will appreciate the real condition of this unfortunate portion of our population, and see to it, that they are given the benefit of the most approved methods of treatment.

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Responsibility as Affected by Alcoholic Anæsthesia.

*INTELLECTUAL AND MORAL FACULTIES WEAKENED AND BENUMBED; INABILITY TO DISCRIMINATE BETWEEN RIGHT AND WRONG — DISGUISED BY AUTOMATISM.**

By T. L. Wright, M. D., Bellefontaine, O.

WHEN the material instruments of the mental and moral powers are, for a protracted season, inhibited in function by the anæsthetic or paralyzing property of alcohol, great and fundamental disturbances must ensue in the manifestation of mind and morals. Clearly pronounced anæsthesia withdraws the nervous centres from independent and spontaneous activity, and compels the mind to assume, in all its essential functions, that inferior plane of exhibition, which is simply routine, imitative, habitual, automatic. It is impossible for a mind in which the feeling of the *ego* is weak, and the sense of personality is wavering or destroyed, to so establish its own relations with morality, as to be capable of distinguishing accurately between right and wrong. To perceive what is right requires alertness, and the power of ready and clear discrimination in the mental operations. To recognize wrong, not only requires the same mental properties, but also a sensitiveness of the moral faculties, which is wholly inconsistent with the obscurity and sluggish movements imposed by alcoholic anæsthesia.

The stereotyped questions propounded in courts of law, respecting the moral capacity of criminals, are as follows: "Could the prisoner distinguish between right and wrong? Did he know when he committed the act that he was

* This is one of three chapters "On Alcoholic Responsibility," in a manuscript dissertation on inebriety.

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doing wrong?" The importance of a familiarity with all the terms employed in these questions, when applied to ascertained facts in criminal cases, is apparent when it is remembered that they embody what the courts in England and America insist shall be considered as the only test of legal responsibility.

But the power of discriminating between the finer shades of the moral qualities must be weakened when consciousness is defective; and it is always defective to some degree, in every grade of anæsthesia. When it is considered that habitual anæsthesia may become, to a certain extent, constitutional and hereditary, we are compelled to admit that the transmission of an alcoholic neurosis may eventuate in the establishment of a mental condition which is incompetent to determine the distinctive qualities of the moral attributes. That is, it may eventuate in the founding of a criminal constitution, through the laws of heredity. I believe that normal consciousness, and a clear sense of personality, or egoism, are nearly convertible expressions; and I repeat in effect, though in somewhat different language, what I have already said: unless the feeling of personal identity is clear, it is difficult to bring self into satisfactory relationship with the delicate and refined principles of the higher morality.

I make a distinction, however, between the purely rational process of discriminating as to the nature of moral qualities, and the living and appreciative feeling of the same qualities. When the distinguishing characteristics of right or of wrong are assimilated in the sound mind, they become motives to conduct; and this is very different from the cold and automatic admission of their existence, without their warming and moving impulses.

The knowledge of right, abstractly or automatically, and through reason only, and the knowledge of wrong abstractly and by habit or rote may be present, and yet the power of discriminating between the two, the power of using the reason and the sensibilities together, in a comparison or analysis of the elements of right as relates to the elements

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of wrong, may be wholly absent. It is possible to have an idea of right without feeling it, for knowledge and sensibility are not always conjoined; and so also there may be a rational idea of wrong, without a living appreciation of its qualities and possibilities. There may exist, indeed, an utter incapacity to enter into such a process of comparison between the two attributes, as to apply the results, to a determination of the character of conduct.

Relevant to this subject are the words of Seppilli: "We must remember that cerebral activity is manifested under two different aspects—that of the conscient and of the inconscient. The conscient activity or consciousness is constituted of knowledge possessed by the *ego* of its own acts —that which happens within itself, which happens in its relations with the external world. On the contrary, in the inconscient activity of the brain, denominated also automatism, all those actions enter in which the *ego* takes no part or is aware of any; but these latter are combined and directed so as to resemble those which the *ego* perceives, wills and directs."

Here is explained the difference between responsible and automatic life. Not only is the fact recognized that normal life must be founded upon a conscious *ego*, but the fact is also recognized that a life founded upon an inconscient *ego* may resemble the former. The first is dominated by an *ego* which perceives, wills and directs; while the other is an exhibition of habit, imitation, custom, in brief, automatism. Human conduct directed by a conscious *ego* comes of a capacity to discriminate between right and wrong; and it is therefore amenable to the requirements of responsibility. But conduct resting upon automatism, into which the conscious *ego* does not enter, and which is incompetent to discriminate between right and wrong, cannot be esteemed as a proper subject for ordinary responsibility. Yet the obvious features of these two lines of mental existence resemble each other; or, rather, the automatic life imitates and resembles the truly rational life.

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The conclusion now forces itself upon the attention, that it is exceedingly difficult, very frequently, for a witness to answer the usual questions proposed by lawyers, respecting the ability of a criminal to discriminate between right and wrong. The imperfections in sensation, and the inhibition on the moral faculties imposed by alcoholic anæsthesia, so depress the mental powers as to compel them to assume the characteristics of automatism; but the semblances of automatism are so similar to conscious rationality, that they disguise the actual incompetency of the moral powers. The beholder very often cannot say with absolute certainty, from the ordinary life of the criminal, whether or not he can discriminate between right and wrong.

That automatic life is merely imitative, and is not something independent and individualized, is shown by the fact that, in any country, the automatic exhibition follows the pattern of the rational operations peculiar to the same country. The automatism of the Hindoo reproduces the manners and customs of the Hindoo religion and civilization. The automatic existence of the barbarian is a reflection of the actual life and habits of savagery.

The "right and wrong" test of responsibility, although of undoubted value, is too frequently lamentably deficient. It has wrought the greatest hardship and injustice to multitudes of persons accused of crime, and has spread desolation and woe into hearts that were worthy of sympathy and pity. As a test of responsibility, it should stand subject to explanation and impeachment; it should be examined by the light of circumstances, and become the object of severe inquisition and of undoubted preponderance of proof. It should never be admitted unsupported by collateral evidence--by evidence converging from other lines of inquiry; and especially, it should never be invested with the force of demonstration, as though it were impregnable and beyond the reach of question.

Independent of the habit of automatism, incident to the depravation of the intellectual and moral powers by

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alcoholism, there appear in the same train of mental disaster, certain other troublesome and unlooked-for phenomena. It is clear that the chronic inhibition or paralyzation of certain functional forms of mind and morals by the force of anæsthesia must end in the establishment of special habits of mind and morals, corresponding with the defects produced by the inhibitory power. The formation of habits, as well as their character for pertinacity, may thus be readily comprehended. When a habit becomes a part of the constitution, the phenomena of living are, with respect to that habit, automatic. But habit and automatism are not under the supervision of judgment or will, and consequently they have little or no place in the formation of comparisons, or the determinations of choice. They cannot, by any power of their own, act as arbiters in questions wherein the qualities of right and wrong are involved.

The tendency of defective mental function, to lead the mind into the ruts of automatism, will be appreciated upon a consideration of the ready disposition of the sound mind itself to follow the channels of habit. Common and healthy mental activity is largely automatic. Yet the peculiar sensitiveness of the moral nature, which is a leading characteristic of humanity, renders the mind of man exceedingly acute and inquisitive respecting points of morality. And so it is, that although much of mental and motor function becomes a matter of routine and habit, the moral character of motive is, in ordinary circumstances, severely analyzed. Of course, when the co-ordinating centers are seriously repressed, as by alcoholism and its accompanying disabilities, the nature of morality, of motive, of right and wrong, is very imperfectly felt and comprehended.

Habits of thought are acquired slowly and painfully. It is only necessary to advert to the difference between man and the lower animals. The former gains by long and laborious experiment a habit of mental activity fitted to his exalted sphere; while the latter are born with instincts sufficient for their lower place in life. The tedious

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repetitions of sensations, perceptions, conceptions and the motor activities, becomes at last, to a great degree, a habit, which it is impossible to discard. Mental, and even motor life, are in time mere repetitions of long enacted powers, which are applied to the usual incidents of human existence.

The power of walking erect is established with much balancing of the body and mental calculation. But at length the acts of walking, running and jumping are strictly automatic, requiring little if any exercise of the judgment or conscious will in their performance. Even the insane walk and run very well; but no one would claim, because an insane man can perform the act of walking with facility—an act, in its abstract nature demanding judgment and nice calculation—he is therefore not insane, but is in possession of fine powers of reason and discrimination.

There are many other courses of nervous function, of a purely mental or moral nature, which may become automatic. The mature mind often arrives at intellectual conclusions with wonderful directness and speed. What was once slow and anxious training, what was once pursued in regulated and prescribed steps, and over difficulties, is made by practice to be instinctive and automatic. The alphabetical order of reasoning no longer obtains. Small things are taken for granted. An immense number of positions are habitually assumed; and in ordinary life, the mental processes, like eagle-flights, are grand movements from point to point, from headland to headland of thought, not lingering to go through the tedious routine of detailed mental activity. And thus men not only sane, but men insane, live and think and act automatically in the common circumstances of daily existence. And it may be impossible to determine from the conduct of even an insane person, whether or not he can properly discriminate between the qualities of right and wrong; for, while automatism resembles rationality, it calls for no active process of discrimination. Many truly insane criminals are adjudged to be sane and responsible

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because their automatic and common mode of life is like that of rational minds; while the cheat and pretender is acquitted upon the plea of insanity, because he shams under all circumstances and upon all subjects.

It is not an impossibility that a mind may be imbued with an imitative and automatic capacity, which will direct the routine avocations belonging to its lines and associations, with a success above that of the average minds of its grade; and yet, this very success may disguise the real imperfection and emptiness of its powers. When the slow invasion of disease finally reaches such a point as to assume the domination of motive, and the control of conduct, the ordinary appearances of automatism fail to illustrate and establish the character of the responsibility involved. The motives and the conduct originating from brain disease, or from toxic impressions, occupy a plane that is different from automatism; and one of these classes of mental and moral exhibition, cannot, by any process of reasoning, or any rule of justice, be brought forward to illustrate and interpret the other class. The "test," of a sensitive knowledge of right and wrong, is fraught with difficulties, and it is sometimes liable to such interpretations, as will confound the judgment respecting the motive or incentive involved in a criminal act.

When a concealed and carefully guarded delusion of insanity, or when the impulsion of alcoholic or other toxic agents circulating within the brain, suddenly and with irresistible violence, breaks forth into deeds of atrocity, the mind for the time being is operating independently of habit. Yet, while moving independently of automatism, it is directed by a power immeasurably greater—namely, the force of insane delusion, or the unbidden hallucinations born of noxious impressions. In such circumstances, it would not be correct to infer that a criminal, because his ordinary life resembles the common life of men in general, could discriminate correctly between right and wrong, or that he knew he was doing wrong when he committed the unlawful act.

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The Hygiene of the Nervous System and Mind.*

THE RELATION OF THE NERVOUS SYSTEM TO CHOLERA AND ITS PROPHYLAXIS AND NEUROTHERAPY. THE CURE AND PREVENTION OF DYSPEPSIA AS A NERVOUS DISEASE. THE NEUROPATHIC DIATHESIS; ITS QUARANTINE AND TREATMENT.

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

Lecturer on Psychiatry and Neurology, St. Louis Medical College; Honorary Member British Medico-Psychological Association; late Superintendent and Physician of the Missouri State Lunatic Asylum, etc.

A CENTURY ago Cullen made the observation that from all that he could discern of the movements of the human body in disease they were all so intimately associated with and dependent upon the nervous system that they might in a manner be called nervous ("Quantam ego quidem video motus morbosi fere omnes a motibus in systemate nervorum ita pendent, ut morbi fere omnes quodammodo Nervosi dici queant."—Cullen's Nos. b. II., p. 181, Edin. Ed., 1780.)

This proposition has been sustained from that day to this by every step taken in the forward march of medicine, for, notwithstanding the significant and valuable discoveries of spores, fungi, microbes, bacilli and other microscopic revelations and their relation to morbid states of the blood and organism, it is not until the nervous system is morbidly touched and yields in disordered action (psychic, trophic, motor, vaso-motor or other parts of the sympathetic, especially in its ganglia), that the characteristic phenomena of distinctive disease appear. The intangible virus of zymotic fever, which "touches the life of all the blood corruptibly" is first revealed in the *malaise*, cephalalgia, jactitation, insomnia or somnolencia and delirium of the

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higher psychical centers of the cerebrum. And so other fevers after the symptomatic revelations of a disturbed and struggling nervous system notify the physician that his aid is needed, the microscope, if he have time then to use it, may reveal the proximate cause of the morbid commotion to be, or have been micrococci or filiariæ, but until the assaulted nervous system succumbs, we know nothing of the mischief brewing or the danger threatened, and the specific microbe sustains the same relation to the resultant phenomena that the draught of air or sudden exposure to change of temperature does to the vaso-motor paralysis and resultant mucous and vascular congestion phenomena of a common cold or its graver results in localized inflammation. Bacilli are not disease, but only potent causes, just as stone in the bladder and sanguineous, fibrinous or serous exudates are consequences of morbid systematic action.

Malaria, of which we know so much and yet so little, reveals itself in chills and fever; both nervous phenomena, and in congestions and delirium and coma, which but for the yielding of the vaso-motor nervous system and disturbance of the psycho-motor area of the brain could not occur, and when the final ending of all physical function is foretold in the graver blood empoisonments of yellow and other fevers, the last expiring movement is in the nervous system, in those "idle comments of the brain which foretell the ending of mortality." This is true of the rigor mortis of sudden death and the last comatose symptom of cholera collapse. We have seen, in the progress of medical observation and research, many obscure diseases, as pathology has grown clearer, assigned to their proper place in the nervous system, from exophthalmic goitre to eczema and from cholera to dyspepsia, notwithstanding that in connection with the contagion and spread of cholera Asiatica, a contagium microbe, thanks to the labors and noble heroism of Koch, is proven in the comma bacillus as the essential causative or resultant excitant and propagative factor. Yet cholera is essentially a disease of

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the nervous system in its symptomatic display, especially beyond the bowels.

The phenomena of this dread disease which demand our attention are essentially nervous; the paralyzed vaso-motor control which admits of the fatal aqueous exudations, which permit the exsanguined and shrunken features, and the fatal exhaustion, the sudden paralysis of appropriating power of the centres presiding over nutrition, the complete exhaustion of the trophic nervous system which makes the administration of medicine in certain fatally predestined cases appear like a solemn mockery, the pinched, contracted visage, and the painful and finally painless cramps, and exhausted power of inhibition, which sooner or later appears, all tell us how essentially nervous are the phenomena of this pestilence, when once its hold is secure upon its victim, and suggest the importance of a well sustained, vigorous, tranquil and resisting nervous system in warding off its destructive attacks.

Though this pestilence no longer walketh in darkness, and though it wasteth less at noonday than in the distant past, its sad work still goes on under the glare of the brightest light of science, but there are hygienic methods which to-day diminish susceptibility to contagion, by imparting public confidence, reducing mental demoralization and panic, and maintaining the general health of communities up to a higher standard. Though by sight of science we have probably found the cholera bacillus (the bacillus of cholera Asiatica and of cholera nostras perhaps) we can not yet entirely by power of science keep this potent living infinitesimal from evil, yet we can resist and circumvent its power, not alone by clean streets and dwelling places, sunlight into the dark places and disinfection and pure air where dirt and filth abound, but by clean and strong bodies and by well sustained, well rested, invigorated and tranquilized nervous systems, built up to the power of resistance to the very maximum of physiological strength, not stimulated spasmodically by sudden fright after the pestilence has come, but trained up in

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advance by adequate but temperate nourishment; by ample rest of brain for the fullest possible recuperation, each night, of the day's wasted power; by making cities profoundly quiet in time of the pestilence by interdicting the needless noises both day and night, which keep the cells of the brain and nervous system agitated and restless, when they might be restful and in condition of repair for more work; and by a trained abeyance of the passions, the abandonment of exhaustive vices which undermine the nervous system and fit it to succumb to light assaults of disease.

To this end, in anticipation of an invasion of cholera here next year, the prudent will finish up, before the epidemic comes, present business enterprises which promise unusual mental strain, worry or other tax on their powers, and permit a little of that reserve nerve force to accumulate, which, hitherto, like an improvident man with his bank account, they have been in the habit of expending as fast as it has accrued. Cholera is not in strictest sense a filth disease, at least in this country, though filth by contaminating the atmosphere and thus impoverishing the blood and impairing the nervous system, furnishes favorable conditions for its taking hold on the organism. On the contrary, putrefaction bacteria, as Koch asserts, destroy the comma bacilli or arrest their multiplication. Alcoholic stimulation, at least to dissipation so-called, must be abandoned; the physiological tone of the vaso-motor system maintained and the perfect stability of the higher cerebral centres—the psycho-motor and psychical—must be permitted to become re-established up to the point of their highest resisting power. Habitual alcoholization is a paralyzant of the vaso-motor nervous system as well as of the cortex of the brain, beyond all doubt, notwithstanding it acts as a temporary excitant, and momentarily stimulates latent power into increased activity. The frequent habitual use of stimulants like alcohol exalts the heart's activity, exhausts the tonicity of the brain by causing it to expend its latent reserve power

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daily; and leaves its vessels dilated and its substance oppressed; the cerebra-spinal fluid crowded out of the perivascular spaces and the brain is prepared then for apoplexia and coma. Tobacco, too, is a vaso-motor paralyzant and motor depressant and weakener of vital power in those in whom tolerance has not been well established, and had better be used with moderation or abstained from.

To the end of proper prophylaxis in regard to the nervous system, the hours of rest and labor should be regulated by municipal authority, that over-taxed human beings, especially among the poor, should not be made ready subjects for attack and almost certain victims to the fatality of cholera. Night work should be discountenanced so far as practicable and prolonged work-hours without adequate rest following should, when practicable, be prohibited.

The schools should be looked after; tasks should be lightened and invigorating relaxation lengthened both for teacher and pupil, and more daylight and pure air let into the school room. Fewer hours of study should be required; overcrowded rooms should not be tolerated and basement lunch, or recitation rooms, abandoned.

Those who hold people to service should see that they do not engage in dissipating and exhausting pleasures during hours which should be devoted to sleep, and should enjoin staying at home and resting instead of wasting their nervous powers by frolicking till midnight, and then retiring to be awakened unrefreshed for the morning's work. Cholera in the kitchen imperils the health of the parlor and the health of rooms upstairs is concerned in the welfare of the occupants of the laundry. Saloons should be closed at an early night season if not during the day, in times of epidemic, and men before they get dead-drunk in them should be taken home and put to bed by the police.

All causes, public or private, of depression of the nervous system should, in times of this epidemic be avoided; long and exhaustive funeral services, especially

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in crowded and illy ventilated rooms, tiresome and ostentatious funeral processions, cars and rooms vitiated by tobacco smoke and depressing human exhalations.

Men may deny that nature's God commanded the Sabbath day for rest, but physicians know that imperious nature demands it, if longevity of human life would be reached. The law of Moses commanding a respite from customary labor one day in seven was founded in physiological wisdom, nature and nature's God inspired it. And for this reason physicians should demand that the sounds of busy industry should cease one day in seven, that the ceaseless bustle and din of business, which so tries the nervous system during the week, shall cease each seventh day, for one of recuperative rest to brain and mind; that all needless noises which harshly grate upon the ear and rob tired nature of needed repose should be suppressed, in order that enough of sleep, and rest, "sore labor's bath," "tired nature's second course," may come to the people of the heart of the city to "knit up the week's ravelled sleeve of care." There is too much unnecessary noise even on ordinary business days, and too much noise allowed in the night time, and altogether too much on Sunday for the highest health of the people of our great American cities.

The wealthy suburban resident does not suffer so much from this cause of nerve disturbance as the working man and subordinate business man who lives down town, but the needless wear and tear of brain and nerve from unnecessary and preventable city noises, if prevented, would add very materially to the healthful endurance of the people in time of cholera and at all times, prolonging life and averting insanity and premature failures of the nervous system in other directions. To be well repaired, man, like any other machine, must rest, and rest of brain and nerve is disturbed through the channels and centers of audition and sight, as well as through those of motion, etc.

The prayer of conservative physiology is for rest, for the salvation of the resisting power of the nervous system to devastating pestilence, and the power of resisting and

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sustaining disease in general, is obtained by adequate rest of the organism, which is a condition of its repair and power.

The cause of much of the premature decrepitude and nerve degeneracy, and breakdown of our day, is in the many inventions man has devised whereby he robs himself of timely rest. The morning newspaper often read through before breakfast; the telephone in his house to call him at any and all times aside from his repose; the electric light to keep his brain unduly stimulated through the retinæ; the railroad and the sleeping coach which may keep him constantly on the rail (if he chooses to so travel) for continuous weeks without rest from the noisy and exhaustive cerebro-spinal concussions of this mode of travel; hasty meals and telegrams, and business, and nightmare sleep, all commingled, wither and wreck lives innumerable, which, under wiser management might end differently, and the needless noises of the city, the bells and steam whistles, howling hucksters, noisy street cars, yelling hoodlums, that make night hideous with soul jarring sounds, hasten the premature endings of useful lives. And when, superadded to all this unphysiological strain, we have the assault of a pestilence that poisons, like cholera, how much exemption can such overwrought organisms expect? How much of resisting immunity can such overstrained and exhausted nerve force oppose to the invading foe?

If the epidemic comes, as it almost surely will next summer or fall, there should be a common understanding among physicians to demand as much rest as practicable for the people, and, by comity among themselves, they should lighten each other's labors and no one should work continuously night and day.

It is not long after an epidemic comes before the long watching nurses and the tired, over-taxed doctors become its victims.

The lesson a pestilence teaches is not only cleanliness but temperance, and restful resisting vigor for the nervous system and the conservation of its powers, maintaining

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the functions of the body in the presence of a blood destroying and vitality depressing enemy. With the human organization, in a long contest with disease, the blood is the life, but if the nervous system have secured to itself, by ample rest and frugality and economy of expenditure; and by freedom from overstrain and vicious indulgence, have established the habit of claiming and securing to recuperative use its own elements from the blood, it will be long in yielding and longer still in perishing under the assaults of disease.

It is this trained resistance of the nervous system by which it is taught physiologically, pending a successfully resisted attack, to claim its own nutrition, even while the blood is depressed by the presence of a pestilential virus, which, in my opinion, constitutes immunity from recurring attacks; the comma bacillus is destructible too in strong healthy gastric juice as Koch and Klein have shown, and it is through a vigorous, well poised nervous system that we may be assured of the destructive potency of the gastric digestive secretion. The inferior animals too, whose nervous systems are unshattered by the vices and overstrain of civilization, are more exempt than man from cholera.

In time of epidemic visitation the illy-fed, unrested, poverty stricken or vice-broken succumb even more frequently than those whose ambition for wealth and schemes for success rob them of the full benefit of sleep and regular food and recuperating rest.

Many a man well endowed and unweakened in his nervous centers goes about unharmed with the same amount of malaria in his blood, probably, which causes another, less strongly fortified, to succumb to a fatal form of congestion.

All other things being equal, the tranquil-minded and restful and daily and adequately recuperated nervous systems of a community afford the best and longest immunity in time of pestilence. The unrested and unrestful, the weary and the heavy laden, the vice-broken and the unsteadily endowed nervous systems furnish the most numerous and earliest victims.

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Insomnia is a thief that robs the brain and nervous system of power and circumvents recuperation—a factor in nervous breakdown more potent than all others, yet it is preventable and curable by remediable measures, public and private.

There is, therefore, without dwelling more in detail, an obvious and important sanitary hygiene for the nervous system in time of great epidemics, and the time for the beginning of preventive measures should be in advance of the actual presence of the morbid invader. That time is now, for when the pestilence shall have come and gone, those who are fittest in the tone and resisting power of their nervous systems to survive, will live out the scourge. The weak and organically unprepared will succumb.

The practical deduction from the foregoing to avert cholera from the human system, in addition to such measures as quarantine it from the country or chemically destroy the bacillus and prevent it from coming into contact with the organism at all, is to eat only such slightly irritating substances as will promote the gastric secretion, without inducing catarrh of the stomach or bowels, and keep such a supply of healthy gastric juice in the stomach as will destroy such comma bacilli as may find lodgment there. Take the best possible care of the physiological vitality of the central nervous system by every known means of rest and repair, and by frequent moderate eating. Maintain by normal nutrition and electrizations the necessary tone of the solar plexus and the perfect physiological integrity of the cerebro-spinal axis; keep away from the cholera infected when the system is exhausted and the supply of gastric juice is likely to be scanty or weak in quality; cultivate and maintain a state of hopeful mental tranquility by avoiding every source of mental overtax and unrest.

The successful prophylaxis of cholera consists of something more than quarantine or chemical disinfection. The chemistry of the nervous system itself, if we but invoke it, may give us aid. The cultivation of resisting nerve force involved by healthy organisms is worthy of our

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consideration. A wise prophylaxis and therapeusis seems indicated in adequate rest of the nervous system, in galvanism, which maintains its tone and static electricity which promotes its vigor at the same time that it has the probable power to destroy bacilli and in hot water as near 150° F. as practicable, taken internally, which gives nerve tone and dissipates congestion through its influence on the vaso-motor system, and in chloral, which gives strength through restorative rest and which is also powerfully antiseptic.

The following brief epitome of the anatomical and physiological data of the subject may serve to show still more plainly how essential is the integrity of the nervous system in its highest physiological power to the prophylaxis and endurance of cholera. It is also a sufficient anatomical *résumé* for the subject that follows.

The local innervation of the stomach and intestines is carried on through interlacing of the nerve fibres and ganglion cells imbedded in the sub-mucous and muscular coats. Auerbach's plexus in the muscular and Meissner's in the sub-mucous tissue. Descending from the medulla are the pneumo-gastrics, and from the solar plexus of the sympathetic come gastric branches. The pneumogastrics and the gastric branches of the solar plexus may be said to encompass the stomach.

Vaso-motor nerves branching through the splanchnics from the solar plexus accompany the gastric vessels. These nerves have connection with medullary centers and pass through the cerebral peduncles and thalami aptici to higher centers in the cerebrum.

The salivary and gastric secretions, as well as the movements of the stomach and bowels, are dependent upon nerve influence and the regulation of inhibition and excitation. Gastric secretion is partly a local reflex act through peripheral stimulation from the interior of the stomach, through the nerve branches which go to Auerbach's plexus imbedded in the sub-mucous tissue, but the amount and quality of this secretion will depend largely

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upon the integrity of the general ganglionic and whole nervous system, especially upon the tone of the solar plexus and the brain.

The gastric secretion may be inhibited or excited by a powerful mental impression; a painful emotion suppressing and an agreeable one, as of the remembrance of a delicious dish, exciting it and the salivary secretion also.

A reflex from the gustatory nerves to the brain may pass to the stomach and excite it. Great fatigue as well as great pain suspend both gastric secretion and appetite.

During the week of the great St. Louis fire in 1849, the ravages of cholera, which up to that event had reached a mortality of over two hundred a day out of a population of fifty thousand, almost entirely ceased, so stimulating and invigorating was the excitement of that week to the brains and nervous systems of the people, the psychical exaltation inseparable from the sudden necessity thrown upon so many business men for repairing the sudden damage and re-establishing their abruptly interrupted business. Some of the germs, too, may have been destroyed by the great heat, but it was only the business part of the city that was destroyed, where but little cholera prevailed except on the steamers. The writer was in the city at the time and recollects this to have been the fact. And after a week had expired the pestilence raged as before in all its resistless and relentless virulence.

The destructive power of fire suggests the value of crematories for destroying the cholera bascilli found in the clothing and dejecta of cholera patients.

THE NECESSITY OF HYGIENIC MEASURES IN REGARD TO DYSPEPSIA ARE BECOMING MORE AND MORE APPARENT EVERY YEAR.

We have become a nation of dyspeptics, not because we eat too much but because we work too much with our heads and too inopportunely. Fret and worry and ambition to get rich keep the brains of Americans over active. The precarious results of business, the gambling ventures in stocks and sudden reversals of fortune and

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recurring threatenings of panics, and the feeling of insecurity which periodically possesses the public mind, keeps the American brain constantly anxious and active to arrest impending failure or miscarriages of cherished enterprises, and the brain thus incessantly overworked and overworried, robs the ganglia of the sympathetic of their due innervation; the pneumogastrics too are impoverished and the innervation that belongs to the stomach through the solar plexus upon which a healthy quality and abundant quantity of gastric juice depends, is not received by it. The victim of dyspepsia is a victim of self-robbery. The overstrained brain surreptitiously takes from the stomach what it needs for healthy function. It is not the bolting of food, so much talked of, that usually causes dyspepsia, but this voracious robbery of the brain, which takes all the nerve force of the body, which brings dyspepsia to the ceaselessly active brain worker and brain worrier.

I have time and again seen men recover from dyspepsia while under treatment for an overworked brain, without a single remedy addressed to the stomach, recover under rest and recuperation of mind and those agencies which induce them.

DYSPEPSIA A DISEASE OF THE BRAIN AND NERVOUS SYSTEM.

Forty years ago the distinguished Amariah Brigham observed that "in a majority of cases, especially among students, dyspepsia is primarily a disease of the brain and nervous system," and before him the great Abercrombie wrote that "symptoms which really depend on disease of the brain are apt to be referred to the stomach."

The testimony of the thousands of watering place and mountain air resorts and sea voyage cures are witnesses of the fact that dyspepsia is largely a disease of the brain and nervous system. The changed home and scenery cure, where depressing cares are dropped and irritating environments are exchanged for agreeable mental surroundings and brain and nerve rest, is the surest

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therapeutics for the average dyspeptic, aside from a rational home treatment addressed to the rest and recuperation of the nervous system.

If any one is dyspeptic let him relax his business and secure a rest for his brain, is a safe therapeutic axiom, and this suggests the hygienic procedures of preventive medicine.

If the salvation of the people from gradual as well as sudden destruction be legitimate subjects of sanitation, then the investigation and removal, so far as practicable, of the causes of nervous dyspepsia are legitimate subjects for the efforts of physicians and sanitarians, and it should claim attention of one branch of civil service reform. In all departments of the public service hours of work adjusted to the physiological endurance of the human nervous system and no more should be enjoined, and the time for rest demanded by the physiological necessity of the organism should be secured to all government employees. The State could avert a good deal of nervous break-down and insanity in this way.

The service of nervous dyspeptics, besides being a crime against nature, in a government that develops it in its employes, is never the best service; and in times of national trial or peril is not the kind of service to be relied on. All the causes, mental, moral and physical, of neuratrophia, or malnutrition of the nervous system are legitimate subjects of study for the sanitarian and physician, and the prevention of premature nervous exhaustion in the people of the country is the collective salvation of the nation. A sound nervous system develops and fosters a vigorous optimistic patriotism, confident of the future of the country and capable of putting forth the essential energies to prevent natural decay, while pessimists are bred by illy-nourished and unrested brains and nerves, and the conditions for the fulfillment of their sombre and fatal prophesies are in their nervous systems. Strong brains are the defensive and protective brawn of a people, whether in peace, war or pestilence, and a wise people

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will continually foster a judicious nerve sanitation. A well nourished nervous system is the foundation of personal courage and endurance, and in a whole people it is the best security for the prosperity of the state. The conditions and attendant vices of our present civilization tend to undermine nerve-stamina, and sanitation should address itself to arrest the individual and national nerve disintegration, which is in excess, in so many occupations, over recuperative conditions and physical regeneration.

THE NEUROPATHIC DIATHESIS.

There are too many insane, idiotic and feeble-minded people in this and other civilized countries.

A proportion of one to every five hundred people annually falling mentally maimed in the battle of life is too large. The neuropathic diathesis and the insane temperament is becoming the fatal heritage of too many of our people; there are too many brain-weakened and nerve-degenerate victims strewing the pathway of our progress.

Unstable nervous systems are everywhere, and they often wrongly influence public thought and state legislation to the detriment of the race. Cranks and intellectual squints and obliquities, inheritors of neuropathic tendencies, from the vice, ambition, or misfortune-perverted brains of an overtaxed ancestry abound, instead of that nervous stability which, like righteousness, exalts a nation and without which a vigorously righteous people can not be made, but in lieu of which will exist a sickly moral sentimentality running after unfounded moralisms and pathies and driven by every wind of spurious doctrine. To be logical, brains must be strongly endowed. Cramming and straining of brains, especially such as are not uncommonly well endowed by nature, give activity but not power, and all systems of education which disregard individual capacities that come of unstable neurotic endowments are vicious; all plans which seek to draw out all the powers of a growing child, leaving no reserve force daily for building up the growing brain into its possible

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proportions of power and beauty, are wrong and must and do result in ruin.

The wants of the evolution period of the nervous powers in the human economy can not be ignored, without arrested development and stunting of the mind and body, or more properly speaking the body; the mind is for all practical purposes, the body; its capabilities and powers being dependent upon the quality and tonicity of the brain texture. (*Mens sana in corpore sano, and vice versa.*)

Education should repress tendencies as well as draw out powers, and to do this it is not moral platitudes that are demanded, but the training up of the organism in the way it should go, by the light of neurological and psychological law; by regarding the physiological wants of the growing brain, letting it rest when it needs rest and feeding its powers during the process of evolution of the higher centers of the thought layers of the cerebral cortex, as well as of the basal ganglia, and by looking to the abundant nutrition, and daily repair of the ganglionic system which presides over the functions of organic life, and this part of education is not one of object lessons or of words, but of true physiological training by supplying the growing organism with the chemical elements of nerve repair richly and without stint. No Dotheby Hall plan of richness will suffice, but the true cream of nutrition for the brain and nerves as fast as they feel the famishing influence of disintegrating work.

The proper building of a brain, with its wondrous powers and possibilities, is the grandest work that can engage the attention of educators, but the chief aim, or at least the principal effect of our present unphysiological system, is to exhaust it in many respects.

Even the violinist will look well to the tone of his instrument, and to atmospherical conditions, before he attempts to use it, but the average educator treats the harp of a thousand strings regardless of the conditions of keeping it in tune, and as though despite the worst ill usage, it would keep in tune forever.

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It is a long time since Grotius wrote "the care of the human mind is the noblest branch of medicine," so long that, like all other medical facts long ago promulgated, it has become common property, and the care of the mind should be the chief concern of the people.

History shows us how nations have perished and been blotted out by reason of degeneracy of brain and nerve organization, and how people, once masters in peaceful arts and war, have grown powerless or passed into third rate powers among the nations. "Greece, Rome, Carthage, where are they?" And why are they not as of yore? And Spain and Mexico how changed! And other nations saved from absolute extinction by revolutions bred of unstable neurotic organizations, by which, in blood and carnage, hordes of neuropaths have been destroyed, and the neuropathic degeneration of the nation has been stayed through regenerating war permitting mainly the fittest to survive to propagate a fitter race to longer live.

No regenerating revolutions have yet swept over our land, save the late unhappy war with the South, itself born, in my humble opinion, of unstable passion, which, with better brains and steadier nerves, might have been averted, and we should have a care lest by carrying the forcing process of our public school and collegiate systems too far without due regard to the recuperation and growth in steady brain power of our children and youth, we fit the rising and coming generations for the repetition of ensanguined history; for revolutions and wars must needs come, like pestilence and famine, to fit the survivors of a largely unfit people to live. As waste precedes repair and is a condition of it, in brain or muscle, and as it is the condition of the display of power in physics, so in the human economy the ordinary waste may give place to extraordinary destruction, that that which is most physiological in a people should be separated from the pathological and it thus be made possible for a nation by the rejuvenation of revolution and war to live out an otherwise inglorious destiny.

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We see in our own day individuals stricken down in their prime, with preventable brain and nerve destruction, and it is fortunate for the welfare of the race that so many die prematurely without leaving behind greater multitudes than there are, dowered with the fatal tendency to break down early in life in brain and nerve. Yet too many, like Dean Swift, begin to perish at the top, even before middle life. Greeley, President Johnson, Vice-President Wilson, and hosts of others, whose names occur to you among the not remotely dead, tell how very prone the brains of our public men are to break down under the strain of life's demands.

The hygiene of the mind and nervous system should be such as to make these too common occurrences exceptional. Men should know that blood vessels kept over full by habitual and too prolonged mental excitation, aided by over stimulation of the heart by alcoholic indulgence, must sooner or later end in pathological dilatation of brain vessels, in serous exudation, or in arteriole rupture, or in heart failure or hypertrophy and their fatal consequences. There is a limit to the capacity of the brain or of any other organ of the body for labor, without ample rest and repair, even as there is a limit to the capacity of inanimate machinery less intricately and wonderfully wrought than the mind, to endlessly work on.

Nations and states and communities have need of quarantine against the hordes of neuropaths that hover about, or fill high places or go about in public, ready, like dynamite bombs, to explode under slight, sudden pressure, and destroy. The Guiteaus and Boothes and Lawrences who shoot at Presidents, in times of public political excitement; the Passenantes and Hadfields who make Kings the mark of their unprovoked vengeance; the Freemans and Smiths who make tragedies of child-sacrifice to delusive inspiration, like the horrors of Pokassett and Westminster, and murder and arson and crimes innumerable and nameless, are often only possible through predominance of insanity or the insane temperament, the

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spread of which is more to be dreaded in any community than the worst of physical pestilences, for its baneful work goes on from generation to generation; through it the infant now just suckling at the breast is fatally predestined to slay her who gives it its first life sustenance; through it babes just born are strangled by mothers in the throes of puerperal mania; through it are fratricides, patricides and matricides otherwise impossible, and many of the most horrible and awful of crimes which in the public press daily keep our thoughts on blood. It is a great good fortune for the perpetuation of the average stability of the race that so many who are possessed of the insane temperament early commit suicide and that, possessed of feebler resisting power to morbid disintegrating forces, they die prematurely, or before propagating their species of intercurrent diseases, and before others are made the victims of their fatally unstable heritage.

When the neuropathic diathesis has developed into insanity, in its aggravated and dangerous forms, society is willing to house the lunatic and let him out again when he ceases to be harmful, but an insane man is never harmless to society if he be in the prime of life. If he be married, or likely to marry, the reason is obvious, and all the more harmful will he be if a victim of some doubtful undemonstrative form of insanity whose existence is so often denied, of insanity in psycho-sensory rather than in pronounced delusional form.

Insanity and the insane temperament are therefore subjects of the greatest concern to any people, of the utmost importance to communities as well as to families. A matrimonial alliance once formed with an impending lunatic means the founding of a family with a tendency to brain degeneracy, and the likelihood of a progeny of cranks, or over active or feeble-minded and unstable eccentrics or positive lunatics, and the individual and the State must suffer. Our modern civilization does not justify the radical measures which would have occurred to Lycurgus had he been confronted as we are, with the fatal

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ravages of the insane temperament; but law can and must, if the nation is saved, do something more than simply corral the physically dangerous lunatic in asylums, which is now the present tendency and only remedy employed.

A certain degree of exemption should be proven, sufficient at least to give a reasonable chance of regeneration, before marriage contracts are sanctioned.

Positive lunatics should of course be forbidden marriage, and marriage should be forbidden to confirmed drunkards, for drunkenness breeds hereditary epilepsy, dipsomania, imbecility and insanity; and marriage should be forbidden to epileptics.

The instructive typical family history given by Morel, of immorality, alcoholic excess and brutal degradation in the first generation, followed by a record of hereditary drunkenness, maniacal attacks and general paralysis in the second, hypochondria, lypemania, systematic mania and homicidal tendencies associated with sobriety in the third, with feeble intelligence, stupidity and mania in youth and transition to complete idiocy and extinction of the family in the fourth generation, is not more instructive than the history the writer has given of the O. Z. family, (Vide ALIENIST AND NEUROLOGIST,) where from the early intemperance of the father (though reformation subsequently followed in the father) all of the immediate descendants are neuropathically endowed, one child having been first nymphomaniacal, then generally maniacal and demented, another maniacal, a third dipsomaniacal and morally deranged, a fourth epileptic, the fifth markedly hysterical and gangliopathic and the sixth, still a youth, markedly neuropathic.

The peril of the race from the increase of the neuropathic diathesis should set us all to thinking, and those who have the authority, to acting in the direction of self-preservation and indirectly of the ultimate life of the nation. The multiplication of hospitals for the insane and of inebriate asylums and of schools for the feeble-minded, and improved methods of treating nervous diseases and

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of homes for impoverished neuropaths of every grade, from the hospital for nervous diseases proper to the almshouse where many of these wrecks are lodged, does not cure the evil, though they serve to hide it somewhat from public sight. We best provide against the spread of small-pox by general vaccination, not by numerous pest houses, so by general preventive sanitation can we avert the threatening spread of the now prevalent and growing diseases of the nervous system.

The neuropathic diathesis, the insane constitution that breeds its like and burdens the State with hereditary imbecility, idiocy, insanity, deaf-mutism, and the lesser degrees of mental defect, must be made the subject of statutory enactment and enforced law; sentimentality must yield to fact; the teachings of nature must be as decided and as sternly enforced as her own unerring edicts are. Why should the drunkard and epiletic be permitted to beget a race of imbeciles, epileptics, idiots or criminals? Why should the life-long criminal and the pauper be allowed to go on reproducing his defective kind, the lunatic likewise, and all the mentally maimed of whatever degree, especially when by forfeiture of liberty they fall under proper custody of the law; and why should generation after generation of these miserables be allowed to be brought into being to become either burdens upon the state or victims of its misdirected vengeance, when prevention is possible, and better for the state, and only justice to the helpless and prematurely doomed to an unchosen existence worse than death? If municipalities may lawfully quarantine yellow fever and cholera, why may not, and why ought not, this greater destructive agency than plague or pestilence, which never ceases its ravages—the hereditary descent of the organically vicious and defective—be stopped by law? No pestilence that ever walked in darkness or destruction that has wasted at noonday has done greater harm to mankind than the silent, ever active destructive power of hereditary degeneracy of brain and mind. Instead of visiting punishment on the heads of

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these weakened victims of entailed disease, let law go to the *fons et origo*, and stop this vicious progeny from being thrown upon a world in which they are unfitted to live.

More than a century ago Cabannis said: "As the liver secretes bile and the stomach gastric juice, so the brain secretes thought," a proposition exact enough for comparison, and as a working basis for sanitary legislation, for, though thought and mind are probably something more than secretion of the brain, mind is dependent for its every normal movement upon the integrity of the brain, and wrong and misleading thought will be evolved if the physical subtratum of the mind—the human brain—gets out of order. The duty of our day is to see that, so far as practicable, we transmit to our descendents healthy brains and vigorous nervous systems, and to this end personal endeavor and municipal legislation should be invoked. A true civilization should show development and not degeneracy of brain power, and the proudest monument to our wisdom we might erect would be one of neurotic regeneracy, a richer legacy to the coming generations than railroads or telegraphs, phonographs or telephones, electric lights, or ærial navigation successfully accomplished, for without neurotic regeneracy these blessings will prove curses and promoters of still further neuropathic decay, and final extinction of mind. To enjoy these, power of the nervous system and mind should be increased, not diminished; yet in them, and the press, injudiciously used, are the seeds and elements of destruction.

Let the present generation, with all of its advancement and advantages, have a care for its strength of brain and nerve, and the brain and nerve strength of those who are to follow it.

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PARETIC DEMENTIA.*

IS IT A PSYCHOSIS, A NEURO-PSYCHOSIS OR A COMPLICATION OF THE PSYCHOSES?

By JAS. G. KIERNAN, M. D., Chicago, Ills.

Medical Superintendent of Cook County Hospital for the Insane.

THE cases, herewith presented in tabular form, are such as came under my observation in the Cook County Hospital for the Insane, whose history could be obtained with sufficient accuracy to render them available for solution of the question raised in the preceding article:

Name.	Age.	Sex.	Color.	Early Mental State.	State at Last Observation.	Menstruation.	Complication or Origin.
C. M....	49	F	White	Depression.	Moderate optimism	Began at Menopause	Locomotor ataxia.
B. H.....	50	F	"	"	Still depressed at intervals	Ditto.....	
F. C.....	49	F	"	"	Nearly always optimistic	Ditto.....	
C. B.....	54	F	"	"	Optimism and depression alternate	Menopause.	Locomotor ataxia with epileptiform attacks.
A. K.....	31	F	"	"	Depressed at intervals	Amenorrh'c since onset	
F. Ch...	33	F	"	"	Always optimistic..	Ditto.....	
W. K....	30	M	"	"	Alternate.....	....	
M. L.....	40	M	"	"	"	.....	
Geo. L..	43	M	"	"	"	Rlr'd injury	
O. K. S.	37	M	"	"	"	.....	
H. Ro...	41	M	"	"	Quiet optimistic.....	....	
C. H.....	46	M	"	"	Alternate.....	....	
B. E.....	73	M	"	"	Optimistic grandiose delusion	.....	Lues complicated.
D. G. B.	47	M	"	"	Varied by furor.....	.....	Ditto.
H. B.....	33	M	"	"	Quiet optimism	.....	Ditto.
P. C.....	46	M	"	"	" "	....	
A. D.....	34	M	"	Optimistic..	" "	....	Lues preceded.

* In this and a succeeding series of articles it is proposed to pass in review the history, symptomatology, ætiology and pathology of this disease, with a view of determining its nosological position.

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Name.	Sex.	Age.	Color.	Origin of Complication.	Original Mental State.	State at Last Observation.
F. D.....	M	35	White	.....	Depression.	Alternate depres'n and exaltation.
H. F.....	M	42	"	....	"	Ditto.
F. G	M	45	"	..... .	"	Ditto.
J. G... ..	M	38	"	....	"	Ditto.
C. G.....	M	47	"	Epilepsy.....	"	Ditto.
W. C. K.	M	60	"	Senile insanity.....	"	Exalted delusions.
G. C. K.	M	48	"	Lues preceded.. ..	Optimism ..	" "
G. P. L.	M	58	"	.....	Depression.	Exalted delusions, furor.
P. L. M.	M	47	"	Lues preceded and paranoia	Querulent...	Alternate exaltation & depres'n.
B. M.. ..	M	35	"	Lues.....	Depression.	Ditto.
H. McN.	M	37	"	..... .	"	Ditto.
C. D.....	M	45	"	Locomotor ataxia	"	Ditto.
D. S.....	M	41	"	" "	"	Ditto.
J. S.....	M	55	"	Myelitis.....	"	Furor.
A. P. T.	M	60	"	... .	"	Furor & depress'n.
P. V.....	M	41	"	Lues..... .	"	" "
J. W.....	M	20	Col'd	....	"	" "

It will be observed that of these cases the majority presented at their outset depression. The ætiological features, however, likely to result in depresssion, which presented themselves are as follows:—

Locomotor ataxia preceded in -	4	cases.
Lues preceded in - - - - - - -	4	"
Epilepsy preceded in - - - - -	1	"
Myelitis preceded in - - - - -	1	"
Paranoia preceded in - - - - -	1	"
Senile insanity preceded in - - -	1	"
Railroad injury preceded in - -	1	"
Menopause preceded in - - - -	3	"
	16	cases.
No depressing ætiological factor -	18	"
	34	cases.

On inspecting the table it is observable that the special differences produced by these depressing factors are that, in cases evolving from locomotor ataxia, depression always existed at the outset; those preceded by lues were as frequently optimistic as otherwise. These figures, therefore, tend to support the views advanced as to the frequency of depression at the outset of paretic dementia.

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A VINDICATION OF HISTORY.

By the Author of "Two Hard Cases."

THE October (1884) number of the *American Journal of Insanity* contained an article by the present writer on the progress in provision for the insane in this country since 1844. It was not intended to exhaust the subject, but especially to show the relation of the Association of Medical Superintendents of American Institutions for the Insane to that progress. Prepared with reference to its delivery before that body, the language was naturally somewhat different from that suited to a mere statistical compend, and an occasional metaphor was introduced which would have been out of place in a legislative or a judicial document. However faulty its rhetoric may have been, the reception of the paper at the time showed that it answered its purpose tolerably well, the subject matter excusing the delivery.

That this paper was honored in the editorial columns of the journal in which it appeared with a caveat, from the pen of the distinguished editor-in-chief, of greater length than the article in question, is probably due not so much to any merits of the paper itself—which were certainly not obvious to the reviewer—as to a glimmering consciousness in Dr. Gray's mind that, outside of anything I might have said, there was a growing sentiment with State boards and others having authority in these matters in favor of certain departures in the provision for the insane, departures which were in opposition to much that had been authoritatively enunciated by the Association in past years; that these modern Philistines, these troublesome innovators on the good old ways, were unsettling things which had been adjudicated, that the sacred ark of "the propositions" was in danger, that it was necessary

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with a strong hand to strangle this heresy within the Association at its birth.

The trouble is that the strong man has come too late:

> "Oh Richard, oh my king, the world is all forsaking thee,"

is losing its faith in infallibility, and while we willingly accord to Dr. Gray the position of "giant," and allow that if Ilium could have been successfully defended, it would have been at his hands, yet as the case stands, there is something touching in seeing even this Goliah boastingly put on his armor.

Napoleon the Third prefaces his history of Julius Cæsar with the statement, "Historic truth ought to be no less sacred than religion." It does not appear that this solemn asseveration has made his own narrative any more trustworthy, but as an opening sentence it sounds well. So Dr. Gray's assertion at the outset of his diatribe that his strictures are to "vindicate history" sounds well, but unfortunately imparts no validity to his statement.

In my paper the statement is made that in 1844 there were but twenty-five hospitals for the insane within the limits of the United States and Canada, the extent of whose combined provision would hardly have exceeded three thousand inmates, so that of the seventeen thousand insane at that time living in the United States, more than four-fifths must have been left to be provided for in almshouses, in jails, in cages, and at large in the community. Is there anything incorrect in this? Dr. Gray says so; he says:

> **We find no evidence except the census of 1840 which was shown to be very defective to justify the statement that there were seventeen thousand insane then in America. The census of 1840 to which we refer (*Journal of Insanity*, No. 1, page 72) gave 4,333 white insane and idiots supported at public charge, 829 colored insane and idiots at puplic charge, and 10,192 white insane and idiots supported at private charge, and 2,103 colored insane and idiots at private charge. If there were then seventeen thousand insane, which we do not believe, there were nearly five thousand of them in the charge of hospitals.**

He gives the figures of the census to prove my state-

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ment and then says he does not believe it! The question is not what Dr. Gray believes, however important that may be, but what is the fact? No doubt every census of the United States until the last, that of 1880, has been defective in the enumeration of the insane, but the defect is mainly in the omissions, the number of the insane being understated. Dr. Edward Jarvis has made this very evident of the census of 1850, by his masterly study of the subject in Massachusetts. From a most thorough canvass made by the order of the State legislature, he found the number of insane persons in that State, in 1854, was 2,632, while the census of 1850 gave only 1,680. The census of 1880, whose returns were collected, collated and corrected under the careful method of Dr. Jarvis, gives the total insane of the United States as 91,997, while, according to the census of 1870, it was only 37,432. Now, no such increase had actually taken place in ten years, but the census of 1870 was defective by reason of omissions. If, then, the census of 1840, with all its defects and omissions recorded 17,457 insane and idiotic then, it is safe to conclude that the number of the insane four years later, when the population of the country had increased nearly two millions, was not less than seventeen thousand. But, says Dr. Gray, "Then there were nearly five thousand of them in hospitals." No, Dr. Gray; not in hospitals; at public charge no doubt, in almshouses, in jails, and a part in hospitals, but not five thousand. My possible limit of hospital accommodation was three thousand, and the very article from which you quote would have told you, had you chosen to look (*Journal of Insanity*, No. 1, page 88), that the actual number in the lunatic asylums of the United States was 2,561, showing the error of your statement to be about one-half, or 2,439 "nearly." But is it hardly fair to insist on accuracy in one of such varied accomplishments? If we do, we shall be disappointed.

It is pleasant to be put right on one point, where a very natural inference proved not to have been the fact.

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Dr. Gray, who was present at the meeting of the superintendents when "The Farm of St. Anne," by Dr. Galt, was discussed, says that Dr. Galt "was not stoned, nor was he sawn asunder." As Dr. Gray was an eye witness and Dr. Galt was fortunately absent from the meeting, that settles it. It is a relief to know that death did not result from a metaphor. Whoever takes pains to read the proceedings of the Association at that meeting* will see that, aside from the deadly metaphor, the statement in my paper, "That the ideas of what the provision for the insane should be was regarded as authoritatively settled by the Association," was correct. Dr. Gray allows that he was the subject of criticism and attack for having, as an independent editor, presumed to publish the offending article. This censorship of the press, Dr. Workman, of Toronto—to his credit be it said—then and there rebuked, and spoke brave words regarding the architecture and perfection of the then existing hospitals, but the general tone of remark on that occasion was one of abundant self-satisfaction, and Dr. Kirkbride undoubtedly expressed the sentiment of the meeting in regard to Dr. Galt's views of farm houses for lunacy versus hospitals, when he said of such views, "It was scarcely necessary to notice them further, as this Association had long since settled them, as conclusively as they can be, by a unanimous expression of opinion." No; the soil of the Association at that time, and for many years after, was not favorable to the planting or the growth of the farm cottage system of hospitals.

In this connection of "St. Anne's Farm," Dr. Gray makes one of his strongest points when he shows that "The Government Hospital had more of a farm, in 1855, than that of St. Anne." "In 1873 this farm had reached 419 acres." This is in the Doctor's usual close style of reasoning. Because the Government Hospital had in arable lands and pleasure grounds three times the extent of territory of the entire farm of St. Anne, in France, he

* Journal of Insanity, Vol. XII., p. 42–48.

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would have us infer that, therefore, Dr. Galt could learn nothing of a different system of caring for the insane at the little St. Anne Farm from what he might any day see at St. Elizabeth. *Non sequiter.*

It is noticeable that the Government Hospital for the Insane is made to do duty as a back ground to the Doctor's article throughout, like the one piece of scenery in a third class theatre; now as a cottage for agricultural lunatics; again, with an ingenious use of the estimates of the cost of a building, for which the appropriation was never made, as a cathedral in collegiate gothic; and, at the close of a political interjection to his argument, as the centre-piece in a tableau of patriotic citizens sorrowing over down-trodden Africa. The motive of the Doctor in all this is plain and is duly appreciated; none the less do I protest against so unwarranted a use of this hospital and its noble founders to buttress an argument too weak to stand alone. Had the writer for one moment supposed that all this would be considered necessary to get at him, he would willingly have come out from the castle that the buildings might have been spared!

Having stated the number of the insane within the limits of the United States, together with the number in hospitals and asylums, as given by the census of 1880, the writer said, because historic truth admitted of no other statement: "There remains a majority to be provided for, as in 1844, indiscriminately huddled in almshouses, in cages, and adrift in the community." Dr. Gray says he "cannot believe it." Why not? He has a faith that might remove mountains, if they stood in the way of the infallibility of the propositions; but the facts of the last census, so painstakingly and impartially collated, he will not believe. Statistics seem to trouble the Doctor, and not without reason, for they are the stubborn facts on which his glittering generalizations fall only to be broken. But since there is an old-fashioned prejudice which still calls for the figures, he brings those of the last report of the State Board of Charities of New York, as his measuring

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line, with which to gauge the provision and the needs of this great nation! One rises from a perusal of his paper with an oppressive sense of what we all owe, under Dr. Gray, to New York. The devout Mohammedan turns five times in the twenty-four hours towards Mecca, the transcendental philosopher never ceases to give thanks to the Infinite Fitness that he was born in Boston, but it needs Dr. Gray to convince us that what exists outside of New York is hardly worth mentioning. Those of us who have our being in that outer darkness—"doubtless we are His children, though Abraham be ignorant of us,"—are expected to content ourselves with such broken fragments of information respecting the provision for the insane in that great State as the Doctor may chose to give us. More of this anon. But granting all that he claims for New York to be true, what necessity have we to infer from a part what the whole is likely to be when that whole is before us? The Doctor says "in New York we have, practically, universal care." What of that? The fact remains, that of the forty-seven States and organized Territories that make up these United States, only eleven had in 1880 hospital provision for a majority of their insane. This provision ranged from more than ninety to a little above fifty per cent.* The rest had hospital provision for their insane varying from a little below fifty per cent. to absolutely none. There were 417 in jails, and 9,302 in almshouses, having no insane department—indiscriminately huddled—these being nearly one-fourth of the entire number provided for in hospitals and asylums, and the number of that class, 40,942, was actually exceeded by the number, 41,101, reported as "at home"—practically at large in the community.† Despite then, the ingenious arguments of Dr. Gray to show that a part is greater than the whole, and his Pharisaic assumption that "whatever may

* These were in the following order: District of Columbia, California, Montana Ter., Oregon, New Jersey, Washington Ter., Minnesota, Massachusetts, Rhode Island, New York and Kentucky.

† For the above facts, see Compendium Tenth U. S. Census, part II., page 1678.

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be said of other States, the insane of the State of New York have now universal care," together with his unwarrantable deduction therefrom in regard to the rest of the United States, the verdict must stand, that a majority of our insane are still outside of hospital shelter, and that "thus far only have we come with our progess in provision in forty years."

The Doctor's New York studies are ingenious rather than ingenuous; he is familiar with that State's provision for her insane; he is at home at Albany—probably no man has followed its legislation closer—and if he chose he could give us history that would be very interesting reading. As it is, the pictures he presents are noticeable for their coloring rather than their fidelity; assumptions are made to do duty as facts, and when facts are employed they are apt to be fearfully overworked. Like the early panoramas, his show entertains rather than instructs, and his combination of fact and fancy becomes hopelessly bewildering when our genial showman fails to point out to us which is Daniel and which is the lion.

Such confusion of the facts about New York was unnecessary. The Empire State is justly proud of her record, can afford to abide by it and asks none of Dr. Gray's glossing commentary. Quoting from the Report of the State Board of Charities of New York for 1884, he gives the total number of insane in institutions of all kinds as 11,343. This is the fact in his statement, the assumption in it is that this number represents the entire insane population of New York, an assumption which nobody believes, not even the Doctor himself, although he adroitly says it is "her full share," and again, "we have universal care." If by universal care he means the Providence that is over the sparrow, no one will dispute him; but if he means that the State now makes universal provision for her insane, then this must be characterized as one of Dr. Gray's facts that has been broken down by overwork.

According to the census of 1880, New York at that

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date had 14,111 insane. Assuming the annual rate of increase to be only 500, the whole number in 1884 would be 15,611.* Deducting 553, which Dr. Gray admits were in almshouses with no distinct provision for the insane, from the 11,343 in public institutions in 1884, there would remain not quite seventy per cent. under some form of hospital or asylum care. Seventy per cent., though creditable to the State, is not "universal care." The figures quoted by the Doctor further show that less than one-fourth of the total insane were provided for in institutions belonging to the State, and eliminating the distinct asylums for the chronic insane at Willard and Binghampton—a provision so unanimously rejected by the Association in 1866—there remains less than twelve per cent. under care in the State general hospitals for the insane. Less than twelve per cent.! The character of the provision made in the city asylums and county almshouses is not being questioned here, but the figures are instructive, a lesson wholesome and chastening alike to State and to individual pride, showing how little after all the noble pile at Utica and the lavish expenditure in building the cathedral structures at Poughkeepsie and Buffalo and at Middletown availed as a provision for the great mass of the insane of New York.

There was no attempt to rob the Superintendents of the Poor of New York of their well-earned laurels, gained by giving utterance as early as 1855 to the noble sentiment, that "a State should make suitable provision for all its insane."† This was adopted by the Association in 1866, and knowing that there was nothing new or original in putting it forth at that time, I characterized the action of the Association as an "enunciation of principles, a favorite method of progression with us." No where in

* I know of no data giving the actual annual increase of the insane in New York since 1880, but in the adjoining State of Massachusetts, with a population but little more than one-third that of the State of New York, there is an annual increment of 300. See 5th Annual Report State Board of Health, Lunacy and Charity, of Mass., 1884, page lxxxv.

† It is a matter of historic interest that these resolutions passed by the Superintendents of the Poor in 1855, were from the pen of Dr. John B. Chapin, at least the most of them.

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my paper is it hinted that the States had not in more than one instance prior to 1866, in providing for their insane, made larger accommodations in individual hospitals than the propositions of the Association sanctioned. The awakening of '66, over which the Doctor is so merry, was that of the Association as a body; the people were awake to the necessities of the situation long before. Individual members of the Association were awake—Dr. Gray gives us to understand that he was, and as an "individual" assisted at the Convention of the Superintendents of the Poor at Syracuse and at Utica in 1855, and he intimates that the sentiment then aroused "was the origin of the Willard Asylum." If that was so, then it was an oversight that his name was not mentioned with those of Drs. Cook and Chapin in my reference to what they did at Willard. But as the Convention of the Superintendents of the Poor in 1855 passed this resolution, "That insane persons considered curable and those supposed incurable should not be provided for in separate establishments," and the Willard Asylum was projected some ten years later to afford just that separate provision for the chronic insane, I think the statement that the Convention of 1855 originated that asylum will have to be classed as one of Dr. Gray's overworked facts.

Historically the matter stands in this wise: The movement in New York in 1855 resulted in the erection of the Auburn Asylum for Convict and Criminal Insane, and a bill before the legislature for the erection of two additional asylums which failed of passage, and there the matter rested. The movement in 1864 began with a resolution passed by the State Medical Society calling the attention of the legislature to the state of the poor-houses of New York. The movements of 1855 and of 1864 were both in the State of New York, and this was the only connection between them; one was in no sense an outgrowth of the other, except that one followed the other in point of time and both had relation to the condition of the insane.

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There are associated with notable epochs in the world's progress some names that fall out and are forgotten from history, while others, perchance no worthier, are held in grateful remembrance; for Sir Thomas Browne says truly, "The iniquity of oblivion *blindly* scattereth her poppy." Many noble and true men took part in the movement of 1864, in behalf of the insane in the New York poorhouses which resulted in the asylum at Willard, among whom Dr. Gray very justly recalls Judge Folger and others, but whatever may have been their merits, and there is no wish to underrate them, the fact remains that the names which history will ever associate with the founding of Willard will be those of Drs. Cook and Chapin. And in this she will not be far from right, for these men, together with Dr. Gray, were consulted by Dr. Willard at the outset of his investigation, and rendered him efficient aid, bringing to the work no doubtful support, but whole-hearted service. It will be remembered of these two men that in the Association of Superintendents, in the midst of a fierce opposition, they stood almost alone, urging the claims of present necessity, calling like the man of Macedonia to come over and help them, but calling in vain! Then it will be remembered to their honor that these men stepping outside of what the Association, as a body had decided to be the only provision they could sanction—that or none—did as individuals precisely what we should expect as Christian philanthropists they would do, accepted the provision which the State of New York had decided to attempt for her chronic insane, and gathering in these poor, neglected ones from the wretched dens where they were hidden, like Good Samaritans, did personally what they could, working with their might to carry forward the good work, albeit this were only asylum care, to an established success. Is it any wonder that history gratefully remembers them?

Dr. Gray in this connection delicately suggests an omission in my paper to which allusion has already been made. In his criticism the Doctor brings out the fact

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that he was chairman of the commission to locate and give a plan for the Willard Asylum, and I have stated that Dr. Willard consulted him prior to his own report in 1864. If we add to this, service with the Superintendents of the Poor in 1855, I think the Doctor has established his claim to be regarded as one of the founders of Willard, and as I prefer being right to being consistent, with the Doctor's approval, I will now make the correction, prefixing his name to the list so that it will stand Gray, Cook, Chapin. But my memorial is a very temporary scroll at best, and what history will consent to do I cannot undertake to determine. History catches only the outlines, and possibly the shadow cast upon her page will be that of a grim stepmother dry-nursing a child pronounced illegitimate by the Association; this even though the Doctor assures us that "there was no croaking and coldness and opposition."*

The question of the provision for the chronic insane poor of New York was a mere episode, and I entered into no discussion of its merits or demerits as a system, although Dr. Gray, treating it as if it was the main topic of the paper, devotes a large number of pages to the question. I nowhere defended the system of separate provision for the chronic insane. I did recognize the fact that the question of their separate care had been agitated elsewhere than in New York, and referred to the remarks of Dr. Butler of Hartford, Conn., before the Association in 1865, to indicate this. The gratuitous assumption of the Doctor, without a particle of evidence in the contest to show this, that I supposed Dr. Butler was talking about New York, only indicates the peculiarity of Dr. Gray's mind already mentioned. Apparently some

"Pent up Utica contracts his powers,"

until the State of New York becomes his universe.

*** For the other view of this question see Journal of Insanity, Vol. XXII., pages 192-212, although perhaps the approach to the entrance of Dante's Inferno (p. 201) may imply warmth rather than "coldness." Vol. XXIV., pages 288-336. Also other volumes of same journal. Also the recollections of living Superintendents who are old enough to have been participators in the discussions of twenty years ago.**

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All the more therefore it behooves him to be certain of his facts about that State when he assumes the character of censor and vindicator of history. Still eulogizing the resolutions of the Superintendents of the Poor at their Convention in 1855, at which he assisted as an individual, he says:

This was in 1855, not in 1866. Such derogatory language as Dr. Godding has used was not applicable to New York in 1866 if it ever had been, and we cannot permit such perversion of history in a memorial service to go out to the world uncontradicted.

Noble sentiment; but what are the facts? The Willard Asylum was not opened for the reception of the chronic insane from the almshouses and the community at large until 1869, nor was any provision made for them elsewhere. On the 13th of January, 1865, Dr. Sylvester Willard, Secretary of the Medical Society of the State of New York, who had been empowered by the legislature of the State to investigate the condition of the insane poor in the county poorhouses of New York, made his report to the Assembly. The language of Dr. Gray, quoted above, renders it necessary for me, in my own vindication, to reprint from that report extracts that I had far rather would sleep in the archives to which they have been consigned, now that the horrors which they depicted no longer exist, but this vindicator of history has left me no choice in the matter.

The report of the condition of the insane in each county was made by a physician appointed for that purpose by the county judge, so that the language in each case is that of a disinterested medical man. The extracts given are from the printed official report, and whenever italics, capital letters or exclamation points are given, they are present in the official copy of the report.

Albany County:

The asylum *was built to accommodate thirty-one* lunatics. There are in confinement at the present time in this space designed only for *thirty-one*, ONE HUNDRED AND THREE. The greatest number in confinement at any one time was ONE HUNDRED AND TWENTY, designed to accommodate thirty-one! the almshouse asylum of the capital, of Albany!!!

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Alleghany County:

The old block-house in which some insane are confined, occupied in part by idiots, is in a very bad condition with no ventilation, old, rotten and filthy, and entirely inadequate for the purposes for which it is used.

Broome County:

Four males and two females are destructive to their clothing, and four males and one female are in constant restraint, by handcuffs or otherwise. The other forms of restraint are persuasion and confinement. *Whipping is seldom resorted to.* * * * * Six sleep on straw without beds or bedsteads; the straw is changed once a week.

Cortland County:

The violent cases are kept in cells in a building off from the main building. In one ward ten are constantly confined. The sexes are not kept entirely separated, and male attendants are employed to care for female insane. The atmosphere in the rooms is generally unwholesome. At this institution recent cases are received!

Delaware County:

A hall runs on each side of the building, and in the middle is located the cells (after the style of a prison,) which are 4x8 feet square, made of rough material, the doors are made of rough hard-wood plank, three inches thick, with a diamond hole in them 7x9 inches, *which is the only source of light and air!* Beds are on the floor, with nothing to separate them from where they sit, except a piece of plank set up edgewise, and indeed the whole construction is a stigma on humanity. In apartments thus dark, and cold in winter and filthy at all times, more gloomy than prisons, twenty-six insane human beings are kept. * * * * And this institution continues to receive recent cases!

Franklin County:

There is a spring of water near by, from which the building is supplied, but the insane are not required to bathe, or even to wash their hands and face, except when they see fit to do it themselves. * * * Two or three sleep on straw without other bedding; the straw is changed once a month. * * * In the day time the sexes mix as they please, and receive their only care from the sane paupers. The rooms were "not cleanly," and the atmosphere was "bad enough," and the keeper said that vermin were "somewhat plentiful." They have no changes of undergarments.

Madison County:

The house has no bathing tub, the insane are not even required to bathe at all, and the violent insane not even to wash their hands and face. It is idle to describe the building, it is heart-sickening to describe what is in it. * * * * The only care they receive is from the hands of incompetent paupers. Those confined in the cells are extremely filthy, most of them not using vessels, and their excrements are mixed

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with the straw on which they lie. Their straw is changed only once in a week; and these lunatics, with their bodies besmeared with their own excrements, not allowed to come daily to the open air, eating in the same filthy apartments, are not washed from one year's end to another. The cells in which they are confined are only 4x6 feet with a ceiling of seven feet, and open into a hall, so that they can have no ventilation.

St. Lawrence County:

It is an old wood building, three-stories high, the ceilings being 8½, 8 and 7 feet respectively, with rooms 12x12 and 8x12, and CAGES 3 feet by 7 and 5x10, with small windows opening out of doors, but the cells have no such window. The building is not supplied with sufficient water, nor has it any provision for bathing. * * * Those who cannot work have neither occupation nor amusement, and though no restraint is used by handcuffs, WHIPPING is resorted to, and the violent are put in *cages* to subdue them. * * * * At night ten are confined in a single cell. The sexes are not separated but mingle promiscuously, and the attendants are from the family of paupers, who are grossly unfit to administer to them.

This is not all, but it is more than enough, and sad enough. Of this state of things in 1864, Dr. Willard in 1865 said officially:

The investigation shows gross want of provision for the common necessities of physical health and comfort in a large majority of the poor-houses where pauper lunatics are kept. * * * * In some of these buildings the insane are kept in cages and cells, dark and prison-like, as if they were convicts, instead of the life-weary, deprived of reason. They are in numerous instances left to sleep on straw like animals, without other bedding, and there are scores who endure the piercing cold and frost of winter without either shoes or stockings being provided for them—they are pauper lunatics, and shut out from the charity of the world where they could at least beg shoes. Insane, in a narrow cell, perhaps without clothing, sleeping on straw or in a bunk, receiving air, and light, and warmth, only through a diamond hole through a rough prison-like door, bereft of sympathy and of social life, except it be with a fellow lunatic, without a cheering influence, or a bright hope of the future! Can any picture be more dismal, and yet it is not overdrawn.

Looking on the same picture of wretchedness I said in my memorial, that they "found the chronic insane that the hospitals had cast forth to make room for recent, curable cases, lying with others whom hospital care had never reached, wounded and bleeding by the wayside, forgotten in almshouses, festering in cages, loathsome with neglect, ready to say with Job: 'To corruption, thou art my father; to the worm, thou art my mother and my sister.'"

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Dr. Gray says in his caveat, "Such derogatory language as Dr. Godding has used was not applicable to New York in 1866, if it ever had been, and we cannot permit such perversion of history in a memorial service to go out to the world uncontradicted."

You have the language of the statement, the facts are before you, and who has deliberately falsified history the reader must decide. But he who pursues the *ignis-fatui* is hopelessly lost in the bog at last, and I must be excused from following further the Doctor's criticism of what I did *not* say, in order that I may in a brief statement attempt to disentangle the line of thought which he seems to have either quite misapprehended or purposely chosen to misrepresent.

With honest purpose and kindly intent, whatever my words can be made to imply, I did recognize, after my feeble fashion, the great, the enduring, the noble work of the fathers in their provision for the insane. The attempt was made to show to how great an extent the progress in provision of the first era depended upon the carefully considered ideas of construction embodied in the propositions of 1851, and known as the Kirkbride plan; moreover how admirably this plan was adapted to the needs of a limited number of the insane. It was also shown, because this too was a matter of history, how gradually the increase of insanity and the limited accommodations afforded by the State hospitals, built under this plan, resulted in a large majority of the insane being left without suitable care. How propositions that were a help in the first instance, being adhered to as authoritative dogmas enunciated by the Association, came to act as a bar to real progress by reason of their limitations. How the practical result remained that, whatever might be the theoretical possibilities, in no State was public sentiment educated up to the point of providing hospitals built on the basis of the propositions fast enough to relieve the wants of the insane within that State. Hence sprang the question of a separate provision for the chronic insane,

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and the agitation of this as against liberal provision for the few and almshouse neglect for the many, brought about an era of enlarged accommodation in palatial structures built on the Kirkbride plan greatly extended, for which in the paucity of my vocabulary I could find no better name than the cathedrals of lunacy. The rapidity with which this era culminated and declined was due to the exhaustion of the resources of the taxpayers without attaining the universal provision hoped. The provision was good as far as it went, but cost too much.

And before leaving it I did not fail to acknowledge how much we owe to the noble men and women in all the past for the work they did and the monuments they have left us. That Miss Dix was not mentioned by name for effusive gush, those who know her best will understand the reason. When we sit in sunshine it is not necessary to call attention to the light. Miss Dix's labors for the insane ante-date in their inception by more than ten years the organization of our Association, and her triumphal progress from State to State, speaking hospitals into existence, was outside of our poor propositions, and for its fame depends not on our sufferance, asks not our comment, and neither Dr. Gray nor the writer can add to or detract from its merit by our fulsome eulogy.

And then I turned from what was accomplished and completed to the hopes in the dawning of a new era not yet finished, when hospitals no longer limited in numbers, or restricted to one plan more than a generation outgrown, might by simple structures as detached wards, buildings suited to varying conditions of life and disease, by common dining halls, by departures in arrangement, by less expenditure for gratings than for roses suggesting homes more than prisons, with the support of a discriminating and judicious charity that never faileth, at last to make provision for all the insane. Yet not claiming, only hoping it. And so, granting much, asking something, hoping more, the memorial ended. As Dr. Gray most pertinently asks, "Is all this new which Dr. Godding has

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said?" No, nothing new, only the old truths with which we were all familiar, and not too plainly dressed in their Quaker garb even for that holiday occasion. Intended as home truths with a lesson for every day, I am glad the Doctor takes their lesson so much to heart. The good man may have gone wrong in being a little rough on me:

> **"O, it is excellent**
> **To have a giant's strength, but it is tyrannous**
> **To use it as a giant."**

To ridicule an argument is not necessarily to answer it. It is a mistake to think that eminent dignity can put back the progress of events by simply standing still, and to suppose that ponderosity of character alone will outweigh established facts, is no less absurd than to imagine that true greatness consists in mere avoirdupois.

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Borderland Psychiatric Records, Continued.

PSYCHICAL CONCUSSION AND PERVERSION OF THE SELF-SENSE—ABERRATIONS OF SENSATION ASSOCIATED WITH PROBABLE LESION OF THE SYMPATHETIC SYSTEM.

By The Editor.

THAT there is a self-sense the writer is prepared, if the statement is gainsaid, to prove at another time, but not now. That sensory nervous filaments are associated with the ganglionic system in various parts of the body the reader as well as the writer are aware, and that there is a psychical concussion in which the intellectual area of the cerebral cortex shows the suffering of the sympathetic system, the melancholias of sudden shock, and other recognized forms of insanity prove, as well as the sudden insanity in somnic form and the post neuralgic mental aberration which have fallen under the writer's observations, but which lack of time forbids him to describe, abundantly prove.

The following description shows a state of nerve disturbance not altogether unfamiliar to the writer, but which he has not seen described. The case may be grouped with the Borderland Psychiatric Records published in The Alienist and Neurologist, for January, 1884:

December 27th, 1883.

Dr. C. H. Hughes—Dear Sir:—Four years ago and more, I endured a long siege of watching, nursing, anxiety and fatigue, succeeded by great and uncontrollable grief in the loss of my husband. In three or four days afterward I experienced a most sudden and violent change or revolution, a complete breaking up or giving way of the whole nervous system or inner man, and since that dark and sad hour I have never had a natural feeling or sensation. Everything is wrong, the whole sympathetic system

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seems completely paralyzed. Every feeling and sensation that make life is completely annihilated. I have not even the common sensations of hunger, thirst, or any sensation whatever of sleep. All is gone, and every act of my life is now purely mechanical. I, of course, take food, and sometimes have a kind of sleep, but entirely devoid of sensation or desire, and therefore painfully mechanical. My mind calls up every act, thought, or word of the past, and most cruelly tortures me for every failure or imperfection. It would be perfectly impossible to describe my singularly strange and insupportably torturous mental condition. Oh! it is a living death—all this combined with the darkest and deepest melancholia, but oh! it is more—far more than melancholia. There is a most dreadful and continual singing noise in my head, as of ten thousand insects at a distance, and then another noise as though a popping was going on in my head, this is *not* continual. My bowels move, but the actions are unnatural, and possess little or no odor. My kidneys move right often and but little at a time, and that little seems full of strong salt, so much so, as to stiffen my linen like starch. Dr. S—— told me I had diabetes also. No medicines have ever seemed to have any effect. I am 49 years old, and had just entered upon a "change of life" when all of these troubles came upon me.

Mrs. C———

In a similar state of feeling, nine months later, the same patient wrote to the accomplished medical superintendent of one of our State hospitals for the insane, who kindly referred the letter to me for my opinion.

We here give the conclusion of the letter, the omitted pages being a repetition of the history already given:

Oh! I cannot tell you how I have borne it so long—this is the strangest part of it all when it seems utterly impossible to endure the moments as they come. Oh! I have wept and prayed and importuned my Heavenly Father to let kind death relieve me, but no answer comes and every day is but a repetition of the past, for nothing breaks the awful monotony. My tears are like rivers and my prayers are continual and importunate. There is the most startling horror on my soul, and when I would end my sufferings death startles me. Any death would be more welcome than this existence. Food nor sleep do

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not seem to be essential to such an existence. When I take neither, I get along as well as when I have a little of each. I cannot engage in any of the duties or pleasures of life. I cannot have one moment's relief from my anguish, consequently cannot read, nor see, nor converse with a friend, nor with my own, dear, devoted children. There is a most terrible ringing and popping noise in my head; as of a thousand insects at a little distance. It never ceases for a moment, and a tremor is felt over the whole system. My trouble seems to originate in the head. My brain is so disturbed, and my head feels like a tight bandage was tied around it. When I lie down on the bed, I feel like I press it so hard, as though I would go through it.

Nothing has ever been done for me that has amounted to anything. Many suggestions have been made, but to no good. We have done the best we could and all we knew, but nothing has had any effect. The food I take does not seem to be taken up by the system, nor does it assimilate, nor so much as have odor.

I write to you for advice and counsel, for I am growing very feeble. Have you ever treated such a case? And do they ever yield to treatment? Can I ever hope to be natural again? Could you do anything for me, and if so, what would it cost me? Please let me have your best counsel and advice, and let me hear immediately. I have a large circle of friends and acquaintances and can give you references.

Mrs. C———

This patient should be under the care of a well regulated asylum, or in the hands of a physician in whom psychical influence and skill are so blended as to reinspire her with confidence and hope, and direct her mind from morbid introspection and foreboding. Her present home and surroundings are not the proper place for her. General practitioners who try to treat such cases as these at their own homes, will have only failure for their pains. In intensified form they are quite familiar to insane asylum physicians, and the best term by which to designate them is psychical concussion and sensory aberration.

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A Case Record in Forensic Psychiatry.

JOHN B. HOFFMANN:

ARRAIGNED FOR THE MURDER OF HIS SON, JANUARY 12th, 1883, FOUND GUILTY AND SENTENCED TO HANG, JUNE, 1884.

By H. Illoway, M. D., Cincinnati.

THE defense was insanity. As related in the history that follows, the lawyers who had charge of the case at first, did not try it; two others were appointed. From some cause or other the most important facts, the hallucination of long standing and other peculiarities and incidents, the fact that a sister of the prisoner is an inmate of an asylum, were not brought out at all. It is not my purpose to refer to the legal side of the case; it was, however, necessary to say what I have said above that the reader may understand why he finds such statements here, as "persons here who knew the parents well state." "I have been informed by a responsible party," &c., instead of testimony taken in court. I was called for the defense and testified that the prisoner was insane, an hallucinated person, or to speak with the older psychiatrists, a monomaniac. As some other physicians (without an examination of the prisoner) testified to the contrary. I deem it my duty to make public the grounds for my testimony.

The law of Ohio provides as follows:—

"When the attorney of a person indicted for an offense "suggests to the Court in which the indictment is pend- "ing, at any time before sentence, that such person is not "then sane and a certificate of a respectable physician to "the same effect is presented to the Court, the Court

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"shall order a jury to be impaneled to try whether or "not the accused is sane at the time of such impanel- "ment, etc.—*Revised Statutes of Ohio, 1880, Chap. V., Sec. 7240.*

Some time in February, 1884, I was requested by the attorneys of John B. Hoffmann, who then had charge of the case by appointment of the Court, to examine into the condition of the above-mentioned prisoner.

John B. Hoffmann is sixty-two years of age, a clothing cutter by profession. He is about five feet six inches in height; very spare in flesh; his face rather small and thin; hair turning gray, beard also. No evidence of alcoholic excesses (perhaps due to forced abstinence by long imprisonment). In good health at present.

Since his confinement in jail he has been ill twice, and was sent on both occasions to the Cincinnati Hospital. The following letter from Prof. Jos. Eichberg, M. D., explains his condition at that time:—

CINCINNATI, July 23, 1884.

DEAR DR.—In answer to your note of yesterday, would say that John B. Hoffmann was treated for scurvy at the Cincinnati Hospital on two successive occasions. He was at the time of his first admission suffering from melancholia, but did not receive any treatment except general tonics, mouth wash, etc, to relieve the local symptoms.

Very Respectfully Yours,

JOSEPH EICHBERG.

The subject uppermost in his mind is his trouble. He is very depressed, weeps while relating his griefs and looks upon himself as a much injured man. In speaking of his trouble he declares openly that he murdered the young man. No attempt at palliation; no effort to make believe that he was, or is, out of his mind, or that he was, at the time, laboring under the influence of alcohol. The reason he assigns for killing the young man, and which it seems is to him all sufficient and gave him the right of disposing of the young man's life, is, that he was a bastard. "I killed him; I could not help it; he was not my son; he was a bastard," is his extenuation.

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This is his history as related by him; a story of his life in America:

He was an honest, hardworking man in New Orleans, (whither he emigrated from Germany, and the place where his troubles began back in the fifties,) a tailor by occupation. He had a little shop and worked hard day and night to support his wife and child. A Frenchman by the name of Dobieu, a man of philanthropic instincts who lived opposite to him and had taken an interest in him on account of his hard work, his steadiness and his probity, out of pure human kindness supplied him with funds and thereby enabled him to open a fine merchant tailoring establishment. He did a good business, was prosperous and happy. By chance he one day became acquainted with a countryman of his, a fellow by the name of Kirchner. He invited him to his home and fed him and treated him well. After a time it became rumored about that his wife was unduly intimate with Kirchner, and neighbors and friends would ask him what was going on at his house. For the sake of his newly established business, which was flourishing, he paid no attention to the rumors and kept his peace

Thus time rolled on. About five years after he had first introduced Kirchner into his house, a friend of his, a physician, Dr. Hegewish, asked him how it happened that every day, in the early morning hours, a man left his house. As he occupied but two rooms he supposed he knew what was going on therein, and therefore denied that such a thing occurred. But his friend insisted upon the truth of his assertion, and suggested that perhaps his wife gave him something to smell that rendered him unconscious. This, with the rumors that had been coming to his ears, with the frequent inquiries of neighbors into his family matters, made such a strong impression upon him that he determined to investigate. Accordingly that night before retiring he stuffed his nostrils, unobserved by his wife, with bread crumbs, so as to preclude the possibility of his inhaling anything. He remained awake and

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watchful though pretending to sleep. Late in the night towards eleven o'clock, he observed his wife take a bottle containing a clear fluid from under her pillow and hold it to his nose. Soon thereafter the paramour came in; his wife set out a bountiful supper and they ate and were very merry. Once the lover asked whether he, Hoffmann, was asleep, and the wife with a merry laugh replied "that chap is fast asleep." Having enjoyed themselves, they undressed and retired together to the same bed in which he, Hoffmann, was lying. Then he roused up, made a terrible scene and the paramour fled in haste. He now tried to get possession of the bottle containing the inhaling fluid, but in the struggle for it between him and his wife, it was broken. The next morning he wanted his wife to leave him, he would take care of the children, but she would not. In spite of all his warnings and threats to leave her, she kept up her illicit relations with Kirchner, and learning that he would come in for some money from some relatives in Europe, she went through the form of a marriage ceremony with him. Later on Kirchner died and she claimed his European inheritance, sending out documents representing her as his wife. Two of her neighbors, women, discovered the fraud and threatened to inform on her, and she bribed them into silence by giving them one thousand dollars apiece. She claimed that he, Hoffmann, was the cause of Kirchner's death, or had perhaps killed him, and threatened that she would repay him therefore, at sometime or other.

She had all of his (Hoffmann's) money, twelve thousand dollars earned by hard and steady work, and carried it around with her in her bosom.

Matters went from bad to worse with him in New Orleans; his business was broken up, his peace destroyed and he concluded to remove to New York. In May, 1863, he left New Orleans and went to New York. Not finding work there, he left with his family for Cincinnati. At Bellefontaine, Ohio, his money gave out and he could

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get no further; accidently he met a countryman, borrowed five dollars of him and proceeded on his way to Cincinnati. His wife knew at the time that he was out of money, and, though she had four thousand dollars of his hard earned money with her, she would not give him a cent to help him along.

He came to Cincinnati in 1864, and found work at good wages, and supported his family handsomely. He was here but a short time when the same troubles, that had driven him from New Orleans, arose. His wife prostituted herself again and carried on so shamefully that the people with whom he lived (and he refers to persons now living) asked him what was going on in his part of the house. His wife would take a pillow out into the hallway and there carry on her shameful orgies, her paramours, two and three at a time, coming to her through the skylight over the hall. They would help each other down. She infected him with a veneral disease, and Dr. Fishburn (a highly-respected physician of this city) treated him and cured him of it. She attempted to poison him. One evening coming home from work he found prepared for his supper a dish (*blutwurst und sauerkraut*) of which he was particularly fond. Soon after eating he was seized with violent cramps and vomiting. He sent for his physician Dr. Fishburn. The doctor prescribed for him, and in going down said to a lady (now living), who then lived in the same house, "there must be something wrong in Hoffmann's family; he is in a very bad condition." He recovered, however, and subsequently his wife confessed that she had poisoned him with oxalic acid.

In the year 1878, in the month of May, he made an attempt upon the life of his wife with a revolver. His oldest son, who interfered to prevent the murder, was accidently shot and died. He deplores the death of this son, who was his own flesh and blood, and weeps at the recollection of the tragedy. This, his oldest son, was a good boy and always treated him well. He relates that in 1878

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he had attempted suicide by hanging, but was cut down before life was extinct. "I wish they had not interfered with me then and I would not be in my present trouble now."

In 1880 he left his family altogether, wandered about the country, working now here now there, and gradually drifted down as far as New Orleans. He returned from New Orleans and shortly thereafter murdered his second son, Kirchner's bastard as he calls him, as related above.

* * * * * * *

This story as related by Hoffmann is singularly connected and is told by him in such a plain, unvarnished manner, with such deep feeling that the listener is greatly moved thereby. It is the recital of a martyrdom.

And still there is not an iota of truth in the whole story. Sworn testimony taken in New Orleans expressly contradicts his statement as to what occurred there. He never had a merchant tailoring establishment. The philanthropic Frenchman like Manso, the guardian angel of Tasso, is only a creature of his imagination. He never had any wealth; he never *even* had a large sum of money. The incidents said to have occurred in Cincinnati are equally imaginary. No such thing, as he relates, occurred in his house; this is testified to by his co-tenants, and the very persons to whom he himself refers. He was never infected with any venereal disease, so far as Dr. Fishburn can recollect. The Doctor is positive he never treated him for any such ailment; he is equally certain that he never treated Hoffmann for poisoning, and therefore did not say what is attributed to him by Hoffmann as mentioned above.

His wife is a very plain looking, hard-working woman, to whom this world has been a vale of tears. Her griefs have left their indelible impress upon her countenance. Her character is the very best, as is testified to by people who have known her for years as co-tenants of the same house, neighbors and friends. She has worked hard, day and night, to raise her family, to clothe them, to feed

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them and to educate them. And she has raised them well; they are praised as good children. She has paid all the expenses of the family, and owes no person anything; even when her husband left her and went away she paid his debts contracted to that day. The greatest burden she has had to bear have been the vagaries of her husband.

As to him, Hoffmann, the testimony is rather conflicting. Some who knew him well describe him as a shiftless sort of a fellow addicted to drink, and using up all his earnings for this purpose. Others say quite differently. One witness in particular, a gentleman, an artist, informed me that he had frequently met Hoffmann previous to the year 1876 in the evenings at some beer saloon; that they conversed frequently upon many topics, and that he, Hoffmann, seemed to be a very well-informed person. In 1876 the artist went to Europe and was gone for some years. When he again saw Hoffmann he found him greatly changed; he was now shiftless, addicted to drink and rather irrational in his talk.

At places where he worked as cutter he was regarded as "cranky." Meeting accidently a gentleman in whose employ Hoffmann had been some years ago, I asked him, casually, whether he recollected ever having a man by the name of Hoffmann in his employ. "What!" he answered, "that crazy man?" And then related a rather peculiar act of his in connection with his employment. Various other queer doings of his, in different places where he worked, are related of him by fellow-workman.

* * * * * * *

From the foregoing it is clearly seen that the man labors under an hallucination—his wife's supposed infidelity and her retention of his imaginary wealth. This hallucination has gradually grown upon him and waxed stronger. The enmity and bad feeling thereby engendered towards his wife would, in the natural course of events, extend to the children, or to any one particular child, if the child or children sided with the mother. In

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this particular case the son had always sided with the mother, and on one occasion ordered Hoffmann out of the house.

The idea of his wealth was a fixed one with him. He abandoned his wife because she was unfaithful; but his money, his hard earned savings, which his dishonored wife carried around with her in her bosom, this he must have, and he made one last effort to obtain it peaceably. Shortly after his return from New Orleans he called upon Mr. H. Goebel, an attorney,* with whom he was well acquainted, and asked him to go to his (Hoffmann's) wife and demand of her, and make her surrender his money—seven thousand dollars. The lawyer paid no attention to the matter, knowing, as he says, that "Hoffmann never had any money." Hoffmann called on the lawyer several times reiterating his request, but seeing that the latter would do nothing for him he ceased coming. Mr. Goebel also states that he intended to inform Mrs. Hoffmann to *be on her guard* as Hoffmann had returned, but from some cause or other he neglected to do so. A few days thereafter the killing occurred.

The culmination of all this imaginary suffering, these wrongs inflicted upon him, and lastly what perhaps had greatest weight with him and affected him mostly, the retention of his money which he had made a last effort to obtain peaceably, was a *delirium*, a delirium of persecution, and in the natural order of things there remained but two alternatives: suicide or murder. He committed the murder.

In judging of a person's sanity or insanity, there is one point that is of the greatest importance and is of great aid in arriving at an opinion, and that is the family history.

What is the family history of the prisoner? By authentic documentary evidence from the authorities of his native town, wherein his parents lived and where he was born, it is officially certified that his father was of

* The present Republican Candidate for Probate Judge

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decidedly irritable temperament, flying into an uncontrollable passion on the slightest provocation. His brother's character was like that of his father.

In the prisoner these characteristics were exaggerated to a high degree. Already in his early youth he was very nervous, very irritable, and over a trifle that displeased him he would go into such a rage and fury that, oblivious of his surroundings and of all consequences, he would do the utmost.

Persons here who knew his parents well, state that the father and mother were both eccentric, and were known all around the district as the "crazy Hoffmanns."

One sister, as I have been informed by a responsible party, is completely demented, and has been confined in an asylum in this country for the last thirty years.

Here we have clearly shown the seed that have borne such bitter fruit. The neurotic temperament in his family is demonstrated. His father, though not insane, was no doubt on the verge of it. Prof. Ball (the eminent French psychologist,) in a lecture on the "Frontiers of Folly,"* calls eccentrics semi-alienated. In his sister the hereditary taint reached its climax in complete dementia. He, the prisoner, is hallucinated. Therefore, in this case, there can be no question of his insanity. He is a monomaniac.

In the lecture above quoted, speaking of hallucinated persons, Prof. Ball says:

Without doubt in the majority of cases the hallucinations are only a symptom of the mental malady that dominates the situation, but it happens sometimes, it happens frequently, that these sensorial troubles become the cardinal points of the insanity, the real source of the delirious conceptions. The patient thus becomes insane because he was subject to hallucinations.

In the new hand-book of mental diseases by Dr. Bra,† in the chapter on hallucinations the author says: "The hallucinated form a class of *very dangerous patients.* Treating of the duration of the malady, he says: "The duration

* La Tribune Medicale (Paris), No. 755, 1883; "Les Frontieres de la Folie," Cours de M. Ball.

† Manuel des Maladies Mentales, par Dr. Marie Bra, Ancien Interne, St. Anne, Paris 1883.

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of hallucinatory troubles is, in the great majority of cases co-equal to the existence of the life of the individual—the prognosis is, therefore, certainly an unfavorably one." Further on in the chapter on treatment it is stated: "It is of the greatest importance to surround the hallucinated patients with the most rigid surveillance so as to prevent any attempts at *suicide* or *homicide*. Generally the time comes when incarceration in an asylum becomes an absolute necessity."

* * * * * * *

In accordance with the results of my examination of the case and the argument thereto appended, I certified to the court. Meanwhile, a storm passed over our city, the court-house was burned and many things were changed. The lawyers who had been first appointed to the case went out of it and two others were appointed, and he was tried under the indictment for murder. For the reasons already given, which I believe are ample and supported by good authority, I testified in court that John B. Hoffmann is insane.

I believe he is incurably insane and should be placed in confinement for the period of his natural life.

APPENDIX.

After his trial and condemnation I visited him again, July 21st. His demeanor was more cheerful than on my first visit; a smile was on his face and he seemed in good humor and well satisfied with himself; he was being fed much better now, he said.

He conversed cheerfully and intelligently on indifferent topics, and displayed a good memory. I asked him in what year he left New Orleans? He answered in 1863. "You must have been there in Butler's time?" "Oh yes," he said. "We all had to take the oath again; though we Germans were always Union men and loyal, we still had to swear allegiance again to the United States."

I asked him whether any of his family came to see

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him? He said no, he had not seen any of them since the trial; he was very anxious to see the children. A little while before I came in, he had asked the jailer whether he could not take him home to see his family. Referring to his wife he said he did not want to see her any more—a woman who, for five long years, chloroformed her husband that she might carry on her nefarious practice. She had made him miserable. She had executed her threat to be revenged on him for the death of Kirchner.* She had made him impotent. She had accomplished this by making him drink of her menstrual fluid.† When he died he wanted the doctors to open him and examine him internally; he was positive they would find a terrible state of things. He requested me to see that this was done. Referring once more to the story of his having been poisoned, he said: "One evening I came home from work and, while eating my supper, my wife asks me how do you stand with your lodges? [He, Hoffmann, belonged to several orders, seven or eight, paying life insurance.] I told her it was none of her business; what did she want to know for? 'Oh,' she said, 'I merely asked out of curiosity.' I told her I was in good standing in all of them. The next evening thereafter, she poisoned me, but Dr. Fishburn saved my life." I asked him whether he still belonged to the lodges? He said, "No, I do not; but I left them like a respectable, honest man. I paid up everything and then resigned."

Speaking of his lawyers, he said: "The last two are gentlemen, and did all they could for me; but the first two, especially Mr. —— [referring by name to one of them, a German] did not do right; but I know why; my wife bought them up. She has fifteen thousand dollars of my hard earned money, and she paid them well. Why did they not bring my witnesses? They say they are dead; I can prove by letters, received from them, they are

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* This threat he mentioned above.

† This must be some popular superstition. He asserts that many doctors told him that his impotency and ailments resulted from this.

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not dead; Dr. Hegewish is at Matamoras. But my wife paid them and they would not get them.

"I hope I may get a new trial; but if I am to hang I should like to accomplish one thing first, I want to show up my wife's true character. It is true I killed that young man, but he was not my son, he was a bastard."

I asked him when it was he had attempted suicide? He smiled and said: "That is a foolish story. I read it in the papers at the time; it is not true; I am an honest upright man and it is against my principle to do any such thing. Why, if I wanted, I could hang myself here."

* * * * * * *

It is unquestionable that we have here as well-defined a case of monomania as can be found in any of the records on that subject.

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PROCEEDINGS

OF THE

THIRTY-EIGHTH ANNUAL MEETING OF THE ASSOCIATION OF SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE.

The Thirty-eighth Annual Meeting of the Association was called to order at 10 o'clock A. M., Tuesday, May 13th, 1884, at the Continental Hotel, Philadelphia, Pennsylvania, by the President, Dr. John P. Gray.

Members present during the session:

J. B. Andrews, M. D., Asylum for the Insane, Buffalo, New York.
J. P. Bancroft, M. D., Asylum for the Insane, Concord, New Hampshire.
W. J. Bland, M. D., Hospital for the Insane, Weston, West Virginia.
J. P. Brown, M. D., Lunatic Hospital, Taunton, Massachusetts.
W. T. Browne, M. D., Asylum for the Insane, Stockton, California.
R. M. Bucke, M. D., Asylum for the Insane, London, Ontario.
D. R. Burrell, M. D., Brigham Hall, Canandaigua, New York.
John H. Callender, M. D., Hospital for the Insane, Nashville, Tennessee.
H. F. Carriel, M. D., Hospital for the Insane, Jacksonville, Illinois.
George C. Catlett, M. D., Lunatic Asylum, St. Joseph, Missouri.
Walter Channing, M. D., Brookline, Massachusetts.
John B. Chapin, M. D., Willard Asylum for the Insane, Willard, New York.
R. H. Chase, M. D., State Hospital for the Insane, Norristown, Penn.
Edward Cowles, M. D., McLean Asylum for the Insane, Somerville, Mass.
John Curwen, M. D., State Hospital for the Insane, Warren, Penn.
A. N. Denton, M. D., Asylum for the Insane, Austin, Texas.
R. S. Dewey, M. D., Eastern Hospital for the Insane, Kankakee, Illinois.
Pliny Earle, M. D., Lunatic Hospital, Northampton, Massachusetts.
O. Everts, M. D., Cincinnati Sanitarium, College Hill, Ohio.
Theo. W. Fisher, M. D., Lunatic Hospital, Boston, Massachusetts.
T. M. Franklin, M. D., City Lunatic Asylum, Blackwell's Island, N. Y.
J. Z. Gerhard, M. D., Pennsylvania State Lunatic Hospital, Harrisburg, Pennsylvania.
W. W. Godding, M. D., Government Hospital for the Insane, Washington, D. C.
John P. Gray, M. D., State Lunatic Asylum, Utica, New York.
Eugene Grissom, M. D., Insane Asylum, Raleigh, North Carolina.
John C. Hall, M. D., Friends' Asylum for the Insane, Frankford, Philadelphia, Pennsylvania.

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Charles J. Hill, M. D., Assistant Physician Mount Hope Retreat, Baltimore, Maryland.
S. Preston Jones, M. D., Pennsylvania Hospital for the Insane, (Department for Males,) Philadelphia, Pennsylvania.
Alfred S. Livingston, M. D., Wa-Wa, Delaware County, Pennsylvania.
P. L. Murphy, M. D., Western North Carolina Insane Asylum, Morganton, North Carolina.
Charles H. Nichols, M. D., Bloomingdale Asylum, New York City, N. Y.
George C. Palmer, M. D., Asylum for the Insane, Kalamazoo, Michigan.
J. Willoughby Phillips, M. D., Assistant Physician, Burn Brae, Kelleyville, Pennsylvania.
T. O. Powell, M. D., Asylum for the Insane, Milledgeville, Georgia.
A. B. Richardson, M. D., Asylum for the Insane, Athens, Ohio.
D. D. Richardson, M. D., Department for the Insane, Almshouse, Philadelphia, Pennsylvania.
J. D. Roberts, M. D., Eastern North Carolina Insane Asylum, Goldsboro, North Carolina.
Ira Russell, M. D., Highlands, Winchendon, Massachusetts.
John W. Sawyer, M. D., Butler Hospital for the Insane, Providence, R. I.
S. S. Schultz, M. D., State Hospital for the Insane, Danville, Pennsylvania.
A. M Shew, M. D., Hospital for the Insane, Middletown, Connecticut.
George S. Sinclair, M. D., Assistant Physician, Hospital for the Insane, Halifax, Nova Scotia.
E. E. Smith, M. D., Assistant Physician, Asylum for the Insane, Morris Plains, New Jersey.
Henry P. Stearns, M. D., Retreat for the Insane, Hartford, Connecticut.
J. T. Steeves, M. D., Provincial Lunatic Asylum, St. John, New Brunswick.
J. Strong, M. D., Asylum for the Insane, Cleveland, Ohio.
H. A. Tobey, M. D., Asylum for the Insane, Dayton, Ohio.
George B. Twitchell, M. D., Keene, New Hampshire.
J. M. Wallace, M. D., Asylum for the Insane, Hamilton, Ontario.
John W. Ward, M. D., State Lunatic Asylum, Trenton, New Jersey.

The Secretary read the following letter from Dr. A. P. Tenney:

TOPEKA, KANSAS, May 9th, 1884.

Dr. JOHN CURWEN, Secretary, &c.

DEAR SIR:—As I am unable to participate in the gathering of Superintendents on the 13th, and as I understand Dr. Knapp will not be there, it seems to me that Kansas, now ranking among the first as an agricultural State, should be heard from as to the prosperity of her institutions for the insane. Our present population is not far from one million two hundred thousands. The growth of the State this year is estimated as likely to be one hundred and fifty thousands. The proportion of insane is about one to one thousand population, or not far from twelve hundred insane in the State. The asylum at Osawatomie, for some years and at present in charge of Dr. A. H. Knapp, has about four hundred and twenty patients. The Topeka institution has two hundred and fifty-nine. A building will be completed this year which will give room for two hundred and fifty more, which with the six hundred and seventy-nine now in the two asylums will

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by that time leave nearly four hundred outside of asylums. The State has, however, for some years, made appropriations for all who are refused admission to the asylum for want of room, and has manifested a purpose to care for all of this class in the State.

Two hundred and ninety-nine applications for admission have been made since July 1st. One hundred and eleven have received letters of admission to Osawatomie, one hundred and forty-three to the Topeka Asylum. Seventy-five have been discharged recovered from this institution during the same ten months, and twelve only have died. I have not the figures of restoration and death for Osawatomie Asylum.

The last Legislature appropriated about two hundred thousand dollars for additional room and other improvements. We have erected a new building for kitchen and bakery, boiler-house and laundry, which are now nearly ready for occupation. These take the place of temporary buildings erected five years ago, and are quite well suited to the needs of a large institution. The work of fitting up with new furniture and machinery keeps me closely at home and from meeting you at this time.

My dear friend and earliest teacher in the care of the insane, Dr. C. A. Walker, will be missed by you all. You will remember of our riding together at the St. Louis meeting eight years ago.

Pardon me for writing so much. Wishing you all a profitable and cheering meeting, I am, Yours truly,

A. P. TENNEY.

A letter was also read from Dr. A. E. Macdonald assigning reasons why he could not attend this meeting.

On motion of Dr. Chapin, Mr. D. A. Ogden, one of the Trustees of the Willard Asylum, was invited to take a seat with the Association.

The same courtesy was extended, on motion of Dr. Palmer, to Dr. Foster Pratt, Trustee of the Insane Asylum at Kalamazoo, Michigan; on motion of Dr. D. D. Richardson to Mr. P. C. Garrett and Dr. A. J. Ourt of the Committee on Lunacy of Pennsylvania; and on motion of Dr. Steeves to Dr. LeBaron Bottsford and Hon. A. G. Blair, Commissioners of the Asylum at St. John, New Brunswick.

On motion of Dr. Curwen, it was

***Resolved*, That the Committee on Lunacy of the State of Pennsylvania be invited to attend the sessions of the Association.**

Dr. Curwen then offered the following resolution:

***Resolved*, That in the death of our fellow-member, Dr. Thomas S. Kirkbride, this Association has lost one of its ablest associates, who, during the whole period of its existence had given to it most earnest and devoted**

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thought and attention, and whose counsels were always wise, cautious and most enlightened.

A kind, warm-hearted and sympathizing friend, a faithful and prudent counsellor, a genial and cheerful companion, and a most able, laborious and devoted physician and superintendent; no one who was privileged to know him in these relations can fail to feel the great blank which has been made by his removal.

Privileged to continue in active, continuous service longer than any other member, his latest thoughts were given to the consideration of those things which would most benefit those for whom, for more than forty years, he had thought and labored.

DR. CURWEN: I move, also, that the President appoint a committee to prepare a memorial of Dr. Kirkbride, to be preserved in the minutes of the Association.

DR. GRAY: The resolution is before the Association.

Dr. Nichols paid a brief but warm tribute to the high personal character and valuable labors of Dr. Kirkbride.

DR. GRISSOM: Mr. President—In this connection I desire to lay before the Association a resolution adopted by the Board of Directors of the North Carolina Asylum at Raleigh. Dr. Kirkbride's reputation, fame and service, outside of the State of Pennsylvania, are, perhaps, nowhere better appreciated than in the State which I represent. During his career, he not only had a large number of patients from that State, but was always ready to aid by wise counsel in matters pertaining to the provision for and treatment of the insane.

The resolutions were then read by the Secretary as follows:

Whereas, The Board of Directors of the North Carolina Insane Asylum have heard with deep regret the announcement of the death of Dr. Kirkbride, therefore, be it

Resolved, That the Board desires to express and record its sense of appreciation of the eminent services rendered to humanity by Dr. Kirkbride, during his half century of service as superintendent of asylums for the insane.

That the unfortunate insane have been deprived of a great, kind and tireless friend, and the managers of asylums of a wise benefactor and teacher.

That a copy of these resolutions be sent to the family of the deceased as a mark of condolence for their personal bereavement, to the authorities of the Institution over which he presided with such signal success, and to the Assembly of Superintendents soon to meet.

NORTH CAROLINA INSANE ASYLUM,
RALEIGH, N. C., May 5th, 1884.

DR. GRISSOM: Mr. President and Gentlemen of this Association—When the garlands of remembrance are hung at the door of the tomb of such a man as Dr. Kirkbride, the State which I have the honor to represent thinks it eminently proper that a spray of cypress should be offered

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from the South. It is good for us to pause and reflect upon the lesson which his example teaches, and to think of a life which for more than half a century was the sweet, serene pathway of a good man, intent upon his duty, with a heart warm with love for his fellow-men, and a spirit as true to the demands of virtue and honor as the needle to the pole. It is almost an act of supererogation to speak in this or any other community of Dr. Kirkbride's fame. His name in medical annals and councils has long been honored as a household word; and his memory around thousands of firesides will be cherished with the veneration of a Roman's reverence for his household god. This sun in the firmament of our specialty, whose bright and brilliant rays in the early morn of its career scattered wide and far the mists of mental gloom, and which shone with genial and gentle warmth through the long summer day, unobscured by a single cloud, has at last calmly and majestically set, leaving a surrounding afterglow, soft and beautiful, lingering upon the horizon of its career reluctant to vanish from the scene of its glory. Let us thank God that we have been permitted to witness this example of greatness and goodness, shining through such a long life of usefulness and unselfishness. Let us honor the memory and practice the virtues of this sage, who moved among his followers like a genius, holding the volume of accumulated wisdom and dispensing with a modesty all his own, from the abundance of that knowledge which experience collects and diligence preserves. We are wont to praise the gallant mariner who rescues a drowning man; Grace Darling will live forever in story and in song; but how can pen or tongue tell the tale of this gray-haired hero, whose career was one life-long struggle to save from despair those imprisoned spirits upon whom the world had already set the gravestone of oblivion?

"To dumb forgetfulness a prey."

Think how this man of delicate frame and soft and gentle speech stood for a lifetime on the ocean side of misfortune where the mental wrecks of numerous victims were tossed by the waves, and with cool head and unshrinking nerve rescued from destruction their frail barks and wafted them once more with Reason at the helm and Hope at the prow, to seek yet again a prosperous voyage and a peaceful haven. Clothed and in their right minds, those to whom the precious jewels of man's inheritance have been restored, bring to-day the brightest gems that sparkle in their mental crown, to adorn the shrine of Kirkbride's fame. His mission was at last ended. He died, but not unexpectedly. He kept his lamp trimmed and oil burning, for the coming of the bridegroom. He cherished a constant remembrance of another life than this, another judge than man, another ordeal than human opinion.

He did his duty at all times, in all places, to all men, and he enjoyed a wealth of noble thoughts, memories of noble actions and hopes of a noble felicity. We have on this occasion mingled emotions of sorrow and gladness. We mourn that Dr. Kirkbride is dead; we rejoice that Dr. Kirkbride *can never die.* That omnipotent Providence which overrules our destinies has only removed from this to a higher state of existence a good man, a kind father, a loving husband, a faithful friend, a pure patriot, a distinguished philanthropist, an eminent physician, a sincere Christian. In

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this dispensation we lose a companion, his family a protector, the poor a benefactor, the afflicted a comforter, society an ornament, philanthrophy an instructor, the profession a votary, religion an exemplar. But our temporal loss is his eternal triumph. So dear to him did the path of duty become, from long years of faithful habit, that as age gently withered his strength he tottered on toward honor and immortality. He went down to the grave calmly and without a fear. His example will teach on earth while his spirit rejoices with God.

Dr. Earle: As I cannot trust my organs of speech upon such an occasion, I wish simply to say that I entirely and most cordially approve of the resolution and the remarks that have been made.

Dr. Gray: Gentlemen of the Association—Before putting this motion I would like to add a few words to what has already been said in regard to Dr. Kirkbride. I first knew him more than thirty-five years ago, when I was a student in this city and was in a hospital here. I knew him then in association with other young men, as a friend of young men. With age, dignity and position, he was remarkably accessible to young men. It seemed to give him the greatest pleasure and satisfaction to advance them and encourage them. From that date to the time of his death I knew Dr. Kirkbride well as a friend, and the eloquent remarks of Dr. Grissom have appropriately portrayed the beautiful character of this distinguished physician and superintendent. As Dr. Grissom has said, he was delicate in person, apparently frail in physical structure, but he possessed a large spirit. He was a man of great energy, great vigor of thought and action, though generally quiet in his movements. He seemed to be a natural leader in his profession. Men followed him, listened to him, recognized him as a man of thought and reflection with a power of formulating his ideas distinctly and clearly, and of presenting them so plainly that I hardly recall an instance where his propositions were not accepted, because they were completed in his own mind before he presented them,—like the sculptor who fashions and perfects the figure before he unveils it to the world, so that they who see it hear not the sound of the hammer or chisel, nor see the dust produced in its formation, so Dr. Kirkbride wrought his work, fashioned in the mold of thought, and polished by experimental application, that it came perfect as from the hands of the workman.

When we look back through his history we must estimate him, not as though we judged him to-day, as though he had arisen now or within the last quarter of a century. It must be borne in mind he came upon the stage at a time when there was little that could be said in regard to the treatment of the insane. As we look back now we see that little had been done. We must go back with him as a man who framed (for he was one of its framers) the constitution, so to speak, under which this Association lives and acts. He was connected conspicuously with all the operations in organizing the Association, and with all of its fundamental resolutions and its great work from that day to this; his hand touched everything. More than this, in the institution to which he was so early appointed, years before the existence of this Association, he commenced the work of development of the structure of psychological medicine in this country,—building from within and building from without,—not alone a physical structure,

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but laying down principles for the guidance of those who might come after him. He was a progressive yet conservative man, with that self-poise which kept him from being carried away by seeming advances, and with that patience of judgment which led him to examine before approval or rejection, the ideas of others. He was among those who early recognized that the phenomena of disease were not made up from books, but only disclosed to the patient, toiling observer, in the light of experience.

He was himself a worker. The great utility of his life came from within; his aims were high and pure, and he urged his opinions with a simplicity and earnestness and unselfishness which made them not only unanswerable but irresistible. Any one reading the memorial of his life and work, traced by the hand and heart of his accomplished wife, through the long years of his usefulness, can not but be struck with the fact that he seems to have been associated with the origin and development of every advance made in the care of the insane. The narrative is, in fact, a compendium of the subject during the last half century, and Dr. Kirkbride stands as a foremost figure, especially in all that relates to the practical work accomplished in providing and organizing institutions of this class for our fellow-men.

As Dr. Grissom has said, he was not a man of this State nor of this great and good city; he was a man of the world—whose name is written in every State and in every country in the characteristics which Dr. Grissom has so eloquently portrayed. A man of strong, firm character, of great decision of will, of sound judgment, of high purposes; he was withal, the gentlest of men. He had a sweetness of manner which was like that of a woman, a tenderness of spirit which reached every man he met, and I venture to say there was no man with whom he came in contact that did not feel this. So he goes to rest! But, as Dr. Grissom has well said, "Dr. Kirkbride can never die." His name will never perish from the earth while medical science and humanity have to consider the great questions which pertain to man and his welfare in this world and which reaches on towards the world to come.

DR. GRAY: Gentlemen, you have heard the resolution of Dr. Curwen. Those in favor of the resolution will so signify by rising.

The resolution was unanimously adopted.

On motion of Dr. Nichols, it was

Resolved, That the Secretary be directed to forward to the Directors of the North Carolina Insane Asylum the appreciation by the Association of the spirit which dictated the resolution in regard to Dr. Kirkbride.

On motion of Dr. Nichols, it was

Resolved, That the Secretary be requested to communicate to Mrs. Kirkbride so much of the resolution just adopted by this body as relates to her late husband, with the expression of the sympathy with which this Association unites with his kindred in lamenting his death and honoring his memory.

The President announced the regular Standing Committees, as follows:

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On Nominations: Drs. Chapin, Grissom and Palmer.

On Time and Place of Next Meeting: Drs. Everts, Steeves and Powell.

To Audit Treasurer's Account: Drs. Bucke, W. T. Browne and Catlett.

On Resolutions: Drs. Callender, Stearns and Strong.

On motion of Dr. Nichols, a recess was taken until 12 o'clock.

On the re-assembling of the Association, Dr. Everts said:

Mr. President: During the proceedings of the morning in relation to Dr. Kirkbride, I presume many other members of the Association, like myself, felt that silence was a more satisfactory expression of their feelings than anything else, and the matter passed without such notice as, I think, becomes this Association. I therefore move that a committee of three be appointed to whom shall be referred everything, in memoriam, respecting Dr. Kirkbride, and I wish distinctly to decline any place on the committee myself.

The motion was seconded by Dr. Nichols and unanimously agreed to.

Dr. Gray: As Dr. Everts has distinctly declined to be a member of that committee, the chair would name Dr. Curwen, Dr. Nichols and Dr. Callender, as such committee. It is also understood, I believe, that Dr. Earle and others will communicate in writing to the committee what they desire to say in regard to Dr. Kirkbride.

The Committee on Nominations reported that they would recommend for President, Dr. Pliny Earle of Massachusetts, and for Vice President, Dr. O. Everts of Ohio.

On motion of Dr. Nichols, it was

Resolved, That the report be accepted and that the acceptance carry with it the appointment of the officers of the Association.

The President then delivered his address, at the conclusion of which, he introduced to the Association his successor, Dr. Pliny Earle.

Dr. Earle on taking the chair said:

To all of us, gentlemen, this is an interesting occasion. The coming together at our annual meeting, the grasping the hands of friends, the mutual looking once more, eye to eye, upon familiar countenances, the renewal of old friendships and the formation of new ones, and, above all, the hope that we may here gain something which shall assist us in our laborious duties at home, all these conspire to make this gathering abundantly in-

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teresting to every one of us. But you will pardon me if I claim that it is more overwhelmingly so to me than it can be to any other person now present. As I look around me I recognize the form and features of no one of my compeers, who, forty years ago, assembled in this city, upon this street, and but two or three squares below us, to form this Association.

Many of you, gentlemen, were then in your cradles; several, perhaps, were in their first swaddling clothes, and some were but the dim shadows of the accidental or the incidental possibilities of the future.

With me, and the companions of forty years ago, it is but the repetition of history or fiction, the history of the fiction of the old dinner party of thirteen men who met annually until at length the thirteenth one sat, sad and solitary, at his anniversary meal. And this repeated story is now nearly told. Under these circumstances, to me sufficiently suggestive in themselves, gentlemen, you have come with an offering, the addition of which is, as a matter of sentiment, like the laying of the last sustainable straw upon the camel's back. Not longer to detain you, I simply and from the innermost recesses of my heart render to you my thanks.

The Committee on Business made the following report, which was, on motion, adopted:

The Committee on Business respectfully present to the Association the following report:

Hold meeting for business on Tuesday, from 3 to 6 P. M.

On Wednesday hold meeting for business from 10 A. M. to 1 P. M. At 4 P. M. visit the meeting of the Medical Society of the State of Pennsylvania. At 8 P. M., attend the reception of the President of the Medical Society of the State of Pennsylvania.

On Thursday hold meeting for business from 10 A. M. to 1 P. M. At 2 P. M. leave for a visit to the Friends' Asylum at Frankford, returning at 6.

On Friday hold a meeting for business from 10 A. M. to 1 P. M. At 2 P. M. visit the Department for Males of the Pennsylvania Hospital for the Insane, by invitation of the Board of Managers, returning at 6 P. M. At 8 P. M. hold a meeting for business.

On motion, the Association adjourned to 3 P. M., when it was called to order by the President, Dr. Earle.

The committee to audit the report of the Treasurer's account reported that they had examined the accounts, compared them with the vouchers and found them correct, and a balance on hand of six dollars and twenty-five cents; and they recommend an assessment of five dollars on each member to meet the expenses of the Association.

The report was adopted.

DR. EARLE: Before we proceed to business I wish to trouble you a moment with a small matter. From my first entrance into the specialty,

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forty-four years ago, I have kept what reports I could get, and since I went to Northampton have requested of superintendents to send me two reports, as I have sent them two reports each, yearly. One set of these reports, which I have kept since I went to Northampton, is for the hospital; the other is for myself. I have given my set from the beginning to the American Antiquarian Society, whose large library is in Worcester, Massachusetts. It is, I suppose, the most nearly complete collection of the reports of the institutions for the insane in this country, with, perhaps, a single exception. I am not certain that it is not now the most complete. Ten years ago there was one collection which was larger. Those which I have already given to that institution are bound in over a hundred volumes, some of the volumes being pretty thick. They were given with the hope that they may be of use hereafter, to some one who may write the history of the progress in the treatment of the insane in this country. I have enough now to make nearly eight volumes more, so that in all, there will be about one hundred and twelve volumes.

My object in calling your attention to this subject is, to say that I would like every superintendent to send me two copies this year; and I feel that I shall then have done my duty in that respect, and will not ask for two copies afterwards; but I should suppose that every superintendent would like to have his report preserved in such a collection, for the benefit of future researches. I believe the Antiquarian Society would like to receive from every institution, annually, hereafter, a copy of its report. Quite a number of the superintendents have sent me two this year. Some —I think about twenty—have sent me only one, and some have not yet sent any. If there are any here who have sent me but one, I would thank each of them for another copy, and every superintendent can do what he thinks best in regard to the subject, in the future.

We will now proceed to the business of the meeting, and you will please give your attention to Dr. Curwen's address on the history of the Association.

Dr. Curwen then read the address prepared by him, and stated that he had also prepared a full account of the names, with date of appointment and resignation of each superintendent. After some discussion as to the manner of publishing the history, Dr. Everts offered the following resolution, which was, on motion, adopted:

Resolved, That the Secretary of the Association be authorized to publish five hundred copies of Dr. Curwen's Supplementary History of the Association, at the expense of the Association, provided that he shall send a written copy of all matters pertaining to each institution to the superintendent of such institution for correction, fifteen days before publication, with notice to return the same within that time; one copy of such publication to be furnished gratuitously to each member of the Association. All copies required by superintendents or other persons in excess of the number provided for, to be furnished at cost of publication by the Secretary. The copies to the members to be furnished unbound.

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The Secretary stated that the second address, on the "Causes of Insanity," was assigned by the Committee to Dr. Earle, but his health not allowing him to undertake the labor requisite to prepare the address he declined, and the Committee and the Secretary took the liberty of asking Dr. Shurtleff to attempt it, but his health also failed and consequently no address had been prepared.

Dr. Stearns then read his address on "Progress in the Treatment of the Insane."

Dr. Godding read his address on "Progress in Provision for the Insane."

The Secretary read a letter from Dr. Clarke giving the reason why he could not prepare and read the address assigned him on "Progress in the Pathology of Insanity."

On motion of Dr. Curwen, it was

Resolved, That the medical profession of Philadelphia and the members of the Medical Society of the State of Pennsylvania be invited to attend the sessions of the Association.

The Secretary then read the minutes of the sessions of the day and, on motion, the Association adjourned to 10 A. M.

The Association was called to order at 10 o'clock A. M., on Wednesday, by the President.

Letters were read by the Secretary from Drs. Hurd and Gundry, giving reasons why they could not attend this meeting. He also read the following communication from Dr. John S. Butler:

MY DEAR DR. CURWEN: I am very sorry that it will not be in my power to attend this meeting of the Association. I regret it the more sincerely, as this is so near to the anniversary of our organization in October, 1844.

I naturally recall the events of that most important meeting—the discussion of plans and principles since proved so sound—the natural doubts and fears of the future, giving way in the minds of all to high and confident hopes! All comes back so vividly to my mind, as if these events were not of forty, but only of a *single* year ago!

In view of these most natural and kindly remembrances, I hope to be excused if I recall to the minds, especially of those members who have joined us in later years, simply the *names* of those pioneers whose self.

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denial, hard and warm-hearted work accomplished so much for the insane and to whose good deeds I could here do little justice. They have departed, leaving to all of us their devoted and inspiriting examples.

A better "Roll Call" than this was never read out after any hard-fought battle field! Let their *record* answer to their names!

Dr. Samuel B. Woodward, Worcester, Mass.
Dr. F. T. Stribling, Staunton, Virginia.
Dr. Samuel White, Hudson, New York.
Dr. Isaac Ray, Augusta, Maine.
Dr. Luther V. Bell, Somerville, Mass.
Dr. Charles H. Stedman, Boston, Mass.
Dr. Amariah Brigham, Utica, New York.
Dr. William M. Awl, Columbus, Ohio.
Dr. John M. Galt, Williamsburg, Virginia.
Dr. Nehemiah Cutter, Pepperell, Mass.

And last, but not least, in our respect and loving remembrances, Dr. Thomas S. Kirkbride, Philadelphia, Pa.

These have ceased from their labors—but like the grand old architect of Christian Rome,

"They had builded better than they knew."

Dr. Pliny Earle, of Northampton, Mass., alone remains in active duty, bringing to a higher excellency the good work he began in the hospital at Northampton. He will, I trust, be with you at this meeting, to do more and better honor to our departed associates.

The good fortune of my connection with the Association from its inauguration and afterward the unmerited honor of being elected to preside over it, are among the richest rewards of my professional life.

During the past forty years a great work has been done for the insane. As surely, a great work for the insane remains to be done. Advances are to be, and surely *will* be, made in the medical and moral treatment of insanity, and in the amelioration of the condition and surroundings of the lunatic. The greater work of all is to be done in the line of the *Prevention of Insanity*.

Dr. Richardson, of London, says: "A change has come over the science of medicine; with true nobleness of purpose, true medicine has been the first to strip herself of all mere pretences to cure, and has stood boldly forward to declare, as a higher philosophy, the prevention of disease. The doctrine of absolute faith in the principle of prevention includes the existence of a higher order of thought, of broad views on life and health, on diseases and their external origin, of death and its correct place in nature. * * * * * The science of prevention becomes a political and a social as well as a medical study."

Dr. Henry J. Bowditch asserts, that "We stand now at the very dawn of the grandest epoch yet seen in the progress of medicine. While philosophically, accurately, and with the most minute skill studying by means of physiology, pathological anatomy, chemistry, the microscope, and above all, by careful clinical observation, the natural history of disease and the effects of remedies, our art at the present day looks still higher, viz., to the prevention of, as well as to the cure of disease."

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These are, I believe, accepted as among our highest authorities.

Here *Advance* and *Prevention* are synonymous terms. As such I commend them to the Association.

Though I am so effectually on the "Veteran Retired List" that I cannot even "shoulder a crutch to show how fields were won," still my heart warms to the good and progressive work of the Association.

Remember me most cordially to "one and all" of the members, but especially to those of that excellent "*remainder*" of good fellowship with whom I have been, in olden times, so pleasantly associated.

I remain, your attached friend,

JOHN S. BUTLER.

HARTFORD, CONN., May 10th, 1884.

On motion of Dr. Chapin, Mr. D. Willers, Trustee of the Willard Asylum, was invited to take a seat in the Association.

On motion of Dr. Palmer, Mr. Levi S. Barbour, of the Board of Public Charities of Michigan, was also invited to take a seat in the Association.

Invitations were read from the Managers of the House of Correction of Philadelphia to visit that institution, and from Dr. John V. Shoemaker to attend a reception at his house, which were accepted and referred to the Committee on Business.

The President then called for the reports of the Standing Committees.

Dr. Theo. W. Fisher, from the Committee on Necrology, read a biographical sketch of Dr. R. H. Gale, prepared by Dr. C. C. Forbes of Arkansas:

The subject of this writing was born in Owen County, Kentucky, on the 25th day of January, 1828. His life, though cut off a little past middle age, was singularly eventful. Graduating when quite young from Transylvania University, at Lexington in his native State, he entered the office of his father, an eminent and popular physician as well as a wealthy and influential man; and after the usual term of pupilage under the care of so interested and capable a preceptor, he was enrolled in the classes of the Jefferson Medical College of 184?-43, graduating with excellent standing the latter year.

His first location in the pursuit of his profession was at Covington, Ky., where it is said his practice was signalized from the beginning by marked success. While in this field he became a staff officer of the Cincinnati Commercial Hospital. After very creditable public service and while possessed of a flattering and remunerative private clientage, he was induced by his family and their friends to change his location to the midst

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of the community in which he had been reared; where his personal worth was appreciated, it might be said, to a degree of partiality and his professional capability and skill were recognized at once. A man of lively sympathies and of a generous and genial nature, he could never feel indifferent as to whatever affected in any way those among whom he lived and moved. He was distinctly and distinctively one of the people. Influenced by their wishes, he was twice elected by their suffrages to the office of County and Probate Judge of Owen County. Subsequently he served his county one or more terms in the legislative councils of the State, assuming a prominent part in their proceedings and leaving a highly creditable and flattering record.

At the beginning of the war, impelled by his ardent sympathies with the South, he entered the service of the Confederate States in Col. D. Howard Smith's regiment, which constituted a portion of Gen. John H. Morgan's famous command. His health failing from the energetic performance of his very arduous duties, he was obliged to resign his position and quit the service. After the war he settled in Louisville, where he immediately realized the eminence which he had already achieved. He very soon commanded a lucrative practice and assumed a prominent place upon the staff of the City Hospital, where his tastes affecting surgery most, he took an enviable stand among the many powerful and eminent men then and still identified with the specialty in that institution. Besides devoting considerable time to clinical teaching in the hospital, he also gave lectures for several seasons in the Louisville Medical College. He was chosen about the same time Secretary—who was also ex-officio financial manager—of the Physicians' Medical Aid Society.

In 1873 he was appointed surgeon to the Louisville, Cincinnati and Lexington Railroad, and a year later by the Paducah road, to a similar position. In this capacity he served these roads till 1879, when he was appointed by Gov. Blackburn as Superintendent of the Central Kentucky Lunatic Asylum, in which position he continued till the day of his death, which occurred, as remarkable, on the day fixed for his resignation of the office to take effect. Lately, Dr. Gale had realized very sensibly and painfully the aptness of the pithy and pointed words of somebody, that "a superintendent of an asylum for the insane dwells ever upon a volcano liable at any moment to erupt a catastrophe." He was both confiding and indulgent, and trusted his subordinates perhaps unduly. Unfortunate occurrences, concealed from him, led to charges which challenged investigation, and which eventuated in confirmation. Although the great mass of the testimony in the premises went very far to exculpate Dr. Gale himself and to establish the goodness of his nature and efficiency of his management, still the worry and anxiety incidental to the proceedings, so preyed upon his sensitive feelings and already failing health as, no doubt, to hasten his death.

In 1846, when in his nineteenth year, Dr. Gale was married to Miss M. C. Green, a most charming and estimable lady, whose death in 1880 preceded his own. As the fruit of this union, three children survive their parents, one son and two daughters, all married. Only a few weeks ago he was joined in a second marriage; this time to Mrs. Susan Bryant, an

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amiable and excellent lady, the daughter of Dr. Hughes, a gentleman of fine fortune and great influence, residing near Springfield, Kentucky.

In his personality Dr. Gale was a man, physically, of an exceptionally fine order; of commanding size, he was well-proportioned, gainly and graceful. Socially he was genial and unreserved, while he excelled as an agreeable and entertaining conversationalist. Although possessed of mental endowments and culture much above the ordinary plane, still his breeding and native modesty would never allow these qualities to even seem obtrusive. He died at the residence of his son-in-law, Mr. J. C. Reid, in Owen County, near the place of his birth, on the 22d day of April, ult., in the fifty-seventh year of his age.

Dr. Dewey, from the Committee on Cerebro-Spinal Pathology, read a paper on the "Promotion of Mental Health by Care and Training of Children."

A motion to discuss the paper was made by Dr. Curwen, seconded by Dr. Fisher and agreed to.

DR. FISHER: I seconded the motion, not that I had anything special to say upon the subject, but that members of the Association should have an opportunity to remark upon the paper, if they so desired. It is a step in the right direction, and if the Doctor would go through his entire hospital and gather the statistics he might present some valuable conclusions by another year.

DR. GRAY: I hope that the orator in the upper corner will give us something on the subject.

DR. GRISSOM: "I am no orator as Brutus is."

DR. GRAY: I think with Dr. Fisher that the paper of Dr. Dewey is a step in the right direction. I think it is beginning at the right end of such cases. I presume that the difficulty he labored under is one that we have all appreciated—getting information imperfectly from the persons who bring patients to asylums. I thought I could see, in some of the cases of which he gave a brief analysis or synopsis, that he had labored under that difficulty. I have not a doubt in my mind that in the direction of true progress in reference to the appreciation of causes and the proper classification and treatment of the insane, it is very important that we should have more information than we usually get or are able to get, to commence the care and direction and treatment of patients. Going back, as Dr. Dewey has suggested, to childhood, to see the influences that are brought about children from the hour of their birth to form their characters, to develop or suppress their passions, to guide them in all ways, either into usefulness and integrity and duty, or to let them drift to themselves, is of vital importance.

Now it seems that several of these cases presented by Dr. Dewey, were children that could hardly be said to have been brought up; they simply grew up as weeds grow in the streets, subject to the tramp of every foot or anything that might occur. Out of just such cases we have the institutions for the reformation of criminals very largely filled, and occasionally they

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drift to the asylums; but I perceive from the description of the cases given, that in the majority of these instances they have not simply been subjected to the exposure or drift of life, growing up on the street, homeless, finding there rest for the night and then pilfering or living as best they could through the day, without parents or friends or any one to guide them; but they have been given to those very excesses which in themselves, independent of such a vagabond life, are capable of producing most any disease. I notice that some of the young boys as a beginning have had syphilis. I think the earliest, the Doctor said, was at fifteen years of age.

DR. DEWEY: Yes, sir.

DR. GRAY: Now the lesson to all of us is—and I hope that Dr. Dewey will follow the subject up as he has opportunity, by taking a larger number of persons and giving us as accurate information as possible, and classifying them as he has here. The lesson that paper should teach is this: That we, as representatives of one of the departments of medicine and of a great department of hygiene, certainly of mental hygiene, should use our influence, perhaps more than we do, with reference to the very point suggested in almost the first sentence of the paper of Dr. Dewey, that is, the care and guidance and bringing up of children. I think instead of standing at the other end of the line and inquiring what the diseases are we are to treat, we should do more towards going back to the beginning and impress upon the communities in which we live and act, and through the legislatures to which we constantly report, the infinite importance of such training. Certainly we represent these institutions and the interests of the public, and we should seek to impress upon the public authorities the greater importance of originating and using protective measures, so that in the training of children from the very beginning, in our schools, and through humane societies that look after youth and children, the plain, simple facts in regard to vice, to training, to education, to diet, and all the elements that go to develop the physical, mental and moral life of youth. There is where I think we should begin if we wish to arrest the growing progress that there seems to be in diseases, insanity included.

After this discussion, the paper was laid on the table.

Dr. Catlett, from the Committee on Cerebro-Spinal Pathology, read a paper on "Tinnitus Aurium."

DR. CATLETT: Mr. President and Gentlemen—A report was not expected from me, but the chairman of this committee recently notified me that he would not be present at this meeting nor would he be able to make a report. This paper is not intended as a report of the committee, only supplementary. It was written before I received notice from the chairman that he would not be able to make a report. Being exceedingly feeble from the effect of breathing sewer gas, which escaped into my room last night, I will ask the indulgence of the Association for the manner of presenting the paper.

After the reading, the following discussion took place:

DR. FISHER: In regard to the paper I have but a few words to say. I

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have been aware for a number of years, as probably all of you have, that auditory diseases should be included in the symptoms to be observed among the insane. Deafness, or partial deafness, and hallucinations of hearing are very common in our insane hospitals, but the difficulties of investigation are considerable. It is impossible to rely always upon the statements of our patients, and investigations must be limited to testing the hearing in many cases and making such superficial examinations as are possible.

I had, not long since, a case of suicidal mania, in which I thought possibly some post-mortem evidence might be found of disease of the internal ear. There was deafness in both ears which had heen gradually increasing for a number of years. There was also a decided tendency to rotary motion, from right to left, exhibited when the patient was walking by a series of cycloid motions across the floor, and when the patient was seemingly conscious of his actions. It was thought probable that some of the semi-circular canals might be found diseased. There was soon, unfortunately for the patient, an opportunity for the determination of his disease by an autopsy. On careful examination the semi-circular canals were found perfectly healthy in both ears; but evidences of disease were found in the cortex and in the membranes of the brain, such as are often found in cases of insanity of somewhat long standing. It was therefore supposed that the disease which affected the function of equilibrium was of centric, and not of eccentric origin. As it is often difficult to determine whether disease exists in the ear, we should carefully examine each case. Every patient coming into a hospital should be examined with reference to his hearing, as a matter of routine, as well as to the condition of the retina.

The paper was then laid on the table.

The next report was from the Committee on Therapeutics and New Remedies, by Dr. J. B. Andrews.

Dr. Andrews, before reading his paper said, in explanation:

The paper I am about to read is illustrated by pulse tracings by the sphygmograph, used to show the action of drugs upon the circulation. The instrument employed is a modification of Pond's and is simple in construction and action, and gives very satisfactory tracings. I have prepared a few specimens which I will pass around, simply to show the work of the instrument. Thus far the sphygmograph has been but a plaything in the hands of many who have attempted to use it, and by few have its possibilities been developed. Those who have thoroughly tested the instrument and are therefore most competent to judge, claim for it a great value in the diagnosis of disease. A medical friend who has extensively used the sphygmograph, in an album of some two thousand tracings, presents many of great diagnostic value. That the instrument has not as yet assumed its proper place as an aid in diagnosis, is largely due to the want of sufficient skill in its use. To take a good characteristic tracing requires considerable experience and patient labor. Many of the tracings which would seem at first to be admirable because of their size, are really useless, as they show

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only the systolic beat of the heart without the tension or dicrotism of the vessels. This instrument is very simple. It acts by transferring the arterial beat through a rubber diaphragm to the lever which gives motion to the needle. This motion is more direct and made with less friction than in other instruments. Another improvement is in the shape of the needle; the curve at the extremity prevents its plowing into the paper and gives greater sensitiveness to its motion. It is so arranged by a screw that the barrel of the instrument can be lengthened or shortened, and this raises the lever from, or causes it to approach the diaphragm, thus adapting it to different pulses. If the pulse lies very near the surface, less pressure will be required, and then by screwing up the barrel the end of the lever is brought nearer the diaphragm, which makes the sphygmograph more sensitive. If the pulse is more deeply seated, more pressure upon the artery must be used; then the lever is lifted from the diaphragm. The instrument is so arranged that the paper can be passed through at different rates of speed, to correspond with that of the pulse. The watch motion is very perfect and runs continuously for three minutes.

I would like to call attention to two of the tracings presented. They are instances of very high tension, the highest I have had an opportunity to take. The pulsations were only 32 per minute, increased on exercise to 40.

The papers are prepared for the tracings by being uniformly blackened. This is accomplished by passing them over a lighted lamp, and they are finished by being immersed in or painted over with a varnish made from the following recipe: Gum sandarach, half ounce; alcohol, half pint; castor oil, two drachms.

Simple collodion will answer a very good purpose, but does not give the finish produced by the preparation given above. This is recommended by those engaged in the manufacture of sphygmographs, and does not originate with myself.

You will notice in the tracings presented, that while there is very great variety there is a close resemblance in all of those taken from the same pulse. While there is as much diversity in the tracings of different individuals as in the appearance of their faces, a correct tracing is as characteristic as the photograph of the individual.

With this introduction the Doctor read his paper upon "Paraldehyd, Nitro-Glycerine and Jamaica Dogwood." This was profusely illustrated with sphygmographic tracings.

In reply to a question by Dr. Grissom in regard to the action of nitro-glycerine in epilepsy, Dr. Andrews said:

The patient who had been under observation for a year had never before had a series of convulsions, but after taking the medicine for some six weeks he had a series of thirty-two seizures. The medicine was then discontinued, and he has since had an occasional convulsion only. Glonoin has proved itself valuable in cases of feeble heart and of atheroma of the arteries, the tension of which it relieves in a marked degree, and also in

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cases of albuminuria; see statements of Dr. Bartholow in *Philadelphia Medical Times* of a few months ago.

As the use of the drug in these diseases has been investigated and conclusions favorable to its use presented, I have not enlarged upon this view of the subject.

On motion of Dr. Curwen, Dr. I. N. Kerlin, of the Pennsylvania School for Feeble-Minded Children, was invited to take a seat with the Association.

Dr. Curwen also stated that Dr. Kilbourne was confined to his room by an attack of rheumatism.

The Secretary read an invitation to visit the School for Feeble-Minded Children, at Elwyn, also an invitation from the Secretary of the Medical Society of Pennsylvania, to an excursion to Cape May Point, on Saturday, and also to visit the Pennsylvania Hospital, Pine and 8th Sts.

On motion, adjourned to 3 P. M.

The Association was called to order at 3 P. M. by the President.

The Secretary read an invitation from the Guardians of the Poor of Philadelphia, to visit the department for the insane under their care. The Secretary read the report of the Committee on Time and Place of Next Meeting recommending Saratoga, N. Y., as the place, and the third Tuesday of June, 1885, as the time, which was on motion, unanimously adopted.

The President appointed on the Committee of Arrangements, Drs. J. P. Gray, J. B. Chapin, J. B. Andrews, C. H. Nichols and John Curwen.

On motion, the Association adjourned to 10 A. M., Thursday.

After adjournment, the Association in a body visited the Medical Society of the State of Pennsylvania then in session, and remained until their hour of adjournment, and

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in the evening the members attended the reception of the President of the Medical Society of Pennsylvania.

The Association was called to order on Thursday, at 10 A. M., by the President.

The minutes of the sessions of yesterday were read. The Secretary stated to the members the arrangement for going to Friends' Asylum that afternoon. He also stated that an invitation had been extended by the Professors of the Medical Department of the University of Pennsylvania to visit that institution that afternoon, at 5:30 P. M.

On motion of Dr. Stearns, Dr. G. W. Russell, one of the Managers of the Retreat for the Insane at Hartford, was invited to take a seat in the Association, and on motion of Dr. Denton, the same courtesy was extended to Dr. White of Texas.

Dr. Foster Pratt then arose to offer the following resolutions.

DR. PRATT: Before introducing the resolutions I have to offer, I wish to remind the gentlemen present of the fact that last fall at Detroit, at the meeting of the American Public Health Association, I had the honor to read a paper which was in essence a careful study of the Tenth Census of the United States on what is termed the "Defective Classes" of population, including the insane. A copy of the paper was sent to every institution for the care of the insane, and also to every member of Congress and to State officials. The importance of the subject will commend itself, I think, to this body:

Whereas, By a comparison of the statistics of the "defective" classes of our population, as shown by the eighth, ninth and tenth census, it appears:

1st, That the proportion of insane to the total population of the United States is rapidly increasing; and

2d, That a prominent factor in this increase is the large defective element found among the foreign born who have emigrated to us since 1847 and 1848, and who now constitute one-eighth of our total population; but who furnish approximately, one-third of our paupers, one-third of our criminals and one-third of our insane; and,

Whereas, While the cost of buildings to suitably keep and the annual tax to properly maintain these classes fall wholly and heavily on the several States and Territories, they are inhibited by Federal laws from enacting and enforcing effective measures to prevent or to mitigate these evils as far as they are caused by immigration; therefore,

Resolved, That the Association of Medical Superintendents of American Institutions for the Insane respectfully urges the Congress of the United States to give early and earnest attention to this important subject, to the

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end that emigration laws may be enacted by it, which, while they do not unnecessarily obstruct the immigration of healthy and self-dependent persons, will effectively prevent the emigration and exportation to our ports of the so-called "Defective classes" of Europe and Asia.

Resolved, That in furtherance of this object a copy of these resolutions and preamble be forwarded to the President of the United States, and to the President of the Senate and the Speaker of the House of Representatives at Washington, for consideration by them and by Congress; also to the Governor and presiding officers of the Legislature of each State in the Union, and to each State Medical Society, that they and the people they severally represent, who are most affected by the pecuniary burdens and by the physical and moral evils caused by the unrestricted and unregulated immigration, may be moved to take such action as they deem best to secure early and efficient action by Congress (with whom alone is the power,) to abate the great and growing evils to which public attention is hereby called.

While a study of the census of 1860, 1870 and 1880, as has been remarked in the preamble, demonstrates the increase of insanity, and that our foreign born population is one of its most important factors, we have in addition to the statistics a great many isolated and important facts, in late years, to substantiate the general charge. Among several leading editorials which the Chicago papers gave to their readers in comments upon my paper when first published, there was one very important editorial which contains the statement that the day previous, in Chicago, thirty persons had been adjudged insane by the courts, all foreigners and none of them more than six weeks in the United States. Entirely apropos, I find in the *New York Herald* of this morning the following editorial:

"PAUPER IMMIGRATION."

"The action of foreign governments in exporting their paupers to this country is as ill-advised as it is impertinent. Hitherto, perfect freedom to admission to live and labor in the United States has characterized our system of economy, but this never contemplated the emptying upon our shores of the contents of British or other foreign workhouses. The arrival on the City of Rome of forty or more persons thus described, should arouse the vigilance of the authorities, and they should be at once returned whence they came. The fact, that in this instance, heads of families have been supplied by the British authorities with a little money, looks like an attempt to evade the strict definition of paupers while preserving the essential character. If there is probability of such persons being thrown upon our charities for their subsistence, they should be considered paupers and treated accordingly. The act of sending them here is ill-advised, because it is not unlikely to induce such legislation at Washington as will materially interfere with all foreign emigration to this country, a course of action not to be desired on any account."

It is but little over a month since two hundred and fifty were landed from one vessel at Boston, from Glasgow, I believe, but happily by a cablegram from Glasgow they were detected and are reported to have been sent back.

Now it is a significant fact, that, while those concerned in the management of immigrants claim, that as they arrive they are constantly sent back when found to be defective in any way, I have the statistics of the Commissioners of Emigration for the State of New York for the last ten years, and by their published statistics in those reports, year by year, they have failed uniformly to report the number sent back. I have also the reports of the Bureau of Statistics at Washington, a complete file from the

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organization of that department, or bureau, and while they enter into great minuteness of detail in the statistics of emigration, they, too, utterly fail to report these cases of pauper or defective persons sent back to the ports whence they came.

By the request of the President, the resolutions were read a second time by Dr. Pratt.

DR. PRATT: I will state by way of explanation on one point, that the Supreme Court of the United States in a series of cases, running for seventy years, has decided that the regulation of immigration is a regulation of commerce, and therefore, according to the Constitution of the United States, wholly within the control of Congress. The way they make commerce of it is this: By the decision of the Supreme Court, in what is known as the "passenger cases," it was decided that carrying passengers for hire was "commerce," as much as carrying merchandise for hire.

DR. EVERTS: I move the adoption of the resolutions.

The motion was seconded by Dr. Catlett.

DR. NICHOLS: I would like to have the preamble to this resolution slightly amended. Dr. Pratt says that one-eighth of the population of the United States is composed of the immigrants since 1847 or 1848, and their descendants.

DR. PRATT: No, sir; I beg your pardon, they are the foreign-born, exclusively.

DR. NICHOLS: Then I misunderstood or misrecollected the declaration in relation to this point, but the statement that it is *conclusively demonstrated* —I think that is the language—from an examination of the censuses of 1860, 1870 and 1880, that one-eighth of the inhabitants and one-third of the insane and other dependent classes are actual emigrants since 1847 or '48, does not affect what I have in view. Now I have not the slightest reason to doubt the correctness of the deductions the Doctor makes from his examination of those censuses, but it might be that another examiner would draw a different conclusion. Besides, there may be errors in one or more of the censuses. If the language is made less positive by substituting the words *it appears from an examination*, etc., in place of *it is conclusively demonstrated*, etc., I shall be willing to vote for the preamble and resolutions. Modified as proposed I think they will impress Congress more favorably than they will if we lay ourselves open to the liability of being thought too confident of our ground.

DR. PRATT: I understand this is the difficulty, that Dr. Nichols and others have not investigated the subject. I have a table here, which was sent to every hospital for the insane in the land, and to several two or three copies.

I would like, now that I am upon my feet, to state some facts in regard to several States. To begin with New York, the native whites are 3,805,000; the foreign whites, 1,210,000. One-fourth of the entire population of the State of New York is foreign-born. Now, mark, of the native white 7,595 are insane, and of the foreign-born—only one-fourth of the population—

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6,321 are insane. Almost one-half of the insane of that State are furnished by one-fourth of the population. The same is true in Pennsylvania. Nearly the same is true in almost all the Northern States, except perhaps Maine, New Hampshire and Vermont. The same is true also, in almost all the Western States and Territories.

Now, as I already remarked, (and gentlemen understand it, it is not necessary to elaborate the point or the argument,) these figures are official in all respects. If any gentleman wishes them for demonstration he may have them to study the subject. But I want to read a paragraph or two, which shows how this ratio of increase has been manifested. Reckoning now from 1850 or 1860, as a basis to start with. During the ten years preceding 1860, the increase of foreign population was 100 per cent., but the foreign born insane had increased 181 per cent. Secondly, while the total of this class had increased during the next decade 30 per cent., the insane of this class had increased nearly 100 per cent. Thirdly, in 1880, the foreign born had increased less than 20 per cent., but their insane had increased 150 per cent. These are the official figures.

DR. FRANKLIN: I would add two or three items to the statements of Dr. Pratt. New York city, of course, suffers to a greater extent than any other place, from the very class of which Dr. Pratt speaks. Ireland furnishes to our institution at Blackwell's Island the greatest number of patients. Germany comes next. But I noticed, in 1881, in gathering matter for the annual report, looking up nationalities, etc., that one-half of the admissions for that year were people who had been subjects of Great Britain. Attracted by that fact, I looked the matter up again in 1882, and I found the number of those that had been subjects of Great Britain exceeded by a little, 50 per cent. I have not made up the report for last year —have not followed the figures down each day so as to see if there is a gradual increase.

Again, we get a great many from the Asylum for Insane Emigrants, at Ward's Island, after they have completed that period during which the Emigrant Department is responsible for their care. Again, we get many whose recent arrival in the country we strongly suspect, but whose mental condition is such that we can learn nothing from them as to the dates of their arrival, and some of these not being visited by friends we fail to get information in that direction. We often get from patients facts sufficient to satisfy us that they are recently arrived emigrants; but the failure of recollection upon one or two important points make it impossible for us to prove to a certainty that which would send them to the Emigrant Asylum. These difficulties sometimes are done away with when the patient has nearly recovered; and at other times after, she has become incurable and acquired the rights of citizenship by residence in our institution.

DR. CHANNING: I think there is one element that we have lost sight of in comparing the proportion of the insane in the foreign population and in our own, and that is the relative proportion of children. The number of these in our immigrants is smaller comparatively than in our native population. Therefore, the inference we draw, without considering these circumstances, might be misleading. An investigation is now being made in the hospitals in Massachusetts, by taking the number of insane of foreign

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parentage and making a comparison in that way, and you [turning to President Earle] probably know the figures better than I do, but I think it is that three-fifths of our patients are of foreign parentage.

THE PRESIDENT: I forget the proportion.

DR. PRATT: Since I have had the matter under consideration, I have had some correspondence with Mr. Wines, specially in charge of this census work, in which I took upon myself to call attention to the fact that of the native born whites in the Northern States and Territories and the District of Columbia, the number of native born whites of foreign parentage outnumbers those born of native parentage by a million and a half. I know it is an astonishing statement, but the figures prove it conclusively. I will repeat it—that the native born children of foreigners of the Northern States, Territories and the District of Columbia—the native born children of foreigners exceed the children of native born parents by a million and a half; but the statistics of the census do not show when they come to classify the insane, anything about the parentage of those who are native born. While it is apparent from a study of the census that the proportion of insanity to population is increasing in the native white class very rapidly since 1850 or 1860, yet the statistics have failed to show how much of this increase is due to the children of foreign parents and how much to the children of native born. While, of course, the children born here of foreign born parents are treated by the census as native born, it fails to give other important data which should be given and without which we can never thoroughly study the subject; but Mr. Wines has promised in subsequent volumes of the census, if possible, to remedy this defect.

The gentleman from New York (Dr. Franklin) speaks of the State of New York as being exceptionally troubled.

DR. FRANKLIN: The city.

DR. PRATT: I have given the figures of the State. Of course the city is included in the State, in the statistical statement. Almost the same result found in New York is found in my own State. While the foreign born constitute one-fourth of the population, they furnish more than one-third of the insane. We have two ports, and a great many immigrants come to us from and through Canada, and coming to Detroit and Port Huron, we are subject also to the same difficulty as the State or City of New York.

DR. FRANKLIN: A great many come to us from Great Britain.

DR. PRATT: I am perhaps in error in part of the statement that I made in regard to the arrival of two hundred and fifty from Glasgow in Boston some few weeks ago. A gentleman from there, sitting near me says they were *not* sent back, that a fine of five dollars was imposed and they were sent to the West.

DR. FISHER: As I recollect, the immigrants were found to have about five dollars in money each, which had been furnished them at home, and for that reason they could not be considered paupers. Many of them represented that they had relatives to whom they were going and who would be responsible for their support. I think they were not sent back. I think I should have known it if they were. They were examined, and it

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was contemplated to send such of them back as were not found to have sufficient means of support; but I think they were all sent West.

DR. NICHOLS: In New York we should have voted them before we sent them West. That is all the difference I can think of between New York and Boston.

DR. CHAPIN: I am not sure that I fully understand the import of this resolution, but think it is hardly wise for this Association to make any declaration about foreign born immigrants who are paupers or criminals, with which classes we have little to do. While, as Dr. Pratt has recited in his preamble, an unduly large proportion of the insane of the country are foreign born, or of foreign descent, it does not appear that these persons were insane or paupers before their arrival in the country. It is true that the foreigner on his arrival in a strange country is suddenly brought into contact with new conditions of living and environments. The change of food, the anxieties of a voyage, and residence among strangers, produce homesickness, and a strain which these persons are not prepared to endure. If they become incapacitated by insanity, or otherwise, they become a public charge at once and admission into a public asylum is an easier transition than for the native born. It is probable a few persons are sent over who are insane and paupers, but I believe if the facts could be reached the majority of the foreign born insane become so after their arrival in the country. As it has been the policy of the government to welcome and promote immigration, it would be very proper to inquire what causes so much insanity among the foreign born as appears, and an extension of the inquiry whether there are existing conditions in our social organization that tend to develop both pauperism and crime, would not be out of the way. I am under an impression that a statute is now in existence to authorize the return of paupers and lunatics, and that it is enforced to a certain extent.

DR. GRAY: You do not refer to the State of New York?

DR. CHAPIN: I supposed the law was enacted by Congress. At least I understand from newspaper reports certain cases have been stopped and returned.

DR. PRATT: The law is hardly directory. There is no penalty upon anybody who does not obey the law as directed.

Now, in regard to the fact, it seems to be a very difficult matter to obtain statistics of the number who come here actually insane. But this body will readily understand that epileptics, and others who are periodically insane—who have lucid intervals—arriving here, or who become insane very soon after they come here, when they once arrive at an institution would remain there, especially if dangerous cases or cases of epileptic insanity. Once before on the floor I called attention to the situation in Chicago, that thirty persons were adjudged insane there in one day, every one a foreigner and none of them in the country six weeks.

PRESIDENT EARLE: I would ask Dr. Pratt if we should infer from that the possibility of that number being adjudged insane every day, or whether in that city there are not certain days for trying the question of insanity, and those thirty patients, as we may call them, had accumulated there?

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DR. PRATT: It is a daily business of certain courts in Chicago. But the important point is not whether courts act daily, weekly or monthly, but that thirty, all foreigners, and none of them more than six weeks in the country, by one court.

DR. NICHOLS, [interposing.] They must have accumulated in six weeks.

DR. PRATT: None of them more than six weeks in the country. Now the inference is irresistible that these persons, many of them if not all, had been insane before sent here—perhaps sent here during the lucid interval. I have personal knowledge, from my intercourse with the insane and their friends in my own State, that many have been sent to us who are periodically insane. Many are among the class of recently termed "assisted emigrants." They are sent over here on the ground, as is alleged, that they have friends to take care of them; and when they get here, their friends prove to be the State.

It is undeniable that various moral causes must produce, at least for a few years after their arrival, some degree of insanity among them, which may be properly chargeable to the simple fact of removal. Mr. Wines in his treatise on the subject, in the chapter on defective classes, calls attention to this. In my correspondence with him I had occasion to speak of the fact that in 1850 the proportion of insane to foreign born was scarcely, if any, larger than the proportion of insane to native born. It was a little larger, just about large enough to account for the effect of these moral and other disturbing influences that I have spoken of. But as you come along down since 1850, that rate is increased in proportion. These foreign "defective" come here from the poorhouses and the almshouses; and since we take them in, they have been acting upon it ever since. The statistics show, as I have already said, that a certain amount of this insanity in the foreign born is probably chargeable to disturbing influences resulting from a change of residence; but it is much more largely due to the fact that they bring with them their periodical insanity and an hereditary tendency to it, which develops here because of the moral disturbance which they encounter. Mr. Wines seeks to fortify his argument by showing that of the people from the Atlantic States going into the Western Territories, as into California for instance, a larger proportion become insane than they do at the East. I think that I succeeded in proving to the gentleman that he was mistaken in his estimate in that direction. The fact is, that in the Western Territories the proportion of foreign born which become insane, is much greater than that which develops in the American or native born.

The total figures as shown by the census, in regard to paupers, I will read. I cannot turn to them just now very readily, but so far as the insane are concerned, the total number is 91,997, of which 26,259 are foreign white. I did not tabulate the details of the pauper element, because I was not so intent upon that as I was upon the matter of insanity.

Total paupers, 88,665; foreign born, 22,961.

DR. STEARNS: I would like to call attention to that portion of the preamble in which it stated that, "Whereas, one-third of the criminal class come from those who are foreign born," etc. I do not know that we have anything specially to do with the criminal class as a body. It seems to me that it would be better to limit our language to the insane, or at most to

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the pauper class, without including the criminal class. It would tend, I think, to prejudice any action in favor of the resolutions among those who are foreign born, and look as though we were stepping out of our sphere of action to include the criminal classes, if not the pauper class.

DR. PRATT: In response to that remark I would simply say that every gentleman is fully aware of the extent to which these classes run together —how many insane come from the pauper class; how many insane come from the criminal class—and it was simply because of their being to some extent connected together by being defective, that these two classes were considered in connection with the insane. Of course, we believe, as a general rule, that chronic paupers breed paupers, and criminals breed criminals, and we know that the criminal insane are largely found in those two classes. The gentleman is undoubtedly aware that a great many of the so-called political cranks of Germany and the social cranks become paupers and insane in the United States. It is with such a view only that these classes have been considered together, and are mentioned in the preamble; but they are not alluded to in the resolutions.

MR. OGDEN: Is the gentleman sure that he is correct in saying that Congress alone has such power?

DR. PRATT: Yes, sir. Congress alone has the power to apply the remedy, so far as these evils are caused by immigration.

MR. OGDEN: It seems to me that is a mistake.

DR. PRATT: No, sir. I can give you the references to the decisions from which it is clear that Congress is the only power that regulates immigration.

MR. OGDEN: My idea would be that diplomatic interference would be more effective than Congressional.

DR. PRATT: Diplomatic action is based to some extent upon legislation and also on treaty. The leading case in which the power of States in this matter was denied by the Supreme Court, is that of Gibbons *v.* Ogden, in 9 Wheaton. This has been followed by a line of decisions, the last being the People of New York *v.* The Company Generale Trans-Atlantic, published in the *Albany Law Journal*, April 7th, 1883. Still later, another case has been decided in the Circuit Court of California, in which these precedents were faithfully followed. In these decisions—a line of decisions from the time of Chief Justice Marshall down—every attempt made by States to obviate or mitigate any of these evils has been decided null and void. The Immigration Commissioners of the State and City of New York were finally discontinued on that ground.

Pardon me for a few further words. I think I know something of the sensibilities of foreign born people to any criticism upon them as a class. But if gentlemen will reflect a moment, this is not a criticism upon foreign born people as a class. I may state that the first audience of my paper, gathered together expressly for the purpose of estimating the effect the paper would have upon the foreign mind—the first audience of my paper, in my private office, was composed of two German Jews, two Englishmen, one Scotchman, three Irishmen and a couple of Scandinavians; all intelligent men. I read the whole paper to them as it is contained in this

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pamphlet, and asked them if action by Congress, such as was asked for, would excite any unpleasant feelings among the foreign class. Somewhat to my surprise, and greatly to my gratification, they all, in the first place, confirmed the statements of the paper, saying that they knew personally that we were being imposed upon by the exportation of these classes to us to take care of, and that they, as foreigners, would rejoice to maintain any attempt to stop it. As taxpayers they feel the burden.

I do not know but that the purpose of the paper can be accomplished by striking out in the preamble all allusions to the proportion which the foreign born population furnish to our pauper and criminal classes; but the foreign people themselves, I have the best reasons to know, are not at all sensitive on the subject, because they know better than we do that they as a class are not responsible; that it is really the mercenary, municipal officials who have charge of the poor in these foreign countries, who are making it convenient, and economical at the same time, to send them to America.

So far as the accuracy of these statistics is concerned, of course the paper on which these resolutions are based professes to be nothing but a study of census statistics. The census chapter upon the defective classes explains with great detail the care taken in getting the statistics. The criminal list was obtained, not by any guess work, but from the dockets of the courts in the several States for a given twelvemonth. The pauper class was obtained in a similar way, by a careful compilation of official statistics; the insane were obtained partly by reports of asylums, alms-houses, prisons and jails, but mainly by a very careful analysis of all returns by the enumerators in their several districts, and with this remarkable assistance; 60,000 physicians, without fee or reward of any kind, except the consciousness of doing a work for humanity, made reports, each from their own immediate neighborhood, upon the report as made by the enumerator himself, as to the accuracy of the enumerator's report, by which some cases reported were stricken off and others were added, and in various ways the accuracy of the report was secured. Now, while I have studied statistics enough myself to know how unreliable they are, if defective, I have the greatest confidence in the general accuracy of the statistics of the defective classes, as furnished by the census of 1880.

After this discussion the resolutions were unanimously adopted as amended.

The report of the Committee on Bibliography of Insanity, prepared by Dr. Hurd, was read by Dr. Palmer.

Dr. Schultz, from the Committee on Asylum Location, Construction and Sanitation, read a report on that subject.

DR. SCHULTZ: Before being aware of my appointment on this committee as chairman, I corresponded with other members in the desire and hope that a report might be made as the result of the labor and consultation of all the members. The idea miscarried, so that the fragmentary remarks to which you have listened, I wish to say, cannot be charged upon any other members of the committee.

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On motion, the Association adjourned to 10 o'clock A. M.

The members of the Association spent the afternoon in a visit to Friends' Asylum, at Frankford, under the care of Dr. Hall.

The Association was called to order on Friday, at 10 o'clock A. M., by the President.

The discussion on Dr. Schultz's paper was postponed for the present.

The next report was on the "Treatment of Insanity," by Dr. Everts.

DR. EVERTS: Mr. President and Gentlemen of the Association—The task of preparing and reading a paper on so trite a subject—the treatment of insanity—to such a body as this, justifies me in stating that I shall not take it as disrespectful if any of the distinguished ex-Presidents of the Association shall go to sleep during the reading.

The report was then read.

On motion of Dr. Denton, Dr. Ghent, President of the Texas Medical Association, was invited to a seat in the Association.

DR. GRAY: I suppose the general silence of the members would indicate what is in my own mind in regard to the paper that we have just heard read. Dr. Everts has so thoroughly exhausted the subject, and so clearly, intelligently and comprehensively, that it seems to me the only thing that remains is to practice its precepts.

DR. GODDING: Lest silence should be construed into dissent, I wish to rise to say amen to every word and every letter of the paper.

DR. NICHOLS: I will only remark, Mr. President, that I am sure that none of the ex-Presidents, distinguished or otherwise, went to sleep during the reading of the paper; and that I am quite willing to unite in the general *amen* in respect to the substance of the paper, two dissenting thoughts occurred to me in respect to what mey be denominated non-substantive matters. The Doctor speaks of patients doing as well in institutions under homœopathic as in those under allopathic treatment. For myself, I do not know that such is the case; nor do I know what therapeutic treatment is administered in homœopathic institutions for the insane. Their annual reports that I have had do not go into much detail in respect to the medical treatment of their patients, but my knowledge of the views of eminent homœopathists and of the practice of several of good standing, lead me to suppose that the medical men at the head of homœopathic institutions

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may give drugs of great power quite as freely as others do. It would not, therefore, be my inference that patients in homœopathic institutions do well because they do not get medicine.

I do not recollect that the Doctor drew that inference for me, but the inference appears to naturally grow out of the remarks.

The other dissenting thought is this. In some works on insanity, in some annual reports and in the paper the use of "*chemical restraint*" is spoken of. The context in all cases has seemed to indicate that those words are used to describe the quieting and restraining excited and violent patient by administering drugs to them, and I have never been able to see any propriety in characterizing the quietude effected in that way by those terms. We have no evidence that opium or chloral act chemically in allaying excitement or producing sleep. Quietude or sleep produced by drugs should, it seems to me, be called *therapeutic* or *medical restraint*, if it be called restraint at all.

With the general views of the paper I fully sympathize and feel personally obliged to the Doctor for presenting them—the more for the admirable diction in which they are clothed.

DR. GRAY: If no other member has any remarks to make upon the subject, I would suggest that Dr. Channing should now present whatever he has to say.

DR. CHANNING: I have very little to say. It is indirectly in the line of the discussion of Dr. Schultz's paper in regard to cheap buildings for the insane. In Massachusetts, as the gentlemen here know, we have been going through the usual reaction in many of the other States in consequence of our past expensive buildings, and our insane have been collecting until now our institutions are practically all filled. The Danvers Hospital was opened six years ago, and since that time the insane have been increasing at about the rate of two hundred a year, and that is now about the rate of increase. At various times during the last three years we have considered—our and other interested legislatures have considered different plans for providing accommodation for the numbers of the insane which were gradually collecting; and one plan, especially, that has been thought about, has been in reference to provision for the criminal insane. We seem to have, in Massachusetts, an unusually large number of this class—that is, we have in the hospital at Worcester nearly seventy insane criminals. Many of them are cases of comparatively mild insanity, but the larger proportion of them are the insane convicts that have been transferred from the State Prison and other institutions during the last few years. Altogether there are considerably over a hundred insane criminals in all our different insane hospitals. The question of provision for this class of the insane was first presented in the form of a bill to the legislature and it died very shortly, and the matter was referred from one legislature to another. As the number of the insane was increasing so rapidly, last summer a joint legislative committee was appointed to consider the subject of the future provision necessary not only for insane criminals, but also for other classes of the insane. That committee sat during last summer. They decided that there was no need of a separate institution for insane criminals, although all the superintendents of hospitals that they saw very strongly

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urged a separate institution. They thought that some separate treatment might be necessary in connection with the State Prison, or in connection with an insane hospital, but that is as far as they went. They found, however, that there was need of increased accommodation for the general class of the insane, and among other plans that they recommended was that of a homœopathic insane hospital, and the Committee on Public Charitable Institutions this winter has presented a majority report in favor of turning some of the existing buildings of the Westborough Reform School into a homœopathic insane hospital, to accommodate about three hundred and twenty-five at a probable expense of $150.000. There were two minority reports, one that a portion of the buildings at Westborough should be adapted to the treatment of the insane and be under allopathic treatment, and the third one that supplementary buildings, such as those at Middletown, or perhaps at Washington, or at Kankakee, should be erected upon the ground of some of the existing State hospitals; and those mentioned, if I am not mistaken, were Danvers and Worcester. The idea of the last minority report was that the building should be erected for a hundred persons, at an expense of $25,000, or at two hundred and fifty dollars a head, and Mr. Robert Treat Paine, Jr., of Boston, who organized our system of associated charities there and introduced this bill. was a member of the Committee on Public Charitable Institutions. He called a meeting at his house a week ago for the purpose of considering in what manner cheap buildings might best be erected to supply the present needs of our insane. A number of gentlemen were present, many of them legislators, and also architects, and two or three gentlemen interested in building and a few physicians.

Hon. Edward Atkinson, of Boston, who is very well known I suppose throughout the country as a prominent Boston citizen, especially interested in insurance, and who is the president of a large insurance company which insures mills and factories, was asked to present a plan of a cheap building for the insane. This he consented to do and some of his plans and some rough sketches which he had made on a small scale, I have here in my hand. I think it may interest gentlemen here to see these plans. He approaches the subject from a rather original point of view. Dr. Schultz spoke of so many of our hospitals being designed by architects who knew very little about the wants of the insane. Mr. Atkinson is not an architect but he understands thoroughly factory architecture, and it seemed to be Mr. Paine's idea to see if Mr. Atkinson, with his special knowledge of cheap, big buildings for manufacturing purposes, could not suggest some shape or form of building which would be cheap and in a certain measure would be appropriate for the insane. So he approached it from that unusual point of view. As he said, he knew very little about what the insane wanted, and the most he attempted to do was to give a plan of a mere shell of a cheap building which might be adapted to their use. He has, since given his plans on that evening, somewhat modified his views I am told. He discovered then that some things were necessary that he had not known of, in providing for the insane. Mr. Atkinson's plans are a direct contrast to those of a hospital like Danvers, and furnish a good illustration of the extreme of reaction. He presents several of these plans. First he

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described a three-story building, and in illustration of it passed around the plan of a mill, showing the system of piping arranged for an automatic sprinkler. An inside view of this building gives an idea of an approved factory of three stories. Mr. Atkinson does not recommend a three-story building, but that section of the mill gives a good idea of the construction of the floors and of the supports of the three-story mill.

[The plans were exhibited.]

This plan, number two. is for a one-story building. This plan he especially recommended, although he modified his suggestions after learning that a one-story building would not be as well adapted to the insane as a two-story building. His plan number two was a frame building, although he said it could be a building of brick at very nearly the same cost. He would build this one-story building with a unite of sixteen. That is, the separate rooms may be sixteen feet square; the hall sixteen feet wide; open dormitories sixteen feet wide; and the large rooms, three sections, each one sixteen feet square. The walls of brick or wood as I have said before. The roof of three.inch plank, covered with gravel or with duck properly prepared. It seems to me such a plan of roof would be a very good one for a lunatic asylum. It is simply nearly a flat roof, raised a little in the middle, of three-inch plank, covered with gravel or with duck, the duck saturated with pine tar or mineral paint. The partitions would be of two-inch plank, grooved and splined, plastered solid, either on wire or dove-tail lath nailed to the centre of the planks, so as not to be affected by their shrinkage. These one-story buildings could be set up in sections in one line, on the sides of a quadrangle, or in the shape of an H or Greek cross or star form, and each section could be separately constructed or extended. This special arrangement, of course, if it is in a Greek cross—and sections too near together are not to be recommended—but the general plan kept up in the sections and proper distances, is one that might be very readily available. Such a building as this could be constructed for about seventy cents, or between seventy and eighty cents a square foot, or without the various internal arrangements adapted especially for the treatment of the insane it would cost not over one hundred and fifty dollars a person. With the boilers and the ordinary apparatus needed to carry on a hospital, it could be erected probably at two hundred dollars a head, on this plan. Here is a view of the one-story, not precisely like this that is mentioned on the other plan, but somewhat similar to it, showing the size of the timbers needed for a one-story building, and somewhat the internal appearance.

Dr. Earle: I would propose, as we have a great deal of business on hand and as our time is so short, that Dr. Channing let the plans lie on the table, where they may be examined at pleasure. As the Doctor well remarked, they show the extreme reaction from what I was about to call the insane delusion which manifested itself in the erection of the Danvers Hospital.

I wish at the present time to ask the assistance of the members of the Association. It is desirable that we should have, as I do not doubt that we shall have, an interesting meeting next year at Saratoga. Inasmuch

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as our closing session will be held this evening, it will become necessary to appoint, before that time, the members of the standing committees—the same committees a part of which have reported this year. I greatly desire that we shall so fill them that the right men will be in the right places. For myself, I am not sufficiently familiar with the special studies of the different superintendents to decide in all cases, who will be the best men to appoint as chairmen of those committees. I hope that if any member of the Association knows of another member who is especially qualified for either of the committees, he will mention the name of that gentleman to me; or, should there be any member who is pursuing studies in a special direction, I trust that he will not be so modest as to keep his name to himself. I am very earnest in pressing this subject upon you and asking your assistance. The first standing committee is on the Annual Necrology of the Association; the second, on Cerebro-Spinal Physiology; third, on Cerebro-Spinal Pathology; fourth, on the Therapeutics of Insanity and New Remedies; fifth, on the Bibliography of Insanity; sixth, on the Relation of Eccentric Diseases to Insanity; seventh, on Asylum Location, Construction and Sanitation; eighth, on the Medico-Legal Relations of the Insane, and ninth, on the Treatment of Insanity.

I desire, further, to seize the present moment to make a few remarks on a subject which I think ought to be brought to the attention of the Association. Perhaps all of the superintendents of hospitals who are present, received, a few months ago, letters from New York asking for the number of patients admitted to their institutions the cause of whose insanity was alcohol. I declined to answer those which were addressed to me. Knowing that I could give no adequate idea of the actual number, or the proportionate number of my patients—whether those now present or all who have been inmates in past time whose insanity was caused by intemperance; I believed that any attempt to answer the questions by statistics would do more harm than good.

A few days ago the result of that inquiry was sent to me in the form of a pamphlet. Undoubtedly it was sent to other superintendents. I have not had time to read it, but have so far examined it as to learn that its author comes to the conclusion, derived from information of all sources, but chiefly from the superintendents of hospitals, that the percentage of insanity caused by intemperance is seven, or about seven. I leave it to you to form your own opinions whether that approximates in any very considerable degree of nearness of approach to the actual proportionate number. I still believe that those statistics will do much more harm than good. There was not, apparently, allow me to say, sufficient care on the part of the superintendents who answered the letter. As Dr. Chapin remarked in essence yesterday, statistics are very delicate things and unless made with great care they may tell great falsehoods.

At several of the hospitals, the figures in the column "Number of Patients Admitted" are *not* the numbers of patients admitted, but, apparently, the whole number in the house in the course of each consecutive year. Every patient received is consequently counted every year so long as he remains in the hospital. The effect of this repetition is greatly to increase the sum of what are called admissions, but are not what they

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profess to be. Thus, at one hospital, which according to its annual report, admitted, in the course of thirty years, 7,061 patients, the number of admissions is made by these New York statistics to be 20,658. The number of cases alleged to have been caused by intemperance was 1,141. The *actual* percentage so caused was 1141-7061, equal to 16.15, or nearly one-sixth of the whole. But the apparent percentage which is the result of the New York statistics, is only 1141-20658, equal to about 5.57, or but little more than one-twentieth of the whole.

At another hospital the swollen numbers of the New York statistics make the admissions, in ten years, 6,187, whereas the true number, as shown by the annual report, was 2,451. The number of cases originating in intemperance was one hundred. The New York statistics make the percentage 100-6187, equal to 1.61, whereas the *true* percentage is 100-2451, or 4.61.

A very similar letter to the one just mentioned has since been received from Missouri. A committee of some association in that State requested the same or similar statistics in regard to intemperance as a cause of insanity. I answered that by first giving my correspondent the number of admissions from the opening of the Northampton Hospital to the present time, and then informing him that if he could sit down and make a shrewd Yankee guess he could obtain figures which would be of more actual value than ostensible facts which I could give him, especially if the committee which used them would acknowledge that they were obtained by guess work.

It is not necessary for me to point out the difficulties involved in this subject or to mention the impossibility of giving to outsiders, from the statistics which we have, an idea of the extent to which intemperance is probably a factor in the production of mental disorders.

Dr. Gray: Mr. President—I am glad that you have brought this matter before the Association, as I understand, formally. I have received, I suppose in common with other superintendents, on an average certainly of once a week, a claim or circular of some kind for information, upon which persons desire either to write a paper, or to write a book, or to appear before some association, or execute some philanthropic purposes for the good of men. As a general rule I have put them in the waste basket. To me, a good many of them seem to be simply sponges, sucking up what they can get here and there and then appearing as authors. Occasionally, when I have complied, after a second or third letter telling me that I was either the only one, or nearly the only one in the State who declined to give the information, and furnished it, I have found that it was generally the case that the information was desired by the writers in order that they might appear as authors, either on opium or liquor, or statistical information, or in connection with the administration of various remedies. I have even been asked for detailed information as to the number of doses of various medicines given in the hospital; the persons calling for it wanting to write a paper, or appear before the public on chloral or bromides, etc., thus sponging all the information possible from persons of experience, they having little or none themselves, and then appearing as great authors on the therapeutics of these subjects. I doubt very much whether any of

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those circulars ought to be answered, except they come from some responsible body. I do not know exactly what association in New York the President referred to. I have received four or five pamphlets.

DR. EARLE: It was a brewers' association.

DR. GRAY: I think I answered them after I had received additional letters from three or four prominent and responsible gentlemen, among them one or two lawyers, saying they thought a public officer ought to furnish the statistics upon any subject asked for by reputable men, or refer them to where the statistics could be found. Afterwards I furnished the statistics as they appear in the reports made to the Legislature upon the subject. I have not received any reply or any pamphlet, but I presume if the rest are in there that I appear with them. However, I have made up my mind to ignore those things as far as possible, because I do not think that that sort of pseudo-science, or whatever it may be called, should be in the least encouraged. I think spontaneous labor on the part of men who know about the subject they are writing upon, who give just what they know themselves and compare it with what they may get from others, or on general record, is the only way that authors should appear. I believe that these sponges should be dropped.

DR. EARLE: I am very glad to have heard Dr. Gray's remarks. The object in this case appears to have been, as I suspected from the beginning, to sustain a trade, the support of which is the support of the cause of intemperance. The pamphlet shows that only seven per cent. of the cases of insanity are caused by intemperance, and then gives the National revenue from the production of alcoholic drinks in such a way as to lead to the inference that the nation gets abundantly paid, perhaps much overpaid for the little detriment of the seven per cent. of insanity which is caused by it.

DR. NICHOLS: The same application for information upon this subject came to me. It appeared to come from an officer of a brewers' society, and I supposed it was made entirely in the way of trade—that is, to make it appear that alcoholic, and particularly malt liquors, did not produce as much insanity as is generally supposed. I think I received as many as three applications for the same information from the same party.

DR. EARLE: I had three or four.

DR. NICHOLS: The second and third applications stated that an additional number of superintendents had responded. I treated the applications as Dr. Earle says he did. I didn't furnish any information.

While I am up I will take the liberty of saying that the subjects presented by Dr. Channing appear to me to be of a great deal of moment in connection with the class of people in whose welfare this Association was organized and is met here to promote, and that I very much hope that Massachusetts will not be led into the concretion, so to speak, of the extreme reaction of sentiment which has taken place in that State in relation to the cost of its institutions for the insane. Nobody will deny that one, perhaps both, of the institutions last erected in that State, including the large sums expended in preparing the sites for building, cost a very unnecessarily large sum, but the money can not in any way be called back

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into the public treasury and its expenditure has not impoverished the State. It is still perfectly able to provide for the increase of insanity within its borders, and I cannot think that it will be led into putting up card-board shanties that will be neither comfortable, healthy and safe as respects patients taken care of in them, nor reputable to that great commonwealth.

From the outset of the consideration of the subject of making proper provision for the criminal insane my judgment had in certain cases favored the erection of buildings or quite separate wards in connection with our State institutions for the treatment of this class of patients. We all agree that the criminal insane should not be placed in the same wards with innocent, reputable people and that they should not be confined to the cells of a prison. Now, the rational course, it seems to me, is to adopt some scheme of separating them that is feasible and practicable. New York has a sufficient number of the criminal insane to justify it in providing and maintaining a separate asylum for them. Other States have a sufficient number of this class to justify the same procedure, but I believe New York is the only State that has such an institution, though the separation of the criminal insane from other classes has been strongly advocated by this Association of Superintendents in their annual reports for at least twenty-five years. Massachusetts might have an entirely separate institution for the criminal insane, but I cannot think that altogether desirable under the circumstances.

DR. EARLE: Not in Massachusetts.

DR. NICHOLS: But there are States beside New York that probably have a sufficient number of criminal insane to justify an altogether separate provision for them. The plan that is suggested by Dr. Channing, or that it is now proposed to carry into effect in Massachusetts, is such a one that the small States can carry into effect; and whether a State has six or sixty criminal insane, it can in that way give them the most enlightened and humane care at a moderate expense; and I believe it can be done without encroaching upon the welfare of the ordinary insane in public institutions.

DR. GRAY: I was not present when the matter came up, but I think I ought to say something in connection with the remarks of Dr. Nichols. I have had some experience in having criminal insane, both convicts and what are ordinarily called criminal insane, in a State institution. I am utterly opposed, looking through my experience, to any such plan as a ward, connected with a State institution or any other institution, for the care of criminal insane. In the first place, the proximity of that class—for they are a class that should be kept away from the ordinary insane—is unpleasant, and it is difficult to have them properly cared for without, on the one hand, too much isolation; and, on the other hand, if they are mingled with the ordinary classes in their exercising grounds, in the work upon the farm, or walks to anywhere in the vicinity, that immediately breaks up any separate management. Besides that it would be unjust to the criminal insane themselves to house them together in a ward, the quiet and orderly with the noisy, disturbed or dangerous. It throws aside at the very beginning all the ideas of classification, by placing an injurious attrition upon each other. The very purpose, therefore, of making them

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feel agreeable and comfortable, and putting them under enlightened supervision, is thwarted. Such a ward would become merely an almshouse ward.

I have been in an almshouse where they took care of the chronic insane with all classes in one ward. There were the noisy, maimed and epileptic patients; the violent, the quiet, the demented classes. This would be the same thing. The State of New York projected this institution a great many years ago, that now has its existence there, and is highly successful. At that time I visited, at the request of the Governor, all the prisons of the State; examined all the convicts and made a report to him as to the number and character of the prisoners there who were actually insane, or who were so insane as to disturb the discipline and order of the prisoners. The institution was erected, organized and then a law passed subsequently authorizing the transfer from the State asylums of such criminal insane as were recommended to be transferred by the superintendents, after examination into each case by a Justice of the Supreme Court, he having the final responsibility. I am glad to say that this last winter, as one of the results of the legislative investigation that was had, was the passage of a more comprehensive law, similar to the provisions (or in essence) that exist in England; that is, instead of restricting the cases of transfer simply to murder or attempted murder, and arson and highway robbery, there is no designation of crime but embraces all persons who have committed crimes, leaving it open then to transfer all criminals who are dangerous or injurious to the welfare of the ordinary insane in the hospitals, following the course in England of transfers from other county asylums of persons of the same class to Broadmoor. Now the system has certainly acted well there, and I think—I speak in the absence of Dr. McDonald, who is Superintendent of the Criminal Asylum in our State—it is conceded by those who have had opportunity to look into the matter, our State officers and the Legislature, that that institution is a success; I know that it is an infinite relief to the State Lunatic Asylum at Utica, and I should be very sorry to see any movement which would tend to place the criminal insane in isolated confinement in connection with any State institution. Of course, if the States are too small, as some of the New England States are said to be, I can see no objection to the erection of some central hospital, where one State could secure an opportunity of transferring its criminals to the care of that institution. I do not know how the matter would work, but if there are from seventy to one hundred or more in the State of Massachusetts, that would be half as large an institution as some of the members of the Association believe ought ever to be erected. But any institution that covers over fifty persons, could very easily arrange a proper classification, so that these people would not be brought together in a confused, heterogeneous mass of mania and melancholy, dementia and general paresis, and the filthy, the orderly and the quiet and neat all put into one ward. I think nothing could be worse than that. If I had a friend or acquaintance so unfortunate as to be a criminal, I should pray that he be left in prison, than that he should be changed under such a system as that.

DR. CHANNING: I do not think that Massachusetts will put up such buildings as Mr. Atkinson has drawn here. I simply brought them here as suggestive of what were better than card houses, warm and well venti-

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lated, etc., and thought they might be interesting to the Association to look at. The chances seem to be now that we shall have a homœopathic hospital there – that the building of the Westboro Reform School will be adapted to the use of three hundred and twenty-five insane persons, under homœopathic treatment. In other ways we have, perhaps, retrograded somewhat in Massachusetts in regard to provision for the insane. A bill was passed last winter, that cities of over 50,000 inhabitants *may* erect an institution for the care of their insane. Just now we have only two or three cities of more than 50,000, so there will not be very many of them at any rate. But our State Board of Health, Lunacy and Charity, has recommended the transfer of the insane from the cities and towns back again to the almshouses, especially if they have an insane department. In consequence, at the present time, we have quite a large number of persons under lay management. For instance, in Lowell the insane department has now, I believe, fifty or sixty insane persons, and they are visited by a doctor from the city once or twice a week. There are also insane departments at Salem and Lawrence. When I spoke of the proposed plan, I did so for the purpose of showing how a number of insane persons might be kept cheaply, but not to recommend it.

DR. NICHOLS: Are there not quite a number of insane kept at Salem?

DR. CHANNING: I do not think a very large number, probably fifteen or twenty.

DR. NICHOLS: Not as large as they have had?

DR. CHANNING: I think they were sent to State hospitals, and not sent back for want of proper accommodations.

In regard to an institution for insane criminals, having been connected with the Auburn Hospital for some time, I got some knowledge of insane criminals; and having also examined insane convicts in the State prisons and reformatories of Massachusetts, I have a little idea of the treatment of insane criminals both in special institutions and in general insane hospitals. Insane convicts, where they are treated with the other insane in a general hospital or in a separate ward, from what I have seen myself, are a source of great embarrassment. At Worcester, where the number is very large, wards were supposed to have been built especially for that class. They cannot all be treated satisfactorily together in one ward, there are so many varieties of insanity among such a large number of insane convicts. I think it is the testimony of Massachusetts' Superintendents, that it is a source of great difficulty with them. But the State of Massachusetts retains insane convicts in the prisons, because of no other place to send them. We do not feel like obliging the superintendents of hospitals to take them, as they are often disturbing and dangerous men. I do not feel like recommending such a transfer, although I know it is the quickest way to get such accommodations as we ought to have. The Warden has to keep them closely confined, and they do not receive the medical treatment that they need; and yet, if they go to the insane hospital they make so much trouble that it seems only right to keep them confined in a close room as in a prison. The picture is very different as seen at Auburn, where the insane criminal is very much like any other insane man, except that he is confined

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more closely within four walls. He has more privileges, a greater amount of freedom and much better treatment in every way than it is possible to to give many of the insane convicts in a lunatic hospital. Men who are disposed to be vicious, cannot be allowed to associate with other patients without the greatest injustice; and where one has seen both sides of the picture as much as I have—having always been interested in the subject and seeing a number of insane criminals every year—one is much impressed with the advantages of a separate institution for insane criminals.

DR. EARLE: Dr. Nichols suggested, as a palliative, at least, of the mistake made by Massachusetts in the erection of so expensive a hospital as that at Danvers, that Massachusetts was not impoverished by it. Of course she was not. If she had expended ten millions upon it she would not have been. But that does not relieve the taxpayers of the State from the effect of the burden of to-day, which is, that they are paying ninety thousand dollars interest, annually, on the cost of that establishment. Aside, therefore, from the actual necessary current cost of support of its inmates, there is this additional ninety thousand dollars a year to be considered as a part of the expense to the State.

The hospital was intended for four hundred and fifty patients. The commissioners and the physician who advised them, always maintained that it never ought to contain more than that number.

Provided, therefore, that the number of patients had been limited to four hundred and fifty, the actual cost to the taxpayers of Massachusetts, of the insane paupers—and I suppose considerably over three-fourths of the inmates of Danvers are paupers—are they not, Dr. Channing?

DR. CHANNING: I should think so.

DR EARLE: The actual cost, then, would be about eight dollars each, per week. Instead of having four hundred and fifty patients it has almost seven hundred and fifty. When I last heard, it had seven hundred and thirty. The hospital never paid its running expenses until the last official year, when the average number of inmates was nearly seven hundred.

In regard to the plans which have been shown by Dr. Channing, and the remarks upon them by Dr. Nichols, I may say that the gentlemen may rest assured that Massachusetts is not going to commit itself to any unwise experiment. That State will never, unless a great change takes place, house its insane in buildings where their physical comforts will not be sufficiently administered to. As an evidence, take our asylum for the chronic insane, at Worcester. A member of the State Board of Health, Lunacy and Charity, within the last year has said to me, "It is the best hospital in the State"—meaning, as I inferred from the previous conversation, the most comfortable and home-like.

DR. NICHOLS: Better than Northampton?

DR. EARLE, [hesitating.] I quote from a member of the Board of Health, Lunacy and Charity:

The whole subject is in the hands of a body of men who will never see their fellow men improperly treated—a body of men and women, for women are beginning to form an important factor in the administration of the charities of Massachusetts.

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DR. SCHULTZ: Mr. President—With reference to the remarks of Dr. Nichols I wish to say something. He did not elaborate his remarks and I do not know fully what his ideas are in regard to the association of these two classes of people, the ordinary insane and the insane convicts; whether he believed they ought to be in the same building, or in the same town, or on the same farm. We have two hundred and sixty acres at Danville and have only four hundred patients, and yet cannot find room enough for suitable exercising grounds, for they are mostly unskilled laborers and they require plenty of elbow room. On that account we go out for exercise into the lanes and roads of the neighborhood and the consequence is that we are blamed for trespassing, justly, perhaps. Now, if we had insane convicts, classified and known as such, we should be restricted still further, as they could not come in contact with each other out of the buildings and away from them, any more than in the halls or amusement room or chapel.

When the Danville Hospital was being erected the attempt was made to have a part of the building appropriated for the insane convicts of the State, but while deliberations on the matter were in progress an article appeared in one of the medical journals of this city, by one whose ability to speak with authority none of us would for a moment question. He maintained with much emphasis and philosophy, I think, that it required one kind of mental organization, habit of thought and moral disposition to take care of the criminal class, and a totally different one to take care successfully of the ordinary insane, and that the two classes could not be suitably cared for under one management.

When, some years later the buildings had to be in part re-erected, the same question arose once more. After a somewhat full conference at the hospital, by a Legislative Committee, the Board of State Charities and the Trustees and Officers of the Hospital, the conclusion was arrived at and acted upon that it was inexpedient to take care of the insane convicts in the building. I hardly know whether I am more surprised or more pained to hear a statement made in this meeting, that these two classes of patients should be taken care of together. I think the position of this Association ought to be decidedly, that it is utterly wrong to treat them together, and it is to be tolerated only as the lesser of two evils.

DR. NICHOLS: Dr. Channing and Dr. Schultz appear to come to a common ground on this question.

No man can be more deeply impressed with the importance of separating the criminal from the reputable insane than I am. When I was an assistant at Utica a considerable number of criminal insane were treated in that institution, and at Washington a very few such patients were treated at different times, and I am unable to express my sense of the injustice to the reputable insane of treating the two classes together. And if they are treated under the same economical and medical organization as the ordinary insane, I have not the slightest idea of having the two classes come in contact with each other, and cannot see that such contact would be necessary. A State institution should have as much as two hundred and sixty acres of land—some have a much larger area—and I cannot see why fifty or sixty acres of it cannot be walked in, buildings be erected in such enclosed

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grounds, and the criminal insane of an asylum district be treated there just as well as they are treated at Auburn.

Perhaps I was unfortunate in using the word *ward*, though I think I did use the word *building*. I cannot think that any one here really supposes that I have for a moment entertained the idea of putting all the criminal insane of one sex in one ward—much less that I have entertained the idea of putting both sexes in one ward—which language used in this discussion might be thought to imply. If a separate building in a separate enclosure provided for three (3) classes of each sex, the classification would be more liberal than has always been provided for the reputable insane in State institutions; and in that proportion of the almshouses of the country in which from ten (10) to a hundred (100) or more insane persons are taken care of, are there six (6) distinct wards, three (3) for each sex? Probably in no more than one (1) out of ten (10.) It is from my sense of the crying evil of associating the ordinary and the criminal insane, and of the urgent necessity of everywhere disassociating them that I am in favor of a plan or scheme that the State legislatures are like to authorize and make the necessary preparations for. I am not in favor of a retrograde movement in this or any other matter, unless it may be, to depart from a single line of endeavor that has long been pursued without desired results, except in one instance as far as I now recollect.

DR. CHANNING: I understood Dr. Nichols to say a ward.

DR. NICHOLS: If I used the word *ward* alone, I was in error. I should have used the word building.

DR. CHANNING: Could not a building be put up on the grounds of an existing hospital? On the score of expediency it might be the best plan; but I think the best or ideal plan is an institution for the criminal insane, that is wholly and absolutely separate, where there is no possibility of association or of demoralization in the environment or in the proximity of that class. I think the insane criminals, themselves, could have more liberty and more treatment, if they required treatment, by themselves, on a good-sized farm, which they could perfectly, work and carry on, than in proximity to another institution. I think with a tenement, one would have an opportunity of curtailing the whole. That would be the only practical advantage.

DR. NICHOLS: The erection of a building on the grounds of an existing hospital—on a part of the farm set apart for the treatment of criminal insane—is just what I advocate where it is not practicable to have a separate asylum for that class of patients. You would consider it necessary to have that part of the farm walled in?

DR. CHANNING: Not unless there was an institution near by.

DR. NICHOLS: I think it should be walled in in every case, in order that the patients might have an easy liberty of personal movement, without the liability to the escape of persons very dangerous to be at large.

It has been proposed that two or more States should unite in the establishment of an institution for the criminal insane for their common benefit. All that can be said of that scheme is that it has not yet been carried into

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effect though proposed many years ago, and that there are many reasons why it is not likely to be.

DR. CHANNING: There is a certain number that will escape, and I think provision should be made in insane hospitals for that class. They should not be allowed the same privileges, should be guarded very closely, placed in particularly strongly constructed rooms, and also more clo-ely watched when they go out doors. You know Dr. McDonald allowed quite a large number to go out into the neighborhood for farm work, and into the fields around. Even in criminal institutions a large number can go out under the care of attendants, without the walls. It would be very expensive to put up walls around a large farm.

DR. GRAY: Wouldn't an institution on a farm, or anywhere else, have to have a medical officer detailed for service there?

DR. CHANNING: Certainly. In regard to card-board houses, or cheaper buildings, Dr. Palmer told me to-day that at his hospital, near Kalamazoo, they have what I think he calls "sheds," where, if I am not mistaken, he has forty patients, at a total cost of fifteen hundred dollars; they are there in the winter as in the summer, and he said they are very comfortable.

DR. EARLE: It is necessary, in justice to myself, that I should make an explanation in regard to the subject which has been under discussion. While Dr. Gray had the floor, I expressed the opinion that it is not desirable, in Massachusetts, to have a separate criminal asylum. It is not because I do not think that such separate treatment is best. My remark was based upon the fact that the number of patients in Massachusetts who, in my opinion, ought to be domiciled in such an institution, is too small, at present, to justify the construction of an independent establishment for their accommodation. Could such a thing be effected, I would hail the day upon which it might be decided that the States of New England should unite in the erection of a joint asylum for the criminal insane. Dr. Gray alluded to the number of the criminal insane in Massachusetts. Three quarters of them, roughly speaking, are criminal only in the very lowest degree, and no worse than many of the patients by whom they are surrounded in the present hospitals. An insane man, happening to get drunk, is taken up in the streets, sent to the Jail and thence to the House of Correction. He is brought from that institution to ours or one of the other State hospitals, and in two or three months the term of his sentence expires. Shall all these cases be confined in a separate institution with other convicts? If those, why not a large proportion of other pauper insane in the institutions who are really as objectionable as these petty criminals themselves? I do not wish to prolong the discussion, but I thought it right to prevent myself from being misunderstood.

DR. GRAY: I would say at this point that those persons are not recognized in our State as criminals. They are simply persons who have not been tried by courts or by juries for crimes, but are found to be dangerous to be at large, and are not subject to transfer to Auburn.

DR. EARLE: In our State they are called criminal insane, and the fact that so large a proportion of them were arrested for merely petty offences is perhaps one of the chief reasons why Massachusetts has not done some-

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thing toward making separate provision for them. The numbers of the really criminal insane, that is, those convicted of felony and those who have committed homicide or other capital crimes, but have not been put on trial, are very few.

Dr. Fisher then read a paper containing a history of a case of tumor of the brain.

Dr. Chapin read a paper on "Mental Capacity in Typhoid Fever."

On motion of Dr. Gray, it was

Resolved, That if any member of the Association wishes to attend the International Medical Congress, he shall be furnished by the Secretary with a certificate as delegate.

On motion, the Association adjourned to 8 o'clock P. M.

The Association spent the afternoon in visiting the Department for Males of the Pennsylvania Hospital for the Insane, under the conduct of Dr. S. Preston Jones.

The Association was called to order at 8 P. M., by the President.

Dr. Chapin offered the following resolution:

Resolved, That Assistant Physicians of State and Incorporated Hospitals and Asylums for the Insane, who have been continuously on service for a period of years, are hereby constituted members of this Association during their official connection with their respective institutions.

On motion of Dr. Chapin, the resolution was referred to a committee consisting of the President, Vice President and Secretary, to report at the meeting in 1885.

The Secretary read the list of the Standing Committees for the year 1885.

[The list of Committees is here omitted, the same having been published in the July (1884) Number of this JOURNAL.]

Dr. Callender, from the Committee on Resolutions, reported the following:

The Association of Medical Superintendents of American Institutions for the Insane, about to terminate its meeting in this city, in which it was organized forty years ago, and in which it has held seven of its annual meetings, in the customary resolutions on the occasion is inspired by

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mixed emotions. The selection of Philadelphia for this meeting was mainly induced by the hope of the presence at its deliberations of one of its venerable and eminent founders, whose weight of years and declining strength was known to the membership—the late Thomas S. Kirkbride, M. D. The inscrutable wisdom of Providence has frustrated that hope. His face was not among us, but the memory of his abilities and his rare virtues was left to us to honor, and will be green as long as the Association shall survive. This meeting has been graced, however, by the presence of another of the links yet connecting the body to the day of foundation, in the person of our distinguished President, his contemporary and colleague, and the Association congratulates itself upon the fact and cordially wishes him length of years and usefulness.

The Association records with pleasure, that the authorities of public institutions of this city with which our work is affiliated, and the resident members of the medical profession have greeted it with their accustomed liberal hospitality, and the observation of our visit is that Philadelphia, the pioneer in this country of humane endeavor in behalf of the insane, is yet abreast of the current of progress in general philanthropy guided by medical science.

To the Board of Managers of the Pennsylvania Hospital for the Insane, and to Dr. S. Preston Jones, for many years in immediate superintendency of the Male Department of that renowned institution, we are indebted for the privilege of visiting the wards of that department and for their courteous attention.

To Dr. John C. Hall, the Superintendent, and the Managers of the Friends' Asylum at Frankford, we are also indebted for an agreeable afternoon in the inspection of the appointments of that institution—a model of neatness and comfort, and an honor to the specialty.

The Association expresses its high appreciation of the invitation to visit the Medical Society of the State of Pennsylvania in its annual session, and the opportunity afforded to mingle with its members and of attending the reception held by its eminent President, Henry H. Smith, M. D., of this city, in the rooms of the Philadelphia Academy of Fine Arts.

The thanks of the Association are returned to the Guardians of the Poor, of the city of Philadelphia, for an invitation to visit the Insane Department of the Almshouse; to the Managers of the House of Correction, to visit that institution, and also to the Directors of the School for Imbecile Children at Elwyn, Pennsylvania, and its regrets expressed that the limited period of the session and the immediate business of the body rendered it impossible to avail itself of their kindness.

The reporters of the city press, in attendance upon the sessions of the Association, have laid it under obligations for their full and accurate minutes of its proceedings; and Messrs. Kingsley & Co., of the Continental Hotel, have its thanks for the quiet and commodious parlor furnished for its use, and for their attention and courtesy to its members as their guests.

On motion of Dr. Curwen, the Association adjourned to meet in Saratoga, N. Y., on the third Tuesday of June, 1885.

JOHN CURWEN, Secretary.

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