ORIGINAL COMMUNICATIONS.

LECTURES ON INSANITY, DELIVERED AT
THE BRISTOL MEDICAL SCHOOL DURING
THE SUMMER SESSION OF 1855.

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LECTURE I.

PAST AND PRESENT STATE OF PSYCHOLOGICAL MEDICINE.
STRUCTURE AND FUNCTIONS OF THE BRAIN. DEFINITIONS
OF INSANITY. VARIOUS FORMS OF INSANITY. CLASSIFICA-
TIONS ADOPTED BY PSYCHOLOGISTS.

In this and the succeeding lectures it is my purpose to treat of the subject of Insanity. You are aware that, until within a comparatively recent period, but few medical men cared to consider otherwise than superficially those diseases of the mind (brain) which induce insanity. Psychological medicine has yet to take the position to which it is entitled, whether as a branch of science, or as involving matters of the very highest importance to the cause of humanity, of progress, and of common justice.

The time has not long passed when the lunatic was treated with the harshness and severity of the criminal; when he was made the companion of the idle and the dissolute; when he was denied all sympathy, and left without any medical or other treatment. But, however much may remain to be done, it is to members of our own profession that must be attributed the high honour of having rescued the lunatic from the neglect and wretchedness which once surrounded and oppressed him. No sooner did the light of medical science and discovery penetrate the mist which enveloped mental disorders,—no sooner did the medical philosopher lift the veil which obscured their nature,—no sooner did the physician dispossess lunacy of its mystery, and demonstrate the cause and nature of its many and peculiar indications,—than the insane were looked on with a marked sympathy, and the best and most praiseworthy efforts were made to ameliorate their condition. Fifteen years since, I was appointed to the medical staff of the County Asylum at Hanwell. At that time a great part of the profession was interested in what was called the great experiment then being made at the Hanwell Asylum, under the superintendence of Dr. John Conolly, viz., that of the entire disuse of all mechanical restraint in the care and treatment of insane persons. At the present time, it is almost superfluous to remark that the experiment has succeeded, and that its success has become a matter of history—of psychical history, if I may so call it.

Since the period just named, it may be observed that the experience of each succeeding year has demonstrated the increased attention awarded to the brain and its diseased states, i.e., those involving a disorder of the mental feelings or powers (insanity). In each county throughout the length and breadth of the land, the number of insane persons has so much increased, that an especial accommodation for them has been called for and duly provided. County and borough asylums have sprung into existence, and are yet increasing over the country. In Middlesex there are now two large asylums; the one at Hanwell, with nearly 1,000 beds, the other at Colney Hatch, with a few short of 1,300 beds. Nevertheless, there are a vast number of insane paupers still dragging out their miserable existences at the union houses, where, subject to hard fare, and inconsiderately accommodated and treated, they are destined but to add to those already burthening the list of incurables, and to take the place of those who, in the same category, will, in the due course of time, help to swell the present high rate of mortality among the insane at the two large asylums above named.

For the existence of so many public establishments for the reception and care of insane persons, and to the consequent demand for skilled and accomplished medical men to fill the offices of medical superintendents thereof, must be

referred the progress in late years of psychological medicine. In order to compete with the medical spirit of the age, not only are lectures on insanity given from time to time at the large public asylums in and about London,—at Bethlem and St. Luke's hospitals, and at the county asylums at Hanwell and Colney Hatch,—but certain of the provincial schools, Liverpool for instance, have established lectureships on "medical psychology." If, then, so much that is needed is being done at London and Liverpool, why, it may be asked, should not Bristol do likewise?

I would have you bear in mind that the object I have in view in addressing you on this and subsequent occasions is not to make a specialist of a single gentleman before me. I dislike specialities; I believe them to be impracticable to any extent. For myself, I have so lived, day by day, with the insane, I have so mixed myself up with them and their daily pursuits and peculiarities, so much and constantly shared, I may say, their hopes and fears, that it would have been almost impossible for me to have continued uninformed of a goodly share of the nature and peculiarities of insanity. The opportunities afforded me, as medical superintendent at Hanwell, and then at Colney Hatch Asylum, have been such as few men can command; and these have not, I hope, been unattended by certain advantages. However, nothing is more certain than that to men who have been or are similarly placed, must our profession be indebted for the facts and principles which are destined to promote the recognition of sound views of mental pathology, and the adoption of the most successful means of relief and cure of the insane, and, not less, their protection from the consequences of a revengeful law, and of dictatorial lawyers. In this and the following lectures I shall hope to place before you the principal of the advantages just referred to. Their value, both as regards quantity and quality, I shall leave to you individually to decide on. And whatever might be your final judgment, I beg you will do me the justice to admit that in the composition and delivery of these few lectures I have done my best to spare you, gentlemen, an altogether profitless expenditure of your time and attention within these walls, during those hours I have the honour to address you. It is not my intention to detain you with the consideration of theories, however ingenious and plausible; my object is rather to place before you what shall be considered as practical; to put you in possession of those facts which, in after life, and when engaged day by day in the laborious and responsible duties of your profession, you will find available and of real utility.

Now, gentlemen, nothing can be further from my wishes than to trespass in any way on the provinces of your teachers of anatomy and physiology; but in order to convey to you anything like a definite notion of insanity, i.e., in the abstract, or of the varieties which the disorder assumes, it is necessary that I should confine your attention for a short time during this lecture to the consideration of the brain: for a knowledge of the normal state and uses of an organ must precede that of its diseased conditions, and of the signs or symptoms by which such conditions are manifested. Insanity is to the brain what gastric disease is to the stomach, or asthma to the lungs, and so on.

The brain, then, or encephalon, is that mass which is contained within the cranial cavity. I have here certain drawings of the human head; these severally demonstrate the remarkable volume of this important organ. This alone is a very fair criterion of its characteristic function, and constitutes in itself an eloquent yet silent reply to those who would make the brain's office a mere sinecure in the animal economy. You all know well that size is the measure of power, other conditions being equal. I would call your attention to these copies of original drawings. If you will be at the pains to look at these portraits of eminent men, viz., Franklin, Gall, etc., you will not fail to remark the large size of their heads, in a general sense. Further than this, the fact here insisted on obtains equally in so far as parts of the head (brain) are concerned. In

this drawing, there appears a decided correspondence between the posterior or basilar region, and those qualities or mental powers for which Pope Alexander the sixth was remarkable; the size of the posterior region of the cranium was here the measure of power in him of the lower—the animal propensities. This is by no means an accidental occurrence; or we should not find the correspondence between the size of the basilar region and the power of the mere animal desires so constantly occurring. By way of contrast, I would now beg your attention to this drawing; it is the portrait of Oberlin, a man of the purest feelings and desires; one ever under the influence of the most holy emotions; one whose whole life was passed in acts of benevolence and true piety; and who died as he lived, a practical and eminent Christian. The basilar region of the head is small in Oberlin, and his lower feelings were inactive. We observe in this instance a correspondence truly—but one of a far different kind—one between the coronal region and the most exalted virtues, for which he (Oberlin) was so well known, and so much beloved. It would be easy to extend and amplify the remarks just made; but, inasmuch as I am limited, on this occasion, to a short course of lectures, I must forbear.

We may find good proof of the position here taken in the brain of the idiot. In the cases before cited, we have perceived the union of size and power; in this there is neither one nor the other. In this drawing, from the work of Spurzheim, are preserved the figures of six idiots, whose brains, with respect to size, were defective in different degrees. Now the common sense of all mankind would be offended at the bare idea of associating a high order of intelligence, or an acute moral perception, with organisations such as are here represented; whilst each one and all of these heads afford strong evidence, though of a negative character, of the truth of the axiom, which gives to size the measure of power (other conditions being equal, *i.e.*, in a general sense); they severally prove, also, that the fact obtains equally in so far as parts of the cerebral mass are concerned, as was just now stated. The cerebral conformation of no two idiots is the same; and this is directly seen from even a very superficial view of these drawings.

I have heard it argued that the doctrines which Gall and Spurzheim taught with so much zeal and address are completely denied by the single fact, that not infrequently the head of the idiot is large and well formed. Nothing can be more true than that every now and then we may see an idiot with a large and well-proportioned cranium. I present to your attention the *fac similes* of three such. But you must bear in mind that the brain within is a mass of disease; that the volume of the head is the consequence, not of normal cerebral matter, but of a large quantity of serous fluid. These poor and afflicted children present so many examples of *hydrocephalus*. The wards of any lunatic asylum will supply you with parallel cases.

In the preceding remarks, I have referred to the *size* of the brain, as revealed by the external and physical characters of the skull. I have also drawn your attention to the importance of the *form* of the brain—*i.e.*, of the relative *size* of its different regions. There is one other physical condition of the organ which I must not pass by without a few words; I mean its *weight*.

According to the tables of Dr. John Reid, as contained in the *Monthly Journal of Medical Science* for 1843, the brain of the adult man weighs, on an average, fifty ounces, *i.e.*, a little more than three pounds avoirdupois. This great weight depends mainly upon the cerebrum and cerebellum, the medulla oblongata forming about one-tenth of the whole weight. These parts exist in their highest state of development in man. Their size does not appear to be regulated by the physical development of the body, either in man or the lower animals. Thus the horse, although greatly exceeding the human subject in the size of his body, has a brain considerably inferior. The largest brain of a horse weighs, according to Sömmering, 1 lb. 7 oz.; but the smallest adult brain may be estimated at 2 lbs. 5½ oz. Many other instances might be cited of animals of great bulk

with brains weighing considerably less than that of man. The brains of the elephant and whale, however, although inferior to it in general organisation, are absolutely heavier than that of man. That of an elephant, dissected by Sir Astley Cooper, had a weight of 8 lbs. 1 oz.; and Rudolphi found the brain of a whale seventy-five feet long to weigh 5 lbs. 10½ oz. Yet how inferior must be the development of the brain in these stupendous animals relatively to the whole body, if, with their enormous superiority of bulk, their brains exhibit so little excess of weight over that of man!

Even among men there does not appear to be any fixed relation between the bulk of the body and that of the brain. A large man has by no means necessarily a large brain; and it often happens that persons of small stature have the brain above the average size. In woman the brain is generally lighter than in men: Dr. John Reid assigns an average difference of five ounces and two drachms in favour of the male brain, according to a statement made by Todd and Bowman, in their *Physiological Anatomy*—a valuable work, and from which I have gathered the principal of the facts just stated. In speaking of the general size of the brain, as revealed in these drawings, it was remarked, that the men of the greatest intellectual or rather mental power are those who possess the largest brain. Now, the size of this organ is, as a general rule, a very fair indication of its weight; and so it follows, that the larger the brain, the heavier will it be found. Cuvier's brain weighed 4 lbs. 11 oz.; Dupuytren's brain, 4 lbs. 9½ oz. On the other hand, Tiedemann found the brain of an idiot, 50 years old, to weigh 1 lb. 8½ oz.; and that of another, 40 years old, to weigh 1 lb. 11 oz.

So much, then, for the *size, form, and weight* of the brain in man; its *structure* must now engage our attention for a few minutes. It will be sufficient for my purpose to consider the "hemispherical ganglion" (the brain is so called by a high authority, *viz.*, Mr. Solly) as composed of two substances, *viz.*, an external (grey), and an internal (white); the former constituting what are called its convolutions or its cortical substance, and the latter its medullary structure. These two substances are, as you well know, in intimate connexion the one with the other, and together form the bulk of the cerebral mass, both in man and animals. When we rest the brain on its base, the first thing which attracts our attention is the deep fissure which runs in the antero-posterior direction, and so divides the upper surface of the hemispheres. The falx major of the dura mater passes into this fissure. The separation of the hemispheres exposes to view, as you are well aware, a white band of medullary matter, called the great commissure of the cerebrum, or corpus callosum. As a very general rule, the hemispheres of the brain present one common character; their external or physical characteristics being very much alike. Like the two eyes or the two ears, or the lateral portions of either the tongue or internal nares, the two sides of the brain are more or less counterparts of each other. That anatomical description which will apply to one eye or to one ear, or to one half of the tongue or to one half of the internal nose, it is well known, will apply equally to the other of each of them; and so also will that anatomical description which will apply to one hemisphere of the brain apply equally to its fellow on the opposite side. It is a curious fact that the exceptions to this rule are found principally among civilised man, *i.e.*, in so far as the convoluted surface is concerned; and that such have not been detected in "the lowest of the negroes" (Solly). More than this, in the idiot and in the monkey tribe, the convolutions on either hemisphere are found "almost in exact correspondence".

Todd and Bowman compare the convolutions of the brain to the rugæ which are seen in the mucous membrane of the stomach when its muscular coat is very much contracted. "They are evidently intended to pack into a small compass a large surface of grey or vesicular matter." A sulcus separates each convolution from the neighbouring one. The grey matter is found at the bottom of the sulci, as well as upon the prominences of the folds; and its union with

the fibrous matter takes place equally in the one as in the other situation. "It is evident", write Messrs. Todd and Bowman, "that if the surface of grey did not exceed that of the white matter, folds or convolutions would not be necessary; but a simple expanse of the former would suffice to cover the surface of the latter. The convoluted arrangement increases the vesicular surface to an immense extent, without occupying much additional space; and, by the prolongation of the fibres, which correspond to the concavities of the convolutions, some distance beyond those which penetrate the grey matter of the sulci, the fibrous matter is adapted to it. . . . A remarkable gradation is observable as regards the number of the cerebral convolutions, from the lowest mammalia up to man. Some of the rodentia, cheiroptera, etc., occupy the lowest place; and monkeys, the elephant, and the whale, rank next to man, in whom the convolutions reach their highest point of development. In the rat, mole, etc., the surface of the brain is perfectly smooth; and the only tendency to complication which it exhibits is to be found in the convolution of the grey matter at the fissure of Sylvius. The brains of these animals resemble, in this respect, to a striking degree, those of birds, which are equally destitute of all semblance of a convolution. But in the rabbit, guinea-pig, beaver, etc., the occurrence of certain fissures on the surface of the hemispheres, and the greater depth of the fissure of Sylvius, denote the first steps in the development of convolutions."

Without detaining you with a specific description of the convoluted brain-surface, as regards the position, size, and connexion of certain "primary" folds of grey neurine, as they have been named, and their relation to certain types of animal being, I may inform you that Mr. Solly reports, at p. 180 of his work *On the Brain*, that all the convolutions may be said to spring from that spot at the base of the brain which, situated at the fissura Sylvii, is called the *quadrilateral spot*, or *substantia perforata anterior*. "This fact", adds Mr. Solly, "is interesting when we revert to the development of the hemispherical ganglion, whether we trace the permanent forms it assumes in the various genera of animals, or in its transient forms during the evolution of the human embryo. At this spot we first observe this ganglion as a mere point, both in the brain of the fish and in that of the embryo of nine weeks; and from these small beginnings it gradually assumes its enormous size and convoluted form."

In connexion with the convolutions of the brain-surface, it must be remembered that not only in man, but in the mammalia, the microscope reveals so many as six distinct layers of neurine entering into the formation of the external or cortical substance of the brain. If we make a section of a portion of either hemispherical ganglion, we bring into view not a single layer of cineritious nerve-matter, but so many as six layers of neurine, *i. e.*, three of grey, and three of white. I have many times seen the distinction between two or three of these layers with my naked eye. It has been asserted that the "stratification" of the cortical substance is more readily made out "after disease"; and Mr. Solly tells us that it is "more distinct" in the posterior than in the anterior convolutions; in fact, it was in the former that the compound nature of the grey matter of the brain was first discovered by Vicq-d'Azyr. Casanvielt it was who demonstrated its prevalence throughout the cerebral (cineritious) structure. To M. Baillarger we are indebted for the most complete information on this head; he, in 1840, taught the existence of six distinct layers of neurine, as above mentioned.

I have three drawings which represent very faithful views of the stratified character of the cortical substance of the brain. In accordance with the statements made by Baillarger and Grainger, you will perceive that the first or outer line is here represented as white, and not grey: proceeding towards the interior of the portion of brain represented in this drawing, the second line is grey; the third line is white; the fourth line is grey; the fifth line is white; and the most interior, *viz.*, the sixth, is grey.

In this sketch, you are afforded a very faithful representation of the manner in which the tubular fibres of the white, or internal, or medullary structure of the brain, pass through the several layers of the vesicular neurine here shown.

"Regarding the structure of the cortical substance in the lower animals, Baillarger states," says Mr. Solly, "that in the fish he observes no stratification of this ganglion. In the class amphibia he has only examined the frog; and he has not been able to observe any stratification in this ganglion. In the brain of the bird there is only one white line; but, it is added, he found six in the brain of all the mammals he examined."

In connexion with the structure of this portion of the human brain, I would beg you to bear in mind that its stratification belongs more particularly to adult life; that this is considerably less marked "in the brain of infants", and in old people, as well as among insane persons, than it is in the brains of those who, to within a short period of their decease, may be presumed to have been occupied with the concerns of life, and living in the exercise of their mental, *i. e.*, their intellectual and affective (emotional) nature and requirements.

In this drawing is exhibited a view of the interior medullary or fibrous structure of the brain, and its junction with the exterior or cortical or grey (cineritious) or vesicular structure: they are each known by many names. The exposed surface herein seen Mr. Solly recognises by the term "figurate", so named in contradistinction to the convoluted surface, and because it presents certain forms or figures, from which the employment of "individual names" has arisen: these aid the anatomist in his description of the organ, and hence their recognition. However, as we have to do with "physiological anatomy", so called, and with only just so much of this as will be likely to render the pathological observations which will succeed the more easily understood and appreciated, I will not detain you with so much as their mere enumeration. The white or fibrous substance constitutes the means of communication or bond of union between the various parts of the grey or vesicular matter, and, disposed in certain forms, and proceeding in various directions, receives the name of commissures or "apparatuses of union" (Solly). The word "commissures", it may be remarked here, has been and is employed to convey two different meanings. Thus, whilst the late Dr. Spurzheim understood a commissure to mean the connecting medium of corresponding parts, and applied the term "instruments of communication" to those which connect different parts on the same side, Mr. Solly considers "under the head of commissures all those collections of medullary neurine which are so arranged as to connect either corresponding parts which are placed on each side of the mesial line; as, for instance, the right and left hemispheres; or different organs on the same side, as the various convolutions of each hemisphere; or two distinct structures, as the two grand divisions of the encephalon, the cerebrum, and the cerebellum; thus following out to its fullest extent the principles which have been laid down elsewhere, that a ganglion is a collection of neurine, of any size and of any form; and that the cerebro-spinal axis, of which the brain is a part, is no more than a collection of ganglia of immense size, connected together by commissures of corresponding dimensions."

For the sake of convenience, the cerebral commissures are divided into transverse and longitudinal. The transverse commissures are six in number:—

1. The great transverse commissure of the hemispheres, or the corpus callosum.
2. The pineal commissure.
3. The posterior commissure, or commissure of the posterior cerebral ganglia, or thalami nervorum optico-rum.
4. The soft commissure, or commissure also of the posterior cerebral ganglia.
5. The anterior commissure, or commissure of the anterior cerebral ganglia, or corpora striata.
6. The commissure of the cerebellum, or pons Varolii.

The longitudinal commissures are four in number : viz.,

1. The superior longitudinal commissure.
2. The inferior longitudinal commissure, or fornix.
3. The inter-cerebral commissure, or processus e cerebello ad testes, with the valve of Vieussens.
4. The olivary commissure.

When it is considered that the size and number of the convolutions are in proportion to the mental activity of the individual; that, as a very general rule, the convolutions are both larger and more numerous in man than in woman; that the convolutions exist but in miniature in childhood and early life; and that in old age they are found shrunken and wasted, and the "intergyral" spaces distended more or less with fluid; that among the varieties of mankind, the Caucasian brain exhibits the most and the largest convolutions, and the negro or Ethiopian the fewest; that a "remarkable gradation is observable as regards the number of cerebral convolutions from the lowest mammalia up to man"; that "a classification of animals in relation to their convolutions will be found to accord with the extent of their intelligence"; that "animals may be divided into groups, in accordance with the form of their convolutions"; that "of two brains, equal as regards bulk, and occupying the same space, that which has the more numerous convolutions on its surface has the greater quantity of vesicular matter, and must be regarded as physiologically the more potential"; and that lastly, "in all idiots the brain is not only small, but its convoluted surface is extremely limited"; when, I say, these facts are considered, we are bound to conclude that the convolutions of the brain are the *centre of intellectual action*; or, more strictly, that this centre, in the words of Todd and Bowman, consists in that vast sheet of vesicular matter which crowns the convoluted surface of the hemispheres; that every mental sensation is associated with a corresponding change in some part or parts of this vesicular surface; and that, as local changes of nutrition in the expansions of the nerves of pure sense may give rise to subjective sensations of vision or hearing, so derangements of nutrition in the vesicular matter of this surface may occasion analogous phenomena of thought—the rapid development of ideas, which, being ill regulated, or not at all directed by the will, assume the form of delirious raving.

When it is considered, also, that the principal commissures bear a direct ratio in point of development to that of certain other parts of the brain's surface; that the corpus callosum and the hemispheres are developed together; that the inflection of injury of any kind to the corpus callosum in rabbits and dogs, etc., is unattended with anything like involuntary movement or convulsions, and from which circumstance it is to be inferred that its office is to connect parts or "centres", "whose appropriate stimulus is mental"; that the fibres of the fornix manifest a complete insensibility to mechanical irritants; that in cases wherein the corpus callosum and fornix were found disorganised, and their fibrous structures altogether disintegrated or broken up, the symptoms were limited to mental disturbance, the sensitive or motor powers being unaffected, etc.; when, I say, these facts are considered, we are bound to conclude, likewise, that the white or medullary substance of the brain, the *tubular neurine* (Solly) performs various offices, each one of which is, however, subordinate to, or an auxiliary of, the grey or vesicular surface. Those offices performed by the white substance are those of—

1. A conductor of an impression from the surface of the body to the brain—a nerve of sensation.
2. A conductor of an order to act from the brain to the voluntary muscles—nerve of volition.
3. A conducting medium between the centres of power—the commissures.

In reference to the brain as a whole, regarded as the seat of all those faculties or powers termed mental, inclusive of those intellectual as well as those emotional or affective, and so on, the following fundamental principles have been established—

1. That vesicular neurine is the source of power.

2. That medullary neurine is the conductor of power.

3. That medullary neurine is also the conductor of those impressions which call forth the power of the vesicular neurine.

4. That the vesicular neurine is collected into masses of variable form and size—the ganglia.

5. That the medullary neurine is moulded into cords and bands—the nerves and the commissures.

With these general and prefatory remarks concerning the structure of the brain, its size and form, and the uses of its principal parts in a state of health, their mutual dependence and co-operation, we are doubtless so much the better prepared to enter on the consideration of those abnormal phenomena which constitute insanity.

I must again beg your attention to these drawings. With their help, I shall hope to facilitate the solution of a query—often put to me—viz., *What is insanity?* I have since 1840 been personally acquainted with some thousands of insane persons. I have lived under the same roof with some 900 or 1000 so afflicted for many successive years. I have passed the larger portion of each day in the society of lunatics, and have accustomed myself to analyse the various signs and evidences of mental disorder, as they are presented to the medical man in the wards of the metropolitan county asylums; and of this I am certain, that no two lunatics are the same—in no two is disease similarly portrayed. The cause of this want of uniformity in the indications of insanity is to be found in the organisation of brain of those persons afflicted. This it is which gives to each case its individuality, and separates it more or less from that of its fellow. We must be prepared, then, to look with suspicion on all mere definitions of the disorder. If we were quite agreed as to what constitutes sanity, *i. e.* sound mind, there could be no great difficulty in defining insanity, *i. e.* unsound mind. Of a hundred individuals of sound mind, and of whom not even a suspicion could be entertained, in so far as the integrity of their mental faculties is concerned, you will not find even two alike: not so many as *two* out of a hundred persons, though in the enjoyment of mental health, so to speak, will ever be seen thinking, or feeling, or acting similarly, under precisely the same circumstances. I would submit, then, that any attempt on the part of the most erudite, accomplished, and painstaking psychologist, to define sanity, can result only in a failure; and no less do the principle and the facts obtain equally under circumstances of disease. Difficult as the matter appears, hazardous though it may be, there are many medical writers who have ventured on a definition of insanity. Dr. Conolly has defined insanity to be a deficiency or disorder of the "comparing faculty". Dr. Bucknill has very recently offered the following definition of insanity; viz., "a condition of the mind in which a false action of conception or judgment, a defective power of the will, or an uncontrollable violence of the emotions or instincts, have, separately or conjointly, been produced by disease." The words of Dr. Bucknill certainly take in a large and varied meaning, and deal very much in generalities, so that one cannot say that his definition does not convey a large proportion of truth; nevertheless, it is imperfect. I believe it may be easily shown that many cases of lunacy are not brought within the area Dr. Bucknill has proposed to himself; and that, if it were made the rule or climax whereby to guide a legislature, not a few madmen would, in the course of time, be sacrificed to an inadequate and revengeful law—one too limited to meet the necessary requirements. The following anecdote of Charles V is an admirable illustration of the futility of general definitions of insanity, as well as of the necessity of judging of every individual by his own standard. In the last number of the *Psychological Journal*, we are told that this celebrated man, in his retirement from the world, was accustomed to employ his leisure in forming curious works of mechanism; and he was said to have been particularly curious with regard to the construction of clocks and watches. He found, after repeated trials, that he could not bring any two of them to go exactly alike; and hence

was led to reflect, with a mixture of surprise and regret, on his own folly in having bestowed so much time and labour on the more vain attempt of bringing mankind to a precise conformity of sentiment concerning the intricate and mysterious doctrines of religion.

Believing that no general expression is calculated to include all the insane, and exclude all the sane, I prefer to adopt the course marked out by Gooch, and practised by the late Dr. Andrew Combe, viz. "to make the peculiarities of the individual the great object of investigation". A particular act, or succession of acts, to acquire value as a symptom of insanity, must do so through the fact of its denoting a departure from the natural and healthy character, temper, or habits. It is not, therefore, sufficient for the medical man, who would determine the question of soundness or unsoundness of mind, to be informed of special acts, which he contrasts with what he may regard as an approved standard of natural health; but it is requisite that his standard be the admitted mental health of the individual, that the acts specified may have their value determined accordingly; since, to quote the words of Dr. Andrew Combe, "it is the prolonged departure, without adequate external cause, from the state of feeling and modes of thinking usual to the individual in health, that is the true feature of disorder in mind."

Now if, as there is an abundance of evidence to prove, "the states of feeling and modes of thinking usual to the individual in health" are portrayed, with a very general correctness, in the size, form, and relative proportions of different parts of the head, then must it follow that, presuming insanity were to occur to individuals with this or that organisation, the indications of mental disease would in such case hold a certain relation to the antecedent *sanity*—if I may be allowed so to express myself; or the symptoms of insanity would in such case depend on the general character of the suffering party prior to the invasion of disease. For example's sake, if a man with a cerebral development like this were to go mad, what, on the grounds before stated, may be expected of him? How would he be likely to conduct himself? What in him would constitute, in all probability, the signs or symptoms of insanity? The large size of the anterior lobes of the brain in this drawing would lead one to expect the occurrence of a form of mental disorder, in which the intellectual faculties would be among the first to suffer. If a scholar is afflicted with madness, he discourses wildly and incoherently of Greek and Roman authors, or of Milton or Shakespeare, or of other writers—poets, dramatists, or historians—whose works may have been most zealously studied by him in former days. If a man of science becomes insane, he will talk for ever concerning either geology, or physiology, or chemistry, or political economy—or of any branch of knowledge to which he may have devoted his best energies when in health. I have a gentleman at this moment under my care, whose best years were devoted to the study of metaphysical subjects, and who, some few years ago, gave promise of taking a very respectable position among men of letters in the particular department named; but his overworked brain gave way—succumbed to disease—and he may now be seen dreaming away his existence, and absorbed in the wildest, most incongruous, and impracticable chimeras; all of which, however, seem to arise from, or to be connected in some way with, his former studies. It is certain that there are very many more insane from overwrought feelings, than from the abuse of the intellectual faculties: and it is interesting to know that of these latter, insanity more generally than otherwise occurs to the musician, the painter, and the poet, than to the mathematician or the philosopher. The three first named necessarily draw largely on the emotional faculties of the mind, or there would be little hope of success for them. The two latter, having to deal rather with the stern realities of science and life than with the mere illusions or exaggerations of art and being, pursue their calling or studies with a calm and steady perseverance befitting the occasion. Spurzheim says, "the study of reality, which prevents eccentric and

chimeric conceptions, will be less liable to induce insanity". Again: "Among scientific professions, however, with respect to insanity, it may be observed that those whose occupations naturally excite the feelings at the same time, such as priests, poets, advocates, actors, musicians, painters, sculptors, are more disposed to insanity than those who study geometry, mathematics, and natural philosophy in general."

As the anterior or frontal region of the brain is the seat of the intellectual qualities, whether under circumstances of health or disease, so is the superior or coronal region that of the feelings, or affections, or emotions. These drawings exhibit the coronal region large; size is here the measure of power, as it is when viewed in connexion with the cerebral mass itself. The fact obtains equally in reference to a part of the brain as it does to the whole of the organ; but this much may be, of course, assumed. If, then, either Melancthon or Oberlin had become afflicted with lunacy, it may have been predicated of them that the coronal region would have afforded evidences of deranged, of abnormal action. In the grey matter forming the convolutions of the middle lobes of one or both hemispheres would have been located the proximate cause of the disorder in either of these good and great men. Their antecedents, not less than the organisation of brain in each, would have led one to anticipate both the character and seat of mental disorder: their whole lives were devoted to the cause of practical Christianity; a great strain was therefore imposed on those faculties of the mind which have their seat in this—the coronal region. It is true, Melancthon and Oberlin were never mad; but less fortunate men, labouring in the same field, have not escaped: thus Irving and Robert Hall died insane—men of the same cast as Melancthon and Oberlin, presenting, doubtless, the same type of organisation, and very similar antecedents. Irving's mental disorder was ever characterised by a wild and delusive fanaticism. This doubtless had its origin in his earnest temperament and too active religious feelings. Few of those who saw and listened to this remarkable man when in the zenith of his popularity in London, as has been my own lot, can well forget his deep and fervid eloquence, his impassioned style of oratory, or his lofty and soul-inspiring enthusiasm. However, he did not for many successive years command the gifts which so enriched him, and which made him so eminent as a divine. These at length refused all correction, all guidance; his reason succumbed to the overwrought emotions; his intellectual powers fell prostrate before the abuse of those feelings, which, used aright, are the source of all good. Irving died insane. The fate of Robert Hall was not unlike that of Irving. Those persons in whom the coronal region is large and well developed, manifest the most acute feelings, the most active moral sensibilities; and such persons, if endowed with a quick temperament, not unfrequently become insane; the feelings in that case gain power with use, and this power at length acquires so great an ascendancy, that the patient realises a condition very like monomania. It is remarked by Spurzheim, that individuals with a certain character predominant from infancy, are disposed to a corresponding form of insanity; as is the case with great genius in respect to the intellectual faculties. Dr. Rush was particularly struck with this psychological fact. "The natural conduct of insane people", he says, "frequently accords with their natural temper and disposition". He adds: "Proud and ambitious persons imagine themselves to be kings, and demand homage; are they ferocious, they assume the nature of wild beasts; are they pious and benevolent, they are inoffensive in their deportment", and so on. Moreover, the influence of size will be manifest, more or less, in respect to parts of the coronal region.

It is worthy of record, and the fact may be demonstrated in any lunatic asylum, that by far the greater number of those insane on the matter of religion, are seen with "elevated heads". If, in your walks through the wards of an asylum, you should be addressed by a patient, who declares himself to be the Emperor of France, or the President of

the United States of America, and whose haughty and imperious demeanour, loud and commanding voice, erect gait, and elevated head, seem to realise all the dignities of so august a personage, and if you will be at the trouble of examining his head, you may reckon on finding a considerable fulness near the apex of the organ. Visitors to our public establishments for the insane are struck by no patients more than by those who, under the influence of a morbid desire to please and to attract attention, array themselves in pretended ornamental decorations and grotesque distinctions. A piece of broken glass, a small polished stone, an insignificant piece of metal; or perhaps a faded laurel leaf, placed with studied care on either breast or in the button-hole of the coat, is sufficient to denote the vain lunatic. Unlike the pretended or imaginary Emperor of France, the assumed personality of the vain madman will realise very much of the patron—his pride will be of that character which apes humility. He may tell you that he is a very great man with a great many titles, holding a very exalted position, but his aim and hope will be to assure you that he views his greatness but as the means to an end. If he should happen to be the Great Mogul, or the Emperor of Japan, or what not, he intends nevertheless to achieve some national good, some amelioration of an existing abuse, some reform in our criminal code, and so on. At the present, I have a patient of the kind considered, who tells me very nearly each time I see him, that he is prepared with the means of securing a lasting and honourable peace between the allied forces and Russia; and that he must proceed forthwith to Vienna, seek Lord John Russell, and so bring matters to a crisis. This crisis he pretends to feel confident will immortalise himself, and render mankind prosperous and happy.

Examine the head of the vain-glorious insane, and in the majority of instances you will find this portion of the coronal region full and rounded.

Of the vain-glorious lunatic, it may be truly said in the words of Moore:—

"He lives in a bright beaming world of his own,
And the light which surrounds him is all from within."

I have often been told by persons after their recovery from an attack of insanity of this character, that they wondered how they could ever have indulged such fancies as they did, and how they could have realised the personal satisfaction, even happiness, which they did, in connexion with such extravagant delusion. The precise words of one such patient were—"I can't think how I ever thought of such strange things, much more feel them as if they were true."

Most of us have read the epistles of Horace. In that one professing to offer an apology to Florus, for having neglected to write to him, Horace offers the following anecdote, as an excuse for the preference he may, now and then, manifest for "toys", and not less for "amusement suited to the taste of boys".

"At Argos lived a citizen, well known,
Who long imagin'd that he heard the tone
Of deep tragedians on an empty stage,
And sat applauding in ecstatic rage:
In other points a person, who maintained
A due decorum, and a life unstain'd,
Whose real virtues you might well commend,
A worthy neighbour, hospitable friend,
Of easy humour and of heart sincere,
Fond of his wife, nor to a slave severe,
Nor prone to rage, although the felon's fork
Defaced the signet of a bottle cork;
A man, who shunned (well knowing which was which)
The rock high pendant, and the yawning ditch;
He, when his friends, at much expense and pains,
Had amply purged with hellebore his brains,
Wrought off his madness, and the man returned,
Full to himself—their operation spurned."

He said:—

"My friends, 'twere better you had stopp'd my breath;
Your love was rancour, and your cure was death:

To rob me thus of pleasure so refined,
The dear delusion of a raptur'd mind."

It is quite unnecessary, I should add, that Horace must have been, in his day, like Shakespeare in his, a tolerable psychologist.

Of all the various inmates of a lunatic hospital, no class of patients will more readily excite your commiseration and sympathy than those suffering from "melancholia", so called. Unlike the vain-glorious madman, the melancholic is lost to all hope and aspiration. Absorbed in his own delusive chimeras, he is a prey to the most abject sorrow. Full of apprehension and fear, he avoids, as a very general rule, all intercourse with those about him, and looks on whomsoever would approach and befriend him, as the destined instrument of his self-exaggerated torture and helplessness. Now moping in a corner of the ward or apartment he may occupy; now secreting himself in a bath-room or coal-hole, or under a bed; now rushing headlong and impetuously through the corridor into the airing-court; hoping, as it would seem, to avoid some impending catastrophe; the melancholic appears the very incarnation of all that is miserable—the very essence of grief. I have examined the heads of a large number of these patients, and have found, as a very general rule, that there is a considerable size of the head and consequent development of brain at one point; viz., the centre of the parietal bone on either side.

The posterior lobes of the brain are large in this drawing; their comparatively greater size is of necessity the index to their undue power, i.e., considered in reference to or in comparison with the superior or coronal region, and the anterior or frontal development. An individual in health, so called, with an organisation of this character, will rarely be found acting in obedience to the moral laws. Such a person will be known as the subject of a bad temper, and inclined to give trouble and offer undue opposition. A great breadth of brain between and behind the ears is no bad or uncertain indication, when found in conjunction with mental disorder, of what is called, in psychological parlance, "a dangerous lunatic."

There is no one primitive faculty or power more commonly found running riot among insane persons than "amativeness." Lunatics of all classes and of either sex manifest, very generally, strong evidence of excited or irregular sexual feeling. The fact in itself is confirmatory of the principle laid down, viz., that size is the measure of power, other circumstances being equal. Presuming that the cerebellum is the organ of amativeness, considering its size as well as the large amount of grey matter entering into its formation, we cannot well be surprised that this propensity should exercise the strong influence it does on both the sane and the insane. I have not the least doubt that the insanity of very many females, among the middle and upper classes, is due to the celibacy which circumstances impose on them. Such patients manifest, in the most eccentric and incongruous manner, the intensity of that "one primitive faculty", which, disappointed of the natural and legitimate means of gratification, induces hysteria and various complications of nervous disease, not unfrequently terminating in incurable madness. The inmates (females) of private asylums for the middle and upper classes are, for the most part, single women; a circumstance which adds weight to the opinion just stated. Those among the insane whose amativeness is the most acutely displayed, however unnaturally or abnormally perhaps, will be found, for the most part, to have a large cerebellum. It is a common thing to see the cerebellum of imbecile and idiotic persons large; and when this is the case, you will be prepared to find that such patients are addicted to habits of self-gratification. An imbecile young man, now under my care, answers, in both respects, to this description. Gall's museum contained the skull of a madman whose disorder was attributed to excessive sexual indulgence, and who declared himself the husband of six wives, and manifested various ideas of that kind. His cerebellum was extremely large. Many parallel cases may be selected as additional

evidence in favour of the opinion which ascribes to the cerebellum the function of amativeness; but I prefer to leave the question, thus put before you, for your future consideration.

I am most anxious to impress on your minds that it is precisely the same with the brain and its parts as it is with each of the organs of the body. Thus brains of all sizes and forms may be, and are from time to time disordered, and so are the lungs and the eyes; but brains of a certain size and relative proportion, *i.e.*, of a definite configuration, are more liable than other brains to be affected with disease; just as individuals, remarkable for a certain configuration of the chest, are more liable than other persons to pulmonic affections: and so on. In estimating the real value of size, regarded as an element necessary to psychical phenomena in man and animals, it should be borne well in mind that there is such a thing as *quality* (of the cerebral substance) as well as *quantity*. The former is indicated by the physical appearance, and this it is which marks the temperament of the individual. I need not tell you that a very wide barrier separates the nervous or sanguineous temperament from the lymphatic. Whilst the cerebral organism of the first named, for example, is endowed with a keen sensibility, and great powers of endurance, that of the last, *viz.*, the lymphatic, requires a more or less powerful stimulus ere an effect is produced. Address any ordinary remark to your friend of a somewhat pale countenance, and perhaps not over robust health; him with the fine thin hair, delicate skin, and small muscular development; him with the bright eye, angular features, and well and distinctly marked physiognomy: see how readily he responds to you; there is no mistake about his temperament. The vivacity and earnestness of his speech and general demeanour bespeak, readily enough, the quality of the nerve-matter of which the organism is composed, or, in other words, the quality of his cerebro-spinal system. In him of a so called nervous temperament, the whole of the nervous system, and not the brain only, is predominantly active, and the mental manifestations proportionally energetic. Again, speak to that man with the large, squat, and fair face, broad features, and dull eyes, bullet head and straight light-coloured hair; him "distinguishable by a round form of the body, softness of the muscular system, and repletion of the cellular tissues": you look in vain for the ready response, you find nothing like vivacity and earnestness here; all is marked by languor and want of power. The quality of the brain is that of the whole body, and, as a consequence, its actions are slow, languid, and feeble.

Upon the grounds just stated we are led, then, to understand how it is that size is but one of the conditions of power; or that size is the measure of power, other conditions being equal. "If we compare," says Mr. Combe, "two separate brains, we must recollect that the size of the two may be equal, and that nevertheless the one, from possessing the finest texture and most vigorous constitution, may be exceedingly active, while the other, from being inferior in quality, may be naturally inert. The consequence may be that the better constituted, though smaller brain, will manifest the mind with the greater vigour. That size is nevertheless the measure of power, may be proved by contrasting the manifestations of a small and of a large brain, possessing the same configuration, and equally well constituted; the power or energy will then be found superior in the latter." This illustrates what is meant by "other natural conditions being equal." The cranium of your friend with the nervous temperament may not be generally larger, or more beautifully proportioned than that of his lymphatic neighbour; but, nevertheless, the mental manifestations in the former, his intellectual powers, his affections or emotions, and his desires, will be considerably greater and more energetic than in the latter. The one may be a philosopher, the other little better than a dolt; the one may possess the most exalted virtues, and be endowed with the purest love of his kind,—in one word, a philanthropist; the other scarcely sensible to moral feelings of any kind, and altogether indifferent to the claims of society and religion: nevertheless

the better man of the two is more likely to become the subject of insanity. And this must ever be the case so long as the preceding facts and principles obtain, as herein advocated, *i.e.*, so long as function depends on organisation, and this latter is liable to be injured by whatever occupies the mind too intensely or exclusively, or so long as the undue activity of each faculty, as of two or more, may become involuntary, and thus realize all the conditions of disease. It is concluded then, that in each and every case of lunacy, the size and form of the head is "neither to be overlooked nor to be overrated" (Spurzheim).

It is a common thing among writers and teachers of psychological medicine to dwell at some length, and with much precision, on the various forms of insanity; these are generally recognized by the terms mania, melancholia, and dementia. From the manner in which each is described, and its respective signs and symptoms dwelt on, *etc.*, the inexperienced practitioner may be led to suppose that a patient afflicted with mania, for example, enjoyed a complete immunity from the other two forms of mental derangements, and so on. The fact is that the words mania, melancholia, and dementia do nothing more than express the temporary and predominant symptoms of insanity in individual cases. It is common enough to find a patient labouring under mania one week and dementia the next. Melancholia is oftentimes preceded by maniacal symptoms, and even accompanied by them; but, after a few days shall have passed by, the patient may be found not only not suffering from melancholia, but seemingly without feeling of any kind—a mere shadow of his former self, oblivious and demented: however, their retention for colloquial purposes is convenient, and therefore desirable. Dr. Rush writes thus: "The successive and alternate changes of the different forms of madness into each other show the necessity of renouncing all prescriptions for its names, and of constantly and closely watching the disease. Haslam has these words, *viz.*: "As the terms mania and melancholia are in general use, and serve to distinguish the forms under which insanity is exhibited, there can be no objection to retain them; but I would strongly oppose their being considered as opposite diseases. In both, the association of ideas is equally incorrect; and they appear to differ only from the different passions which accompany them. On dissection, the state of the brain does not show any appearances peculiar to melancholy; nor is the treatment which I have observed most successful different from that which is employed in mania. We every day see the most furious maniacs suddenly sink into a profound melancholy, and the most depressed and miserable objects become violent and raving." In another passage he adds, "Distinctions have been created rather from the peculiar turn of the patient's propensities and discourse than from any marked difference in the varieties and species of the disorder." Spurzheim, like Rush and Haslam, enters his protest against the use of the terms mania, melancholia, and dementia, considered as so many distinct varieties or forms of insanity. "Modern pathologists," he remarks, "have observed that mania and melancholia cannot be considered as two species of insanity, because they are often interchanged into, and often alternate with, each other; and the treatment which in both has been found the most profitable is the same. Idiotism, anger and fury, or melancholy and despondency, are the most striking appearances; and for that reason insanity, probably, has been divided accordingly. But those who keep up that symptomatic division may adopt, for the same reason, the multifarious forms established by Dr. Arnold; for there are many insane people who are not furious nor despondent, but quite cheerful, and continually laughing. They may also, with Sauvages, subdivide melancholia into fourteen species; as *vulgaris*, *amatoria*, *religiosa*, *etc.*, *etc.*" Spurzheim concludes his criticisms in these words, *viz.*: "I admit four general forms of insanity, *viz.*, *idiotism*, which is partial or general; *fatuity*, also partial and general; *irresistibility*, if any power be so active that the will has no influence on its actions; and *alienation*, if

the manifestations of the faculties are deranged in their quality, and the intellect is incapable of distinguishing the derangement. These four forms", he adds, "designate different states of insanity, while mania and melancholia are merely sorts of alienations."

The expressions "monomania" and "moral insanity" are of comparatively recent introduction; these, together with mania, melancholia, and dementia, including idiocy (congenital), are thought to include those varieties of mental disease most generally recognised. A brief exposition of their several meanings may be of use to us.

Mania implies an abnormal and increased activity of the whole brain (a general insanity).

Monomania implies an abnormal and increased activity of certain parts of the brain (a partial insanity). (The word *monomania* is now and then very loosely employed. A strong and persistent train of thought or feeling in a patient afflicted with mania may lead to an incorrect diagnosis, and the consequent misapplication of the term.)

Dementia is used to signify a diminished action of the brain, a loss of tone, or exhaustion of the mental powers, more or less complete (the sequence of mania).

Idiocy may be looked on as the sign of a congenital defect of the brain, a "non-development of the faculties".

Moral Insanity is understood, plainly enough, to mean a perversion of the moral faculties or feelings—a psychical condition, which very commonly obtains in acute maniacal disorders, and constitutes merely a predominant symptom of the disease.

A reference to Arnold's *Table of the Species of Insanity*, as contained in Dr. Browne's work entitled *On Insanity and Asylums for the Insane*, will show you that he divides the disorder into two varieties, viz., ideal and notional: of the former he recognises four species, and of the latter so many as nine species. The "pathetic" one of the same "nine" is further subdivided into sixteen. Heinroth's division of insanity is into—1. Disorders of the moral dispositions; 2. Disorders of the understanding or intellectual faculties; and 3. Disorders of voluntary powers, or of the propensities. The three are treated of under the opposite states of "exaltation" and "depression".

The arrangement proposed by Dr. Browne bears the same common character with that of Arnold and Heinroth, that is to say, it recognises the same "ideal" and "notional" species (Arnold) though under different names; the one having reference to the intellectual faculties or powers, the other to the "moral dispositions". Dr. Browne proposes to divide insanity into four varieties, viz.: 1. Idiocy; 2. Fatuity (dementia of older writers); 3. Monomania (derangement of one or more faculties—intellectual, moral, or animal); and 4. Mania (derangement of all the faculties). This plan of proceeding is not very unlike the mania, monomania, dementia (idiocy), and "moral insanity" of other and older authors.

Dr. Bucknill, one of the most recent writers on psychological medicine, tells us that insanity may be either "intellectual, emotional, or volitional"; and though in the concrete, he adds, "it is not easy to find pure and unmixed cases under either of these heads, such cases do occasionally subject themselves to observation." And here, again, we perceive Heinroth's theory arrayed in a new garb, and its colouring somewhat modified. "But in attempting to describe the essential features of insanity, and to reduce them to a form of words, it is necessary to afford great latitude, and to adhere to the use of the most general terms; remembering, always, that the question of mental derangement must be decided upon the merits of every single case; and that the best standard of comparison for each individual will be furnished by his own history and his past conduct, and by the change that has taken place in his mind, rather than by the point at which it stands, or the motives that appear to govern it."* Although insanity may make itself apparent in a great number of methods, and although the range of insane delusion may be almost infinitely various; yet there

is by no means a corresponding diversity in the nature of the disease itself, or in the essential character of the change by which the natural balance of the faculties is disturbed.

It has been said by Dr. Conolly, "that all the forms of mental disorder are dependent on one of three states of the nervous system, a state of increased, or a state of diminished, or a state of unequal excitement of that system;" and that "all other forms of insanity appear to be mere varieties, or complications, or results." In fact, all writers from the earliest times to the present day have, like Heinroth, Browne, and Conolly, taught the dependence of abnormal psychical phenomena on the same two opposite states of the cerebral mass, viz., those of excitement and depression.

The late Mr. Hill, of Chester, published in 1814 an excellent book, styled *An Essay on the Prevention and Cure of Insanity*. At page 22 of this able treatise, we read thus: "The universal governing law of animal life is undeniably exemplified in the two forms of insanity; viz., that health is the result of equable, and disease of excessive or defective stimulation, always in a greater or less degree combined with evident and demonstrable, or obscure and unknown organic lesion." The two forms of insanity of Hill are designated the "sthenic" and the "asthenic"; the former being the accompaniment of an excessive stimulation of the brain, the latter being that of a defective stimulation of the same organ; the one answers to acute mania so called, the other to chronic mania, and, according to Mr. Hill, to the low form termed "melancholia". The few following words convey a very just estimate of both the sthenic and asthenic patient, viz.: "The sthenic patient makes every thing that comes in his way the subject of discourse and animadversion to every person who will give him attention. Now angry, now pleased, at once generous and parsimonious, he

"Gives and resumes, and smiles, and
Frowns by fits."

The asthenic affects concealment in trifles, courts silence and solitude, is at first ashamed of his vacillatory conduct; but as stupor and fixed contemplation advances, this wears off. At length, total neglect of all decency and propriety in the sthenic, and total apathy to all common concerns in the asthenic, mark the distinctions, and give melancholy note. how—

—"Each extreme
From the blest mean of sanity departs."

An important feature in the progress of psychological medicine, one which I would impress strongly on your minds, has been the recognition of the fact that the moral feelings and the propensities or passions of man may be and are commonly involved in a parallel disorder to that which affects and destroys the intellectual powers; in other words, that lunacy as frequently, if not more frequently, implies a derangement of the affections and desires common to our nature, than it does of the reasoning faculty.

"Moral insanity", as described by the late Dr. Prichard, to whom we are, certainly, indebted for its general recognition among the profession, constitutes the "mania without delirium" of continental writers; and the subjects of it are described by Dr. Hitch, of Sandywell Park, as "insane in conduct and not in ideas". Arnold, it will be seen, following in the wake of Prichard, and preferring to give a name of his own selection to the offspring of his contemporary, called moral insanity by the epithet "notional"; making "notional insanity" correspondent to the "disorders of the moral dispositions" of Heinroth, and to the principal subdivision (section) of monomania, adopted by Dr. W. A. F. Browne, and which embraces: 1. Satyriasis; 2. Homicidal and destructive; 3. Proud; 4. Vain; 5. Timid; 6. Cunning and suspicious; 7. Religious and superstitious; 8. Desponding and suicidal; 9. Imaginative; 10. Avaricious; 11. Benevolent or affectionate. The "emotional" form of insanity, so called by Dr. Bucknill, is equivalent to the "notional" of Arnold; constituting, in point of fact, the "moral insanity" of Dr. Prichard.

I am thus particular in these details, in order that you may perceive that the best authorities in this department

* See Carter on the Nervous System.

of medical science are strongly impressed with the futility of regarding the mind (brain) as a mere unit, or as the reflex, so to speak, of mere consciousness, and look on the mind (brain) as an embodiment of all the faculties—the assemblage of both the intellectual powers and the moral qualities of our being; and that, for the right comprehension of its disordered states, so much must be admitted.

The following quotation from the "Physiological Proem" which precedes the consideration of mental derangement by Dr. Mason Good, in vol. iv of his *Study of Medicine*, is so much to the point, that I cannot resist the temptation to extract it. "All the powers of the mind are as liable to be affected with diseases, and diseases of various kinds, as those of the body; and either the body or the mind may be enfeebled at the same time in the whole of its powers, in a few of its powers, or in a single power. A sound mind supposes an existence of all the mind's feelings and intellectual powers in a state of vigour, and under the subordination of the judgment, which is designed by nature to be the governing and controlling principle; and, thus constituted, the mind is said to be in a state of order and arrangement. It often happens that this order or arrangement is slightly broken in upon by natural constitution, or by some corporeal affection; but so long as the irregularity does not essentially interfere with the mental health, it is no more attended to than slight irregularities or disquietudes of the body; yet, whenever it becomes serious and complicated, it amounts to disease, and the mind is said, and most correctly so, to be deranged and disordered." By "the mind's feelings and intellectual powers", Good evidently recognises not only the brain as the organ of the mind, so to speak, but the latter named "as an embodiment of all the faculties—the assemblage of both the intellectual powers and the moral qualities of our being", to repeat my own words. Whatever may be the specific views of medical writers concerning the origin or source of "emotional sensibility", by which is meant the moral feelings and affections, and the passions of men, the majority doubtless favour that opinion which ascribes the same to the brain, though to a part or parts of the organ distinct from that or those which preside over, or are connected with, "consciousness". According to Dr. Noble, the optic thalami constitute the seat of the "emotions"; from which view of the case this gentleman would imply that, in every case of insanity, involving the said "emotional sensibility", as evinced in grief, joy, hope, fear, pride, vanity, affection, and so on, one or both of these structures is organically affected. However, if it be admitted as a psychological fact that the passions, like the intellect, are energetic in proportion to the development of the brain; that it is only in the superior classes of animals (those in which the brain is well developed) that we meet with evident indications of love, friendship, courage, ambition, anger, jealousy, hatred, fear, joy, grief, etc.—then must we infer that in every case of disease, involving any undue manifestation or perverted action of the said moral feelings or "passions", the brain has undergone some change from its normal state, and that such change is the immediate cause of insanity.

RECAPITULATION. I have, then, after some general and introductory remarks, endeavoured to show you the importance of a knowledge of the structure and uses of the brain, and its direct application and reference to the subject of insanity. The size and form of the whole brain have been shown to modify the psychological phenomena, both in health and in disease; and the relative proportion of individual parts has been demonstrated as exerting much influence on the indications of mental disorder in many of its various forms. Definitions of insanity have been mentioned, and their merits considered; various forms of the disease have been explained; and the classifications adopted by eminent writers have been commented on, with the view of educating those principles which should guide the psychologist in his inquiries, and take the place of the mere words now employed so generally, involving, as they do, not a little ambiguity, and not a few contradictions.

In my next lecture, I shall consider the "Origin of In-

sanity", and the signs and symptoms which characterise its principal varieties or forms, etc.

The nature of an individual case of insanity belongs so much to the cause in which it originates, that their consideration may very properly go together; but of this at our next meeting.

Northwoods, Bristol, 1855.

DEATH FOLLOWING RUPTURE OF THE BLADDER FROM A KICK: WITH MEDICO-LEGAL REMARKS.

By HENRY PORTER, M.D., House-Surgeon to the Peterborough Royal Infirmary.

THE following case occurred in the practice of Mr. William George Porter, of Peterborough, with whom I had the pleasure of noticing it. I am induced to publish it partly on account of its comparative rarity, and partly because it is somewhat analogous to a case which occurred some months since on board the *Davoutless*, lying off Portsmouth; and which was brought very prominently before the public.

Sunday evening, May 27th, 8 p.m. Mr. W. G. Porter was summoned to attend Samuel Brown, aged 35, an agricultural labourer, who was said to have received a severe injury whilst taking part in a fray on the previous evening, outside his village public house. When seen, he was sitting down stairs, complaining of great pain in the abdomen, and inability to pass urine. He stated that, whilst acting as *backer* to a friend in a fight, he had received a severe blow or kick in the abdomen, from the effects of which he fell to the ground, and lost all consciousness until carried home (a short distance), when he gradually recovered his senses, but had been in great pain all night and during the day following, and had passed no urine. He walked up stairs, without assistance. Upon examination, the abdomen was found much distended, especially at the lower part; and the fundus of the bladder being apparently above the umbilicus. A catheter was introduced, but did not seem to go *home* in the bladder, and but a small quantity of urine escaped, until the man was placed in the erect position, when as much as three and a half or four pints of fluid were drawn off, very highly tinged with blood. He expressed himself as much relieved. There was not much tenderness on the abdomen. The pulse was steady, though rather small; and the bowels had not been relieved. An aperient mixture was ordered to be taken every four hours; warm fomentations to be applied to the abdomen; and one grain of opium, in the form of a pill, to be taken immediately, and to be repeated in four hours, if sleep was not procured.

When seen the following morning, he had slept about three hours, but complained of a good deal of pain. The bowels had not been relieved. The catheter produced about the same quantity of fluid, but with something less of blood in it. The abdomen was not at all tympanitic, nor was there much tenderness, except over the region of the bladder. The man lay on his back, with his legs straight down the bed. The pulse was regular and small, 100. He was ordered to continue the mixture and fomentation.

8 p.m. The patient was much in the same state: he had made several attempts to empty the bladder, but without success. By the catheter, about a pint and a half of urine escaped, less tinged with blood, but with several small coagula. There was no tympanitis; the bowels were still confined. The same treatment was continued: fomentations and opium, with castor oil every three hours.

Tuesday, May 29th. He had passed a restless night; and, though he complained of much pain, it was confined to the region of the bladder, and was but very slightly increased by pressure. There was no tympanitis, or other symptom of peritonitis: he lay straight down in bed, and bore the weight of the bed-clothes. The catheter was passed, and about a pint and a half of urine escaped; it was lighter in colour, but contained some clots. A copious enema