On the reciprocal agencies of mind and matter, and on insanity : being the Lumleian lectures, delivered at the Royal College of Physicians, A.D. 1851 / by J.C. Badeley.

ON THE

RECIPROCAL AGENCIES

OF

MIND AND MATTER,

AND ON

INSANITY:

BEING THE

Lumleian Lectures,

DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS, A.D. 1851.

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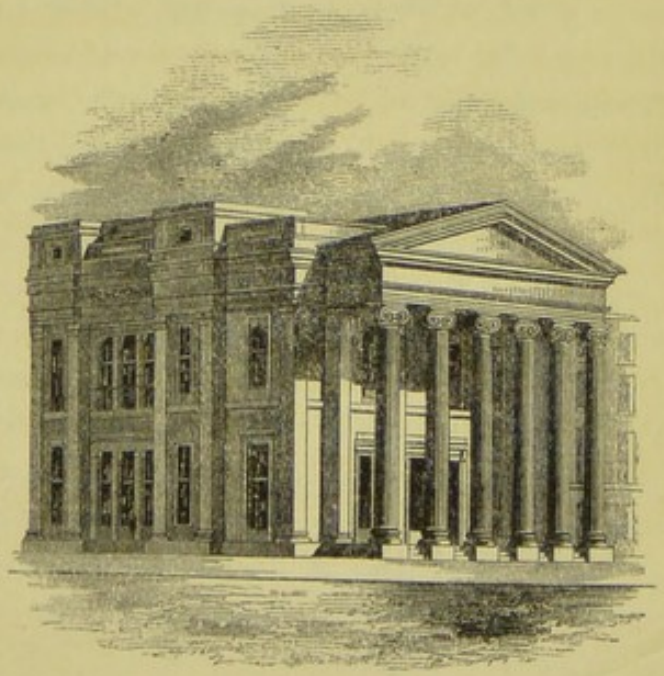
"Orandum est ut sit Mens sana in Corpore sano."



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ON THE

RECIPROCAL AGENCIES

OF

MIND AND MATTER.

LECTURE I.

Preliminary observations—Exposition of the theories of philosophers—Explanation of the agency of the mind—Close analogy of the nervous and electric fluids—Effects of atmospheric electricity on the human system—Distress of mind the cause of cancer—Opinions of Sir Astley Cooper and Sir B. Brodie—Nervous affections—Illustration of their action — Hysteria — Gout — Theory of gout — Temperament —Influence of the sanguine temperament—Anecdotes illustrative of the fatal power of the mind—Hope — its action—Hypochondriasis — Theory of dyspepsia, and its operations on the temper and disposition—Instances of uncontrolled anger—John Hunter—Sleep —theory of—operation of—Dreaming—Nightmare—Delirium — Somnambulism —Suicide—Epilepsy—Apoplexy—Paralysis—Instances of the power of the mind —Fear — Grief — Joy — Chloroform—Narcotics—Opium—their agency—Alcohol—Fainting.

Mr. President and Gentlemen,—In entering on the office of Lumleian lecturer, which I have the honour of holding, and in offering the product of my humble experience to so learned a body, some little allowance will, I trust, be made for the many imperfections which I am but too well aware are inseparable from my position. The science of medicine has, within the last few years, advanced with strides so rapid, and improvements so unquestionable —whilst treatises so luminous and voluminous, in every department of science, have been launched so liberally from the press—that the selection of a subject for a lecture is as difficult as the prospect of throwing new light upon it is comparatively hopeless. An expansive veil of obscurity, nevertheless, still shrouds the arcana of nature and of disease; and many are the objects which neither the mental acumen of man, nor the telescope of time, will probably be ever able to explain. We witness disease in myriad forms and varieties, and are hourly invoked to obviate its ravages; and we succeed: we employ the remedies which science has supplied, and experience has attuned to their complicated operations: we snatch, in numberless in-

stances, the sufferer from an untimely grave; or, if we fail in averting a fatal termination,—

"Make languor smile, and smooth the bed of death."

Not entirely discouraged, therefore, by the difficulties with which it is encompassed, I have selected for my subject, in the performance of the duties which are assigned me, *The Reciprocal Agencies of Mind and Matter;* and, inasmuch as no part or portion of the body is exempt from mental operations, and, on the other hand, the functions of the mind are either impaired or obliterated by diseases of the Encephalon, a most extensive and interesting field is open before us. Such, indeed, is the varying intensity with which the mind operates directly or indirectly on our corporeal structure, that at one time it prostrates, and in a moment extinguishes every manifestation of life—at another, it paralyzes, or only partially destroys it: or it lays the lamentable foundation of protracted and incurable disease. Knowing, as we do, that the Brain is the seat of the acknowledged superiority of man over the whole of animated existence—the fountain from the which our every passion and our every feeling flows—the abode of consciousness—the throne of intellect—of reason—of memory—of judgment—in a word, of every manifestation of the human mind—it becomes our duty to study its material conditions in connection with disease, as well as to trace out and observe the mental phenomena dependent on its impairment. It is not my intention, however, to wander into the mystical labyrinth of metaphysical inquiry, nor to subject myself to the animadversions of theologians by advancing doctrines to which any objection can be raised. A broad margin exists between the *Animus* and the *Anima*. The workings of the one (inasmuch as they are connected with, or dependent on the brain and nervous system) come legitimately within the province of the physician, and may fairly be discussed without entrenching on the object of the care and cure of the divine; and far be it from me to invade his holy mission, or trespass on the boundary of his pious office! Undisputed as it is by men endowed with reasoning faculties, and not afraid to exercise them, that the brain is the material organ of the mind—established as the proposition is by positive, and strengthened as it is by negative reasoning—we have *no choice* but to believe it: hourly evidence demonstrates it; and, to shrink from the contemplation of its workings, or to reject the fact itself, is to mistrust the wisdom and deny the Omnipotence of Him who created and endowed it! Not that the identity of mind and matter is hence to be inferred — the "πνευματα" of Galen are as distinct from the brain itself as the πνευματα, or atmospheric gales, which elicit sound from the Œolian harp, are distinct from the harp itself. "The wind bloweth where it listeth, and no man can tell whence it cometh, or whither it goeth." Should the brain be disordered, as is evinced in the delirium of fever, or should its structure be impaired, as in cases of insanity, the healthy action of the mind is impaired or obliterated also; and, should the harp be out of order, or its strings be out of tune, its music is discordant, its melody destroyed, or no sound whatever can be elicited from it. The brain being the seat of consciousness and of perception, objects act upon it, exciting

different emotions and sensations, which are conveyed, through the medium of the nerves, to different organs of the body—to the glands, for example, whereby the secretions are instantly affected. What, in common parlance, is the "mouth watering," but the sight and anticipation of a savoury morsel acting through the brain and nerves on the salivary glands, augmenting their secretion, and otherwise preparing the digestive apparatus for the exercise of its function? What are tears, but the liquid essence of grief or joy emanating from the action of the mind on the lachrymal glands, under the influence of mental emotion? What is the palpitation of the heart and tremor of the muscles, in cases of sudden and strong excitement, but the action of the mind on the muscular fibre, and consequently on the circulating system, through the medium of the nerves? And so on with other functions of the animal economy which it is unnecessary to enumerate. That these effects *are* produced, and these sensations generated, is known by daily and hourly experience to every one; but to demonstrate *how* it is effected, "*Hic labor, hoc opus.*" The subject, at all events, has given birth to many shrewd conjectures—to many ingenious theories—to great varieties of opinion, and to much profound reasoning amongst philosophers, from the time of Hippocrates to the present day. Haller, who has examined these respective theories most minutely, leans to the opinion that the *modus operandi* of the nerves is by means of a most subtle fluid permeating their cavities, and to which the name of "*Spirit*" was given. This is, in fact, the "*Archæus*" of Van Helmont, the "*Anima*" of Stahl, the "Πνευμα" of Galen, the "*Materia Vitæ diffusa*" of Hunter, the "*Vital principle*" or "*Subtle essence*" of others, all of which are, in fact, synonymous. Hunter conceived that this mobile, invisible spirit, was superadded to inert matter, as magnetism is to iron, and put in motion other bodies which are evident to the senses; that it is consequently analogous to electricity and magnetism, though not identical, and is so beautifully described in the 6th Æneid of Virgil.

As to the "vibrations and vibratiuncles" of Hartley, whether of an elastic ether, or of the infinitesimal particles of the brain and nerves, "there *may* be such things" (as Dr. Reid says), "for what we know, and men may rationally inquire whether they can find any evidence of their existence; but, while we have no proof of their existence, to apply them to the solution of phenomena, and to build a system upon them, is what I conceive we call building a castle in the air." It is true that Sir Isaac Newton formed a conjecture of this nature, an authority which would seem to give it a firmer foundation; but he admitted also that it was not established by proof, though it was entitled to be examined by experiments. Hartley, however, referred all our sensations and ideas—in a word, all the operations of our minds,—to this theory of Vibration—a theory which is opposed and ridiculed by Stewart, Reid, and Drummond. Descartes has attempted almost to demonstrate how, by the animal spirits going and returning in the nerves, muscular motion, perception, memory, and imagination are effected. Some anatomists reject these ideas on the assertion that the nerves are not tubular! Others assert that they are! Le Gallois believed that there

is a secretion in the nerves by which their power is transmitted, and through which medium the brain and spinal marrow exercise their action throughout the body. Then, again, there is a sect of *Idealists*, of which Bishop Berkeley and Hume were the leaders: Berkeley, indeed, so warmly embraced his vapid theory of ideas and perceptions, as to reject the very existence of matter altogether! But, as Lord Byron observed,—

"When Bishop Berkeley said 'There was no matter,'
And proved it,—'twas no matter what he said!"

The only other theory which I shall adduce, and that to which, in my opinion, the greatest plausibility attaches, is that the nervous influence depends mainly on some modification of galvanism and electricity; and it is an equally curious and corroborative fact, that substances which conduct electricity are also conductors of the nervous fluid, and *vice versâ*. A strong instance of animal electricity presents itself in the Gymnotus, or electrical eel, which it is sufficient that I should name, without detailing its well-known properties.

This is a favourite hypothesis with many able physiologists, as well as with myself, and a close comparison of their agencies substantiates the closeness of their analogy. The experiments instituted by Dr. Wilson Philip, of dividing the nerves supplying the stomach and respiratory organs, and then substituting their suspended functions by a stream of galvanism, still further confirm the doctrine, and so vividly illustrate its probability, as to place all others comparatively in the shade. The nerves are, in short, the electric wires by which the brain telegraphs its workings to different glandular stations, or issues its commands to the muscles of volition! If those wires are severed, the telegraph works in vain; if those nerves are divided, the operations of the mind on the respective organismus are annihilated also. Dr. Philip, after detailing his experiments, asks—"Is it possible to explain the result of these experiments without admitting the identity of the nervous fluid and galvanism? We must either admit this, or that there is another power capable of performing the most characteristic and complicated functions of the nervous system." Dr. Cooke favours the same opinion. Mr. Walker, in his work on Philosophy, says—"If a person stand on the electric stool with glass feet, and touch the prime conductor for a few minutes while the machine is working, his pulse will be greatly accelerated; and if bled in that situation, the blood will be projected a considerable distance,—showing that electricity stimulates the motion of the heart, and increases the motion of fluids. Can any doubt remain" (he asks) "that this wonderful agent is a prime instrument in muscular motion?" The perpetual variations of our feelings and spirits, without any assignable cause, are, I have no doubt, frequently produced by the varying proportions of electricity in the atmosphere, exerting an influence on the brain and nerves through the medium of our respiratory organs; and it is highly probable that the vital energy common to all animals and vegetables is dependent on the agency of electricity, though perhaps not identical with it. Mr. Smee, in his Treatise on Instinct and Reason, says—"A gentleman who has much to do with various persons as an agent, assured me

that the weather much influenced the action of people, and to such an extent was he practically acquainted with it, that he never went out to canvass on a dark and gloomy day; but when the sun shines, and the sky is bright, people feel happy within themselves, and then he can do business with them!" (p. 250).

In damp and hazy weather, when electricity is carried off from our bodies by humidity, our spirits become languid, and our sensibility less acute—the nerves lose their tension and elasticity; whereas, on high mountains, spontaneous flashes have been seen to be darted from the fingers, the body containing more than the surrounding rarefied and conducting air.

I am corroborated in this my opinion also by Dr. Holland, who says—"Little though its influence has yet been defined, I believe that the electrical state of the atmosphere is that of all its conditions which has most important and diffused effects on the animal economy, more rapid and pervading than any other, and (as one of the vital stimuli), more intimately allied to the functions of the nervous system" (Notes and Reflections, p. 485). It is difficult to advert to the effects of atmospheric electricity on the body without noticing the question whether this great natural agent is not of itself directly engaged in the functions of the nervous system. It is obvious that changes of atmospheric electricity have much influence on the sensations and voluntary powers, producing results variously analogous to those which attend certain morbid states of body more familiar to us. An atmosphere highly charged with electricity produces alternations of chill and warmth on the skin, and many indescribable sensations; sometimes feelings of a rheumatic character in the muscles, tingling and itching of the sentient extremities of the nerves; and a thunder-cloud is frequently productive of headache, or other cerebral affections. All this demonstrates the influence of electricity on the animal economy.

But, to return from this digression.

If the mind possesses, through the medium of the brain and nerves, such an immense and powerful influence on the subordinate corporeal organization as to enable man, under the excitement of mental emotion, to perform the astounding feats, and accomplish the Herculean labours which we continually witness or read, it can easily be understood that it can also impair or totally subvert the frail and delicate elements of which our corporeal frame is composed. Thus it happens that by its stimulus to the circulating system, the action of the heart and arteries is impelled at times beyond their powers of endurance; and a vessel bursting on the brain, a fatal apoplexy suddenly ensues, or a lingering paralysis is entailed for probably a melancholy series of years. The body succumbs to the sovereign influence of the mind; and the hero, whose "very name struck terror to the foe," is at once reduced to a state of helpless impotence.

In others, where, through misfortune or through grief, the spirits, once so buoyant, are utterly dejected and depressed, the canker-worm of care, with slow and insidious progress, eats into some less vital organ, and, altering its structure, and

vitiating its faculties, gradually undermines the fabric of the constitution, and establishes a painful, an incurable, and ultimately a fatal disease.

During the few years in which I formerly practised in London, whilst engaged one morning in conversation with the late Sir Astley Cooper in his study, a patient was announced who had come from Norfolk for that justly eminent surgeon's opinion and advice. His keen and practised eye at once discerned the malady; and before he put a question to the elderly and melancholy object that had entered the room, Sir Astley asked me if I could name his disease? I admitted my inability beyond that of a constitution thoroughly impaired; on which Sir Astley said that he was much mistaken if the poor man was not suffering from carcinoma of the rectum, and that probably his mind was ill at ease. On examining the patient the accuracy of his diagnosis was most fully confirmed. He then observed how frequently that disease ensued on mental distress.

The disease is, however, by no means confined to the rectum. The female breast and the uterus are particularly subject to scirrhus from the same cause.

"I should have observed," says Sir Astley Cooper in his lectures, when speaking of the causes of this disease, "that one of the most frequent is grief or anxiety of mind. It arrests the progress of secretion, produces irritative fever, and becomes the forerunner of scirrhous tubercle. How often have I found (he continues), when a mother has been watching, night after night, with anxious solicitude, the pangs and sufferings of her child, and has had the comfort and gratification of seeing its recovery, that in a short time after this she has come to me with an uneasiness of the breast, which on examination I have discovered to be scirrhous tubercle. Full three-fourths of these cases arise from grief and anxiety of mind. It is the state of mind and body which predisposes to this disease. The mind acts on the body, the secretions are arrested, and the result is the formation of scirrhus. Look, then, in this complaint, not only at altering the state of the constitution, but *relieve the mind*, and remove, if possible, the anxiety under which the patient labours."

Most surgeons, I believe, concur in this opinion. Some, however, consider that there must be an hereditary or constitutional predisposition to the disease. Others, that it belongs especially to maidens, or to women who have never borne children. Its visitations, however, occur indiscriminately; and where the exciting cause is sufficiently strong to generate the disease at once in a diathesis favourable to it, a similar result, though more remote, may ensue where it may not be expected. Leaving, however, the subject of cancer (which, it must be admitted, is a strong illustration of the morbid consequence of mental sorrow), yet still adhering to the depression of spirits as a fertile source of bodily suffering, we embark at once on the wide ocean of Nervous Diseases.

Here again the softer and more susceptible sex are, as it is well known, the peculiar victims; for their sensibilities being more refined—their habits (especially in the aristocratic circle of society) far

more sedentary—whilst their minds are less briskly engaged,—the influence of nervous irritability is more intensely felt, and more permanently engrafted, than in man. Their passions, moreover, being as strong, or perhaps stronger than in man, but covered by that mantle of concealment which Nature, hand in hand with feminine modesty, throws over them, the inward fire keeps slowly smouldering on, and secretly consuming the frail tenement in which it lies imbedded—they become the prey of grief and disappointment; robbing them of

"Tired Nature's sweet restorer, balmy sleep"

—destroying their appetite for food, and their enjoyment of pleasure — absorbing their every thought—disturbing their secretions —and thus undermining their general health, and, perhaps, ultimately sapping even the citadel of Reason itself! So Virgil, speaking of Dido, says :—

"At Regina gravi jamdudum saucia curâ
Vulnus alit venis, et cæco carpitur igne
Multa viri virtus animo, multusque recursat
Gentis honos—hærent infixi pectore vultus,
Verbaque—nec placidam membris dat cura quietem."

Hence arises Hysteria in its myriad fantastic shapes, acting on and agitating different parts, and simulating sundry structural affections so insidiously as to endanger the diagnosis even of experienced physicians. The irritable breast described by Sir Astley Cooper, the hysterical joint and other local affections, delineated so well by Sir B. Brodie, are striking illustrations of it: and it is distressing to think and to know that even limbs have been amputated, and painful operations performed, under an erroneous and simulated impression of the existence of organic disease. To quote the latter talented surgeon's (Sir Benjamin Brodie) own words :—"I do not hesitate to declare that among the higher classes of society at least four-fifths of the female patients who are commonly supposed to labour under diseases of the joints, labour under hysteria, and nothing else" (Lectures, p. 37.) These diseases occur in persons of an irritable disposition and nervous temperament, in whom there is excessive excitability, accompanied with diminished power. The catamenia are almost always irregular, and generally deficient; and this whole class of disease is, probably, in the majority of instances, the reverberations of disappointed Nature on the nervous system. The mind acting on the body through the great sympathetic nerve, affects different parts and different structures, varying in intensity, in form, and in duration, in proportion to the varying sensibilities of its victims. Hence the extensive catalogue of what are designated *hysteric* affections, deriving their name (as the etymology indicates) from that focus of excitement to which my theory alludes. "Sed nec spectabilior est hujus morbi frequentia," says Sydenham, "quam varietas illa multiformis, qua se ostendit, et nullos ferè non emulatur ex iis affectibus quibus atteruntur miseri mortales. Quamcunque enim corporis partem insederit, symptomata (qualia ei competunt parti) statim producit, et nisi medicus tam sagaci quâdam solertiâ et δεινοτητι quam in arte peritia valeat, fraus ei fiet, atque ista symptomata à morbo aliquo essentiali hujus vel illius partis, non verò ab affectione hystericâ, pendere arbitrabitur."

Though corroborating my purpose, it would consume an unnecessary portion of time were I to adduce all the extraordinary

and protean forms in which hysteria manifests itself. Suffice it to say, that, contingent as the malady is on persons of high nervous excitability, attended with diminished power, it is best obviated by that class of medicine, and met by that line of treatment, which calms the one and renovates the other; and the medicines and treatment must be adapted to the particular form in which it presents itself, and to the individual circumstances of the person so affected.

Albeit, however, the female sex is more especially the subject of this disease, the etymology of which, as I just observed, would clearly *confine* it to WOMAN, many are the instances in which men are also visited by it, inasmuch as it is an affection of the nervous, as well as of the uterine system. "Quinimo," as that patriarch of medicine just quoted observes, "non pauci ex iis *viris* qui vitam degentes solitariam, chartis solent impallescere eodem morbo tentantur." Another proof, though a negative one, of its *nervous* origin, is presented in the fact, that, however acute may have been the local pain, dissection casts no light on its pathology, the seat of all the suffering evincing, in a large majority of instances, no discernible cause of its intensity, whilst the whole class of tonic remedies which would aggravate the mimic inflammation, were it otherwise than visionary, is that which experience establishes as the most conducive to relief, the disease being dependent, in fact, on loss of tone, with excess of nervous susceptibility.

It would be a culpable omission, in speaking of the influence of the mind as a cause of disease, were I not to make a brief allusion, also, to that aristocratic visitation termed the Gout. We know that, independently of hereditary disposition, its *seminium* is in the stomach—that its agency is conveyed by the blood to the organs which it principally invades, and that excesses of an Epicurean character will produce and mostly generate a paroxysm. It cannot, however, be denied that all powerful mental emotions, though opposite in their nature, will generate it also in a gouty subject, and that a fit of anger is a notoriously frequent exciting cause. The passions may either occasion an attack or cause its retrocession, or give birth to some irregular or misplaced action; and the suddenness of metastasis proves that the inflammatory type is one "*sui generis*," and deviating from the nature of inflammation in its ordinary form. If, as I have before observed, and as must be universally admitted, the influence of the mind will alter the secretions, there is no reason why the stomach and its office of digestion should be exempted. We know that the sudden announcement of bad news will at once take away the appetite;—and why? The shock vibrates to the various parts of the body, through the medium of the nervous and circulating systems; the nervous energy is thereby partially paralyzed; the function of digestion is consequently deranged, and a paroxysm of gout is at once generated, where the predisposition exists.

Weakness of the remote nervous ramifications will necessarily influence the secretions of the parts which they supply; and when, as in gouty subjects, the blood abounds with excrementitious matters, the exhaled and secreted fluids possess preternatural or morbific properties, which affect the sensi-

bility of the extreme nerves, and irritate the tissues in which they are deposited. The electric rapidity with which *Metastasis* occurs can only be explained by reference to the organic nervous system, in co-operation with the arterial; the *materies morbi* being vested in the peculiar state of the blood. Now, if we contemplate the intimate connection which subsists through its medium, we can easily comprehend the transference of sensibility from one part to another. The tone, however, if not the structure of a part, having been impaired by previous attacks, renders that part constantly liable to a fresh invasion; or it may visit other organs, according to the several causes which prevail, or the vascular conditions which at the time may happen to be in existence in those organs.

In consequence of frequent and severe attacks the structure of the minute vessels subsequently becomes altered, and the lithic lava of gout is at length deposited in the form of tophi or chalk stones.

Temperament is frequently connected with the progress of disease. There can be no doubt that the irritable temperament —*i. e.*, the sanguine, is more peculiarly under the influence of casual injury and of disease, and that an accident which in others would yield to the *vis medicatrix naturæ*, is frequently followed up in such subjects by serious constitutional disturbance. This temperament, wherein, as Hunter shrewdly observes, there is an "overaction to the strength of the parts," is characterized by extraordinary vivacity of the nervous and vascular systems. Tremblingly alive to the slightest impressions, the sensibility of such persons is more acute; and I am firmly of opinion that they suffer infinitely more pain under surgical operations, as well as more grief under mental affliction, than others who are not thus endowed. The mind is susceptible of greater emotions—their feelings are less under control—they float more buoyantly on the surface of hope, or they sink more deeply beneath the depths of despondency. They are more liable to tetanus after an operation, and their recovery is more uncertain and protracted. Raving madness belongs more particularly (according to the observations of Esquirol, and many others) to the sanguine temperament, whilst the melancholic is most prone to Monomania and depression of spirits: nor is death an unfrequent consequence of this excess of their morbid sensibility. The body in such subjects is the slave of its tyrant empress, and life itself succumbs to her dominion. Such persons have been known to expire suddenly during the steps preliminary to a surgical operation. A striking instance of the fatal agency of the mind is recorded of a man who, under the bloodthirsty Robespierre, was condemned to be guillotined: by some accident the knife was arrested in its descent, and on removing the victim for the purpose of adjusting the fatal apparatus, life was found to be extinct: the mind had anticipated the executioner, and performed his office.

Another instance, which I believe is well authenticated, is presented in the case of three criminals on the Continent, who were condemned to die, and were only reprieved for the advancement of science, and given over accordingly to the tender mercies of surgeons, as the subjects of experiment. These professors informed

them, that though the sentence of death was immutable, yet under the circumstances they should suffer little or no pain in its execution, which it was decreed should be carried out by the gradual loss of blood. Their eyes being bandaged, a slight puncture was then made in each of their arms, and a small stream of warm water was poured continuously over the arm; thus giving them the entire conviction that their blood was flowing into the pail beneath. After this had been carried on a reasonable time, it was found that two out of the three had ceased to live! The fatal influence at other times, though equally effective, is more distant.

A surgeon in Essex, with whom I was well acquainted, rode several miles on horseback, early in October some years ago, to consult my father. He was about forty-five years of age, and not only appeared to be, but admitted that he was, in good bodily health; yet a conviction had impressed him that he should not survive the ensuing February. It was in vain that my father endeavoured to reason him out of it, and urged him to follow his favourite amusement of fox-hunting through the approaching season. He did so; but "death on the pale horse" overtook him, and realised his unalterable apprehension. A patient who despairs of recovery is certainly in greater danger than he who is convinced of his convalescence; and the vista of disease is dark and dreary in which the taper of hope has been utterly extinguished. The physician, therefore, who by his countenance or by his manner can inspire it, has gained an unquestionable advantage in the work of his vocation. The patient, especially if of a nervous temperament, studies his every turn of countenance—weighs his every word—and the thermometer of his feelings rises or falls accordingly. The mind becomes enlisted in the service, and by its influence on matter dispels the peccant humours that oppress it. It becomes the duty therefore of the physician to infuse consolation, and to inspire hope, wherever he can do so without confiscating truth; for

"Sunt verba et voces quibus hunc lenire dolorem
Possis, et magnam morbi deponere partem."

And here, though the language of poetry may by some be deemed inconsistent with the graver matter of a medical lecture, I cannot forego the quotation of lines so beautifully illustrative of the *powers* as well as of the "*pleasures* of hope," as—

"Go, seek the dismal chamber, where disease
Reclines with wasted form and pallid hue;
Where through the half-closed shutter sadly creeps
A feeble ray that scarce a twilight sheds;
Whilst all around distressing signs appear
Of fruitless remedies! Mark, then, how sweet
To lift the eye of *Hope* upon a friend!
To feel upon the fluttering pulse the grasp
Of one beloved—it beats with firmer force—
The languid eye beams momentary joy;
And sickness, cheated by the smiling scene,
Awhile forgets her pain inflicting task!"

It is the despair of relief that too often impels the sufferer to fly into the arms of death in order to

"Whirl him, happy riddance, from himself."

This arises most frequently from exaggerated nervous irritation, as in the higher grades of hypochondriasis resulting from

both physical and moral causes, and acting with awful severity on the brain through the nerves of the digestive apparatus. In aggravated cases of dyspepsia, where the mucous membrane of the stomach and intestinal tube is disordered, the mind becomes impaired: hope is abandoned: reason is overthrown, or rather, in such cases, as Lord Erskine observed—"Reason is not *driven from her seat*, but distraction sits down upon it along with her, and holds her trembling upon it, and frightens her from her propriety." The delusions of fancy, of disordered imagination, and morbid sensibility, flit around their victim, and terrify him. The sympathetic palpitation of the heart is misconstrued into organic disease; the little nervous or hepatic cough is converted by the imagination into pulmonary phthisis; or the occasional giddiness, confusion, pain, heat, or other anomalous sensations in the head, engender an apprehension of apoplexy, paralysis, or derangement. Sometimes the sufferer avoids society from having lost all pleasure in it; or, if some pitying relative or friend should endeavour to engage him in conversation, he is unable to enter upon it, and swerves perpetually from the subject to describe his feelings, and seek their explanation. Consolation is refused; or the abortive effort to lighten his despondency by making light of his complaints is twisted into raillery, and perverted into unkindness. Tortured by hypochondriasis, and frightened by the ghosts of fancied ills, he flies from one physician to another for advice; or, beguiled by the *ignis fatuus* of empirical puffs and base and baseless promises of cure, he becomes the dupe of quackery and the martyr of imposture. Here there is frequently a reciprocated agency of mind and body; the unremitting nightmare of the mind impairs the secretions and digestion, and the irritability of the nerves and mucous membrane (aggravated perhaps by the drastic purgatives with which he has injudiciously been tortured), has added fresh irritation to the material organ of the mind. It is astonishing to observe how constantly the temper is affected by this malady. A friend and connection of mine, a most amiable man in all the domestic relations of life, and a pattern of piety, became so irascible under its influence, that he would sit before the fire and kick the fender, till he nearly destroyed it; swearing violently on the slightest provocation, and (to use his own words), "longing for a sword that he might cut any one to pieces that came in his way."

It is on the same principle that the drunkard is almost invariably irritable and morose; and a similar effect frequently ensues after a full meal, or on eating indigestible articles of food. The irritation of the gastro-intestinal nerves is communicated to the brain; the temper manifests the stimulus; perception is less acute, and the mental faculties are tarnished and oppressed: hence the valuable Roman maxim, "*Impransi disquirite!*" is evidently founded on observation and good sense.

Notwithstanding the entire derangement of both the bodily and mental functions in this disease, Anatomy has thrown no light on its pathology. Villermay maintains that the primary seat is in the stomach, and that the disease consists in a morbid state and an excess of organic sensibility of the nervous system, which is reflected sympa-

thetically on different organs. Broussais refers it to the coats of the stomach, and a chronic inflammation of its mucous membrane. M. Georget, on the other hand, refers all the phenomena to the brain, and supports his theory with most plausible arguments. Certainly, when the cause in different cases is closely studied, it would appear that sometimes the disease is manifested primarily in the brain, and at others, in the digestive functions; each theory has its respective merits. "*Et vitulâ, tu dignus, et hic!*" Be this as it may, the stomach in either case is affected. The hypochondriac, however, must not only abstain from those ingesta which augment this irritability, but must also exercise some moral restraint, and do his utmost to curb the first impulse of temper, by the aid of his reason and religion, as well as by abstinence. Many, after their nervous energy is exhausted, resort to fresh stimulus and to narcotics, and with temporary relief; but the irritability is mostly exasperated by such measures after the soothing effects have passed away; and both insanity and suicide have been the ultimate result.

Want of proper restraint during infancy and childhood lays the foundation of irritability of temper in numberless instances, and affords a lamentable illustration of the mind's dominion. That irritability swells into incontrollable passion, which grows with their growth, and strengthens with their strength, till the mind assumes an unhealthy condition, and runs away with the reason, because reason becomes insensible to its curb. Cerebral excitement at last induces cerebral disease; the membranes become vascular, and subsequently thickened, and the reiterated moral is converted into a permanent physical cause of mental derangement.

Abundant instances might be adduced of sudden death from the vehemence of anger, as well as of its devastating effects on the organismus of our bodily frame. Amongst the former may be enumerated the celebrated John Hunter—dying in St. George's Hospital, from the irritation consequent on opposition to one of his motions at the weekly Board of its Governors! Cheyne, Bonetus, and other authors, give similar instances. The secretion of bile is unquestionably deteriorated by the operations of the mind; its blackened inspissation, combined with depression of spirits, has supplied the appropriate cognomen of melancholia. This is corroborated, moreover, by the relief that it derived from mercury, and its specific action on the liver, as well as the relief given to the irritated gastro-intestinal nerves by carrying off the acrid secretion by mild and cooling purgatives: and hence Lord Byron declared that an ounce of salts exhilarated him more than a bottle of champagne! Since, however, both mind and body suffer in hypochondriacs, both demand our attention. Where the disease is traceable to hard study, close confinement, &c.—which so frequently happens—it is evident that both must be discontinued; and where (as in Broussais' theory) there is evidence of "gastro-enterite," the antiphlogistic plan must be adopted in the first instance, and the tone of the stomach subsequently repaired by that regimen and those medicines which experience has established as most efficacious, but which it is superfluous that I should here enumerate.

Thus far I have cursorily alluded to some of the manifestations of mental influence in the form of those ordinary diseases which are daily subjected to our attention; and in so doing I have sought to refer the agency to that animal electricity which (as I have observed) so many physicians and philosophers consider the most plausible explanation. A careful contemplation of the phenomena can, in my opinion, bring us to no other satisfactory conclusion; and the more closely they are analyzed, and the more attentively examined, the stronger is the corroboration. But—

"Est quodam prodire tenus, si non datur ultra."

There is a boundary which we cannot pass, and there are secrets in nature, hidden from our eyes, which can probably never be revealed. The material organ of the mind is within our grasp,—albeit, its subtile essence still eludes it; as the mariner can shift his sails and shape his course through the deep, but cannot control or command the winds that waft him through it! The human mind, even in its highest state of culture, is inadequate to the attainment of many mysteries; but light from Heaven, which has shone on many scenes of former doubt and darkness, may yet conduct the diligent inquirer to truths such as human intellect has never hitherto attained.

We have taken a glance of the power of the mind in producing disease, and even death, and we have yet much before us as we advance. It may not, however, be irrelevant to direct our transient attention to its powers, and also to its condition, apart from disease,—viz. in a state of Sleep, a state in which the external senses and the voluntary motions are lulled into insensibility and temporary quiescence, whilst the involuntary motions are carried on with steadiness, though perhaps with some relaxation of their activity. Here, in other words, the functions of the brain are comparatively suspended, whilst those of the ganglionic system (though sharing a portion of the insensibility of the brain from mutual connection) enjoy, with modified change, their own inherent power. When the activity of the brain and nervous system has been exhausted (as occurs every 24 hours under the ordinary circumstances of existence), or when a greater demand than usual has been made upon them by excess in mental or muscular exertion, or by any other course tending to expend their inherent excitability, this well-known miniature of death ensues; it is, in fact, a most salutary provision of nature for the restoration of that *vis vitæ* which would otherwise quickly be expended altogether. During sleep the process of nutrition is also carried on more perfectly, and with increased activity; and this is in some measure proved by the increase of corpulence, and general deposition of adipose substance, in those who indulge unnecessarily in it. This is humorously instanced in the fat boy in "Pickwick!" Where sleep is perfectly sound, and the mind as well as the body is in deep repose, *both* rest from their labours, and regain their strength; and so imperious is the demand where either mind or body have been *entirely* exhausted, that neither silence nor darkness, nor uneasy posture,—nay, not even (as history can establish) the close approach of the hour of a public execution, can sometimes avert it. The fatigue of the body is, however, more inducive of it than

fatigue of mind; for a close attention to literary labour frequently generates an irritability which prevents it; whereas in Captain Barclay's celebrated match of walking 1000 miles in 1000 consecutive hours, he was not only fast asleep (especially in the latter part of his task) the *moment* he sat down after completing his mile, but it was with the greatest difficulty that he could be aroused at the proper time for accomplishing another,—so powerful a sedative is exhaustion!

After a certain time, however (which is when the mental energies are recruited), the sleep becomes less deep, the waking fancy begins to work, and those inexplicable monsters of the mind called Dreams arise. They are the interludes between sleeping and waking,—where imagination is busy whilst reason is prostrate and sensation is torpid, and where, consequently, the altered balance of nervous power distorts the action of the brain, not unfrequently generating intellectual abortions of hideous and incongruous formation. This is painfully exemplified in what is well known by the name of *Nightmare*, where, under that abolition of voluntary power, a painful desire to exert the voluntary muscles arises,—although, as soon as those voluntary muscles regain their power, the phantom vanishes. This is consequent for the most part on cerebral irritation communicated by the gastric nerves during a paroxysm of dyspepsia.

Now it is the aggravated state of cerebral irritation attendant on fever which constitutes Delirium. Delirium is literally nothing more than a protracted dream during a state of disease; and as dreams generally consist of the revival of old associations respecting past events, or of new ones consequent on recent occurrences, which the intellectual powers are too much disordered to arrange, a confused mass of ideas is presented, and expressed aloud. Delirium, therefore, is a state of thinking, without the person being able to control the association of ideas, or correct his thoughts by external objects; sometimes they would appear to be prophetic, and their influence over the mind even fatal! A case illustrative of the power of dreaming is well authenticated in a lady, the daughter of Sir Charles Lee, who stated that one night, when she was in bed, a little old woman came, undrew her curtains, and said—"I am your mother, and to-morrow, by 12 o'clock, you will be with me!" The young lady arose, wrote a letter to her father, sealed it with black wax, and by 12 o'clock on the following day was dead,—so strong was the impression on her mind. There is an inscription on her tomb in confirmation of this extraordinary effect of the mind on the body, even during sleep. Many deaths have been predicted in dreams, and been verified; numbers in lottery tickets have been whispered in a dream, and been drawn prizes! and some useful admonitions have been communicated, — for which, "search the Scriptures."

Yet, although this is the ordinary state which constitutes dreaming, there is another state of sleep, named Somnambulism, in which the bodily functions are more under the control of the will than what usually constitutes dreaming, so that the individual *acts* under the influence of his conceptions. Here, while the senses are obscured, and all other objects are unperceived, the somnambulist manifests a fa-

culty of seeing, feeling, and of discovering the object of which he is in pursuit; for he walks, and frequently over dangerous places, in perfect safety, and performs many of the common offices of life, and can occasionally hold conversation. The brain would fain appear to be secreting ideas under the influence of sleep, and telegraphing their fulfilment to the obedient muscles of volition. Many and ludicrous are the instances recorded by medical authors; nor has the dramatist let pass the opportunity of amusing the public by the representation of these vagaries of Morpheus—"La Sonnambula," to wit. I could relate many; I will only, however, adduce *one*, which came under my observation in a young lady of sanguine temperament and high nervous irritability, and who was under my care. She was a person of highly cultivated mind, and devoted herself very closely to the acquisition of knowledge, which was very probably conducive to the irritation. After having been in bed and asleep for two or three hours, she would gradually rise, put on her dressing-gown, go down stairs, walk about the drawing-room, sometimes balance herself like a rope-dancer on the back of the sofa as she walked from one end of it to the other; then go into the dining-room, open the cellarette, help herself to a glass of wine, afterwards return to her bed-room, plunge her face into a basin of water, and get into bed again. When spoken to, she would mutter an indistinct answer. In the morning she was perfectly unconscious of her midnight ramble, and only complained of slight headache, but not enough to interfere with her daily occupations.

It is difficult to explain these extraordinary occurrences satisfactorily or pathologically.

The functions of the brain and medulla spinalis are separate—sleep is undoubtedly an affection of the brain;—and, where the brain is *much* oppressed, constituting *Coma*, its functions are entirely suspended—in sleep only partially so. Yet the spinal functions continue in office; and though, in a protracted state of coma, not only they would shortly be suspended, but life itself, they are so little affected during sleep that the voluntary muscles have a liberty of action; and somnambulism is equally a result and a proof of this. When the functions of the brain are *entirely* rested, and sleep, exempt from visionary interludes, is dispelled by Nature being restored, it is then, perhaps, that the intellect is most clear, the judgment most perfect, the perception most acute, the sensibilities most refined. Thus, "The first moment of waking has been defined —that moment of horror to the unhappy when, amidst returning perceptions, increased in acuteness by the refreshment of repose, a sense of misery suddenly darts its sting into the heart, and renews with tenfold vigour its suspended anguish." This is the time when so many victims of mental emotion rush headlong into eternity; and, could many of those unhappy beings who have been found dead in the morning be restored, I have no doubt that they would substantiate my conviction. They try to sleep again, but they invoke the drowsy god in vain:

"He, like the world, his ready visit pays
Where fortune smiles: the wretched he forsakes;
Swift on his downy pinion flies from woe,
And lights on lids unsullied with a tear."

Could they but sleep again—could sleep but be induced by narcotics—their melancholy exit had been averted; but, aroused by Nature from that sweet oblivion in which all their cares and troubles were just now shrouded and at rest, the sad reality of their condition is more acutely felt than when mingling with those who carry on the world, and whilst they were comparatively abstracted from themselves by the passing objects around them. The intensity of feeling predominates over every other consideration in that solitary hour, and, getting an unfortunate ascendancy over their better judgment, precipitates them into the abyss which alone appears to promise them a refuge from all sublunary difficulties and anxieties. "In some people (observes Dr. Burrows), the more soundly they sleep, when they awake, have all their hallucinations more vivid, and resume all their violence." That the ganglionic system is distinct from the brain is further demonstrable by experiment; for convulsions of the most violent character occur after decapitation, and can be called into action by galvanism long after the manifestations of life have ceased. Again, the spinal functions may be entirely arrested, as in paraplegia, and yet the operations of the brain remain unaffected. For example, I was requested to see a man in my neighbourhood who had fallen from a tree on his back, and fractured the dorsal vertebræ. Entire anæsthesia of the lower extremities ensued, as well as all possibility of moving them; yet his intellect remained unimpaired till a few hours before his death, which did not occur till six weeks after the accident. Many such cases are recorded. All these effects—the classification of nerves, their distinct offices or functions, together with their pathology—are most lucidly expounded in Dr. Marshall Hall's Lectures on the Nervous System; but, as this subject is independent of the operation of *mind* on matter, it may be somewhat irrelevant to enlarge on it on this occasion. Where *mental* shocks are productive of spasmodic affections (of the which they are a fertile source), it is through the action of the brain on the excito-motory nerves. A paroxysm of epilepsy induced by mental excitement is strongly illustrative of this: and sudden alarm or a burst of anger is a most frequent cause. "Parmi les causes excitantes de l'epilepsie la frayeur tient tout à coup sur le premier rang. La colère, et un chagrin profond, paraissent (après la frayeur) tenir le premier rang parmi les causes de l'epilepsie." It is produced by depressing as well as by exciting passions. When there is a predisposition to epilepsy, a cause of either kind, be it productive of excessive or of defective action, may interrupt the equable transmission of the sensorial power, and thus occasion a fit: and hence it is desirable to retain every patient, who is subject to epilepsy, in a state equally distant from plethora as from undue emptiness of the cerebral vessels. In epilepsy both the cerebral and spinal systems are equally affected, as is demonstrated by the temporary stupor and insensibility in combination with the violent convulsions of the whole frame. The frequent occurrence of an epileptic fit during sleep evinces that it is referrible to venous congestion in the brain; and the termination of the fit in stupor and headache, in addition to the effusion of serum, and other morbid appearances, consequent on repeated attacks, proves how deeply the brain is implicated

in this distressing disease. The intellectual powers also become impaired, and frequently terminate in idiocy or insanity, dependent on serious organic lesions within the cranium. In other cases no abnormal appearance is discernible. "Sed et fessi fuerunt summi in arte viri atque in rebus anatomicis peritissimi (to use the words of Van Swieten), quod in cadaveribus hoc morbo defunctorum nihil invenerint sæpè quod culpare poterant." The pathology of this disease is unquestionably involved in much obscurity.

Now, connected with or consequent on epilepsy, it is not uncommon to find apoplexy or palsy. My learned predecessor in this rostrum, Dr. Marshall Hall, classed them, in fact, under one bracket, and supported the theory with his well-known ingenuity and talent. He says:—"The patient affected with paroxysmal apoplexy sometimes becomes epileptic; the epileptic, on the other hand, sometimes experiences attacks which gradually assume the more apoplectic character. The fits of apoplexy usually terminate in an apoplectic stupor, and this sometimes in mania." Sudden emotions (as I stated in the early part of my lecture) have very frequently given rise to apoplexy, owing to the highly increased arterial action, and the venous compression attendant on it, of which numerous instances are given in Aretæus, Portal, Cheyne, and other authors; and, as both these states occur in an epileptic fit, an apoplectic or paralytic seizure may naturally be expected. Paralysis, according to my repeated observation, is more frequently connected with the depressing passions—such as distress of mind from losses, sorrow, frustrated speculations, and other sources of anxiety and disappointment. The nervous energy which had previously subsisted, and carried the projectors through much mental and bodily fatigue, producing increased determination to the brain, with congestion of the sinuses and veins, is succeeded by *exhaustion* of organic nervous power, giving birth, in persons of a gouty diathesis, to an attack of gout—in others, of mature age (and in whom the circulation through the brain is liable to physical imperfection), to a rupture of the minute blood-vessels, and consequent effusion into some part of the encephalon. The result of such effusion manifests itself variously, according to the seat or to the extent of the lesion that has occurred. It may have occurred in the base of the brain, or in the spinal column, as well as in the meninges or substance of the brain itself. If the effusion in the brain be slight, absorption may take place, attended with entire recovery; or the effusion may increase, and be followed by extension and aggravation of the paralysis, and ultimately by death. But there *can* be *no* doubt that both apoplexy and paralysis are occurring almost daily from intellectual disturbance, and consequent on a deficiency of the due equilibrium of the nervous and vascular systems. Amongst the multitudinous minor instances adducible, another striking instance of the effect of the mind is displayed in the change of the colour of the hair, which becomes rapidly grey, or falls off, under the influence of anxiety and grief. The late chaplain of Newgate told me that he has been astonished at the rapidity with which dark brown or black hair, in young subjects who have fretted after their commitment, has been bleached. A lady of my acquaintance,

who experienced great unkindness from her husband soon after marriage, lost every hair, not only from the scalp, but the eyebrows and eye-lashes came off; and her skull, in a few weeks, was as smooth and polished as a billiard-ball.

Other instances of the extraordinary operations of the mind present themselves in the metamorphoses of the Fœtus in Utero, as is well known, and are highly authenticated; and, moreover, powerfully illustrative of the subject of my lecture—in the dispersion of warts by what is termed charming them—the suspension of an ague-fit by impressing the patient's mind with the conviction that it will not recur (be the instrument what it may)—the removal of disease by pretending to a miraculous agency—of the toothache, by invoking the presence of the dentist, &c. &c.

I will now take a cursory view, however, of the effects of one or two of the passions. —I have just observed that Fear, or rather sudden fright, is a frequent exciting cause of epilepsy. Its immediate operation is to paralyse the body, and is therefore precisely opposite to the influence of Rage or violent Anger. The respiratory nerves are instantly affected, causing embarrassment in breathing, and accelerated action of the heart, attended with diminution of its momentum, and retardation of the returning venous blood; thus giving rise to the pallor so notoriously characteristic of the passion. There is a temporary congestion, consequently, in the heart and lungs, and exhaustion of nervous power to such an extent that the limbs totter and shake, and scarcely a muscle but participates in the asthenia; sometimes (as I have already observed) the exhaustion of the Vis nervosa at once annihilating existence. It is a fertile source also of insanity, as well as of nervous disease. I was consulted a few weeks since in the case of a young lady who was affected with partial hemiplegia and chorea, from being frightened by a crazy man, who forced himself into the house after dark, but she soon recovered. There is a case of fatuity at this time at High Beach, in one of the asylums which I visit, owing to the patient being frightened at school by a mock trial of him for stealing a knife from one of his schoolfellows: they pretended that they were going to hang him: he escaped, and hid himself for some hours in a ditch, where he was found idiotic. Numberless similar instances might be adduced, resulting from fancied apparitions, or other causes of terror and surprise.

Look, again, at the consequences of *Grief* on the animal system. We have mentioned one of these in the beginning of my lecture—viz., Carcinoma: and many more sad consequences might be enumerated. It tends, when inordinate, to determination of blood to the brain: it is a not unfrequent cause of insanity; and would be still more so, did not Nature proffer the relief of tears. The countenance at once betrays it: the *depressor anguli oris* is of itself so characteristic of mental sorrow that the artist can instantly pourtray it, and change the representation of laughter into that of weeping by a mere stroke of his pencil, calling that muscle into play. The common phrase of being "down in the mouth" no doubt takes its origin from the action of this muscle. General languor, moreover, prevails; for the exhaustion of

nervous energy which follows fast on the agitation and restlessness of sorrow depresses the whole frame, and leaves it in a state of lassitude and inertia. A general stupefaction of the intellect mostly ensues, all the vivid perceptions which might previously have reigned being absorbed or concentrated in the predominant affliction. The expression of countenance is painfully interesting, and his must be a flinty heart in which a feeling of commiseration and sympathy is not excited on witnessing it. All the harsher emotions of the countenance are lost and melted down; and woman is said to be more radiant through the mist of sorrow—

"So properly the object of affliction,
That heav'n is pleased to make distress become her,
And dresses her most amiably in tears."

That the heart may become structurally affected by the continuance of grief may be asserted with little fear of contradiction; or little faith can be reposed in the writings of Corvisart and others, who have studied its pathology with attention. What is the simple and constant concomitant act of sighing but the comparative inertness of the heart's action, and the consequent impulse of congested lungs to

"Cleanse the fraught bosom of that perilous stuff
That weighs upon the heart."

Sir Charles Bell has beautifully described all the minutiæ, and explained them admirably, in his "Anatomy of Expression,"—a work which merits a place in every library of science and interest, malgrè a few little errors of opinion. He carries on his illustration even in the brute creation, and demonstrates by close analogy that though they have not, strictly speaking, *reason* for their guide, they have instinct,—nerves, and feelings, and emotions, and passions, in common with ourselves, and so verifies the poet's humiliating assertion, that

"Man differs more from man than man from beast."

The opposite excitement—viz., that of intense *Joy*—has also a most powerful effect on the system, and is, perhaps, more to be dreaded in its consequences of the two. This has been abundantly witnessed from the sudden and unexpected supervention of great wealth on nipping poverty; and insanity, and even death, have been a not unfrequent consequence; for the mind is elastic, and gradually rises from the weight of sorrow that depressed it: but when the load of embarrassment, and anxiety, and distress, is suddenly removed, and a superabundant influx of nervous excitement is as suddenly infused, the specific gravity of reason is thrown as it were from the mind's centre, and never able to regain her seat. It is an overcharge of animal electricity, and an explosion follows, the illumination and destruction being simultaneous. Instances of its fatal property are recorded and familiar. Pliny asserts positively that the joy of having won the prize in tragedy put an end to the days of Sophocles, and also of Dionysius of Sicily. He also gives the example of the Roman lady who died for joy to see her son safe returned from the battle of Cannæ. Another instance presents in the old Greek who died on the spot from excess of joy on seeing his three sons crowned

with laurel at the Olympic games. The pathology is only explicable on the principle of nervous excitement already specified,—in other words, a shock of animal electricity; for no *structural* disease could be detected by post-mortem inspection under such circumstances. We can only say that the equilibrium of the nervous and vascular systems has been disturbed to a degree incompatible with the laws of existence, and death is the result!

All other emotions and passions are, in fact, only modifications of the influence of the mind on the material organization already described; and it may be difficult to penetrate more deeply into "*cet abyme des incertitudes*" than has been done by those whose names I have quoted, and by other physiologists whose reputation is immortalized by their researches in this interesting branch of medical philosophy, and is identified with it. It cannot be denied that the functions of the brain and nerves—the reflex action of the latter—the respective peculiarities of the sentient and motor nerves—the distinctions between involuntary muscles and muscles of volition—the ganglionic system—the separate offices of the brain and spinal marrow, and all their individual and combined operations and uses, have been most minutely studied, and most assiduously investigated, and partly ascertained, within the last few years, not only by those on whom the grave has closed, but by several who still live to enjoy the *Superbiam quæsitam meritis.* Should the latter have retired from the field of philosophy to enter it no more, the laurel still is green upon their brow; and, with this encouragement, let us hope that, though the subject is intricate, and the barrier apparently insurmountable, others may not be deterred from prosecuting the inquiry, remembering that

> "The wise and active conquer difficulties
> By daring to oppose them."

In fact, the subject merits even more attention than it has hitherto received; for, however valuable the pathological observations may ultimately be, the inferences which have been drawn from the experiments which have been instituted are nevertheless so incomplete and perplexed, that farther research, and the "*longioris ævi diligentia*," are requisite to verify them. The nature and exact functions of the ganglia—that prime minister of organic life; the sympathetic nerve, with its various connections and offices; the endowments and relations of the medullary and cineritious constituents of the brain and nerves; the unity of the nervous power; the vital principle itself, and its connection with material organization;—in a word, the *terra incognita*, which at present forms the extreme boundary of human knowledge, is still involved in an obscure mist and mystery which affords ample space for our consideration and study.

If Vivisection be indispensable to the further prosecution of physiological inquiry, and physiology stagnates because humanity shudders and shrinks from the infliction of pain, it is gratifying to feel that her handmaid, Chloroform, is come amongst us as though to obviate the leading objection to experiment, and beckon us to farther scientific investigation. Her supreme power over the entire nervous system may ere long

open the portal to information which as yet has been closed against us, whilst her anæsthetic agency must rank high amongst the most valuable of modern medical blessings and discoveries. The extended action of it, and of other powerful anæsthetic and stimulant medicines on the nervous system, is a subject well worthy of especial study. It has burst in upon us lately with a dazzling effulgency, although it must at present be considered in comparative infancy. As we employ it more generally, and become better acquainted with it, many advantages may be anticipated from this class of remedy, especially in mental and nervous affections. We all know or have witnessed the operation of the Nitrous Oxyde on the nervous system; the astonishing influence of Mesmerism; the anæsthetic effect of the inhalation of Æther; the operation of Aconite and other narcotics,—the effects of all of which on the brain and spinal marrow are strongly illustrative of the antithesis of my subject—viz., the action of *matter on mind:* and here, amongst the first and foremost, must be classed the maddening fascination and mental bewilderments consequent on Opium and the preparations of it,—that Nepenthe of both mental and corporeal suffering and inquietude,—"sine quo," as Celsus observes, "medicina quasi manca sit, ac claudicet!" How many a painful paroxysm of agony does it not avert! How many a night of ease and tranquillity does it not procure, which, but for "this sweet oblivious antidote," were spent in suffering and restlessness! Who can forget the poetry and pathos with which its Elysian properties have been depicted by De Quincy in his "Confessions!" Yet who would not shrink from the Circæan cup, or dash it to the earth, rather than be similarly enslaved by its intoxications! Under its powerful influence the nervous system is variously affected in different individuals. Perception is confused; ideality is excited; memory is blunted, or is, perhaps, extraordinarily augmented; visions arise which are confounded with realities; and the mind becomes entangled and intoxicated by it! It begins by exciting, but terminates by stupefying the brain, inducing coma and death: but its action on the mind through its material organization is a striking illustration of the dependence on, and the connection of, the one with the other. The sublimities of genius are, indeed, not unfrequently invoked and elicited by these mental stimulants, which excite the brain, though at the expense of the stomach. Many of the fine pictorial productions of Fuseli are said to have been the children of indigestion and irritated brain,—nay, it is asserted that he ate freely at supper of whatever was calculated to cause dyspepsia and night-mare, for this express purpose.

The effects of all the narcotic poisons on the animal organismus are very analogous; some are more rapid in their effects than others, as Prussic Acid; some are attended by convulsions; some dilate, whilst others contract the pupil of the eye. The principal symptoms are cephalalgia, vertigo, affection of the retina, with paralysis, convulsive stupor, and death; but no morbid lesions are discernible from narcotic poisons, unless we include venous congestion or serous effusion in the encephalon. The general impression is, that they either ope-

rate on the brain through the circulating system, or, as others maintain, their operation is on the centre of the nervous system, and its sympathy with those expansions of it on which the morbific impressions are made; and the instantaneous death consequent on a large dose of Prussic Acid favours this theory.

The action of stimulants is to awaken the susceptibility to impressions, to pour fresh oil into the lamp of exhausted nature, to sharpen the intellectual energy, and to dissipate sorrow and anxiety. "Give strong drink unto him that is ready to perish, and wine unto those that be of heavy hearts. Let him drink and forget his poverty, and remember his misery no more,"—said Solomon.

Profane authors teem with such encomiums. Many a passage might be cited from scores of classic authors in support of the exhilarating and creative influence of Wine. Some of our most celebrated statesmen would not attempt to speak, until they had aroused their powers of eloquence by stimulant potations; and Horace asks—

"Fecundi calices, quem non fecere disertum?"

Energy is therefore the first impression that is made by Alcohol as well as by Opium. The mental function acts with unwonted power; wit is awakened—and fancy and imagination being aroused, and luxuriating with unfettered vigour, the poet and the orator pour forth their sublimest strains, and give utterance to their grandest conceptions. If, however, the stimulus exceed the due proportion, and reason is floated from her capitol, the ideas become confused and incoherent, the powers of the mind are swamped, vertigo follows, bringing exhaustion in its train, and a φευδο apoplexy finishes the scene. Where a copious potation has been suddenly made, not only the mucous membrane of the stomach is inflamed and injured, as Dr. Roupell has ably depicted to us in his treatise, and illustrated with coloured plates, but the shock sustained by the nerves is communicated to the brain, and a fatal result ensues before time for absorption can take place. From smaller proportions, daily and constantly repeated, we have palsy, dyspepsia, mania, delirium tremens, debility, and every indication of the intellect—the brain, and whole nervous system, being shattered and destroyed—and our gaols are crowded, our madhouses are stocked, and our churchyards filled, by the victims of this pernicious and demoralising vice. Without, however, digressing into a treatise on alcohol and its effects, suffice it to say, that the *Vis nervosa* and powers of the mind are salubriously augmented or perniciously impaired by its action on the brain, according to circumstances:—and in alluding to the articles which I have just enumerated, I feel that I have adduced the strongest illustrations with which we are acquainted, of the instrumental agency of *Matter on the Mind*. This it is which renders the study of the operations of stimulants and of narcotics particularly incumbent on those who devote their time and attention to the treatment of insanity: for the condition of insane patients is very various. Wine, which in a state of health induces a temporary delirium, will, on the other hand,

mitigate or suspend the low muttering delirium of typhoid fevers, where it arises from depressed vitality. The same observation applies to opium. How frequently this is demonstrated in the calmness and rationality with which patients awake, where Morphia has been given in such proportion as to induce sleep under such circumstances! and though of course insanity is not to be confounded with delirium, yet how valuable is the effect of morphia, and of henbane at times, in every lunatic asylum, as well as in the fever hospital! My friend Dr. Seymour asserts the acetate of morphia to be more efficacious in that melancholy stage in which Suicide is to be apprehended, than any mode of treatment which can be adopted; and I fully coincide in such opinion in many instances. It is equally so in puerperal insanity, and in other forms of mental alienation attended with irritation and debility. How strikingly this is evidenced in the Delirium à potu, or "tremens" as it is generally termed. Where, from nervous exhaustion, therefore, the nerve matter, whatever it may be, no longer exercises its function as a medium through which the mind exercises volition or perceives impression, morphia would appear to impart a new mode of consciousness. It suspends the exhaustion which causes the disorder of the sensorium in Typhus, and refreshment follows the repose that is induced by it—In a word, the alternations of mental action correspond with states of bodily excitement and exhaustion; but the cause of any deviation from the normal condition of either mind or body must be ascertained before the appropriate remedy can be prescribed, inasmuch as cerebral excitement in an opposite condition would be aggravated by opium or stimulants.

Inequality in the distribution of blood to the brain invariably affects the intellectual functions, be the cause what it may. This is evident in the simple act of fainting (in which all consciousness, perception, volition, and other properties, are suspended for a time), as much as in congestion of the brain. Fainting is, in fact, a vivid instance of the subjugation of the body to mental emotion, for it is a suspension of the heart's action, consequent on a sudden impression on the mind. This theory is, however, opposed by that eminent physiologist Bichat, who asserts that the brain has no immediate influence upon the heart. His opinion was, that the passions and mental emotions are to be referred primarily to the heart, and not to the cerebral system; and in analysing the pathology of syncope he contended that the suspension of the heart's action was in all cases the *primary* circumstance; that of respiration, sensation, and voluntary motion, being only *secondary*. Great as may be the presumption to differ from so celebrated a physiologist, it is difficult to concur in this opinion; for where it occurs in persons of delicate susceptibility on the sight of a toad, or a spider, or blood, or any other offensive object of sight (as so frequently occurs), it is surely an impression on the brain through the medium of the optic nerve, and communicated *secondarily* to the heart and circulating syetem. Where syncope is consequent on sudden loss of blood, on the heat of crowded apartments, on the use of the hot bath, on long standing, and other physical derivatives of blood from the brain,

this theory is admissible; but that it is *also* produced by the agency of the mind appears undeniable, and the etymology of "leipothymia," or "animi deliquium," is accordingly given to it. Since, however, it cannot be denied that Syncope is by no means an unfrequent consequence of FATIGUE,—and inasmuch as I should deeply regret to find myself a remote or proximate cause of such an occurrence in this room by trespassing at *too great* a length on your attention,—I will here close my lecture.

LECTURE II.

On nervous agency.—Insanity—early indications of it—instances of the acuteness of insane people—tendency of women to insanity—its exciting causes—study—religion—poetry—Its usual divisions and varieties—ludicrous instances—anecdote of Hatfield and the late Mr. Baron Garrow. — Medical Jurisprudence. — Monomania. — Pathology. — Lunar influence.—Proportions of male and female patients. — Effects of the passions. — Chances of recovery.

In my preceding lecture I endeavoured to pourtray some of the leading agencies of the mind (through the medium of the brain and nerves) on our bodily structure, and, as far as the impenetrable mysteries of the *modus agendi* will admit, to describe their operations and results. Their extensive variety—their extraordinary manifestations—their morbific and fatal consequences, are daily evinced, and indisputably established; and the more seriously we reflect on them, and the more carefully we contemplate them, the more imperatively are we bound to admit—

"How complicate—how wonderful is man!
How passing wonder He that made him such!"

We have shown in a few instances how the whole animal machinery is subject to the two classes of nerves—to those which proceed directly from the brain and spinal marrow, and, in accordance with their origin, are termed cerebro-spinal; and to those which are characterized by ganglia, and termed ganglionic. The former comprise that portion of the nervous system which relates to sensation and volition; the latter consist of those which supply involuntary motion, and which are the source of nutrition, and of the movements of the internal muscles over which we have no control. To these Sir Charles Bell has added the "Respiratory:" their functions are separate; and the distinction is demonstrated by the circumstance that the latter can be carried on independently of the former, as has been proved by the physiological experiments instituted by Le Gallois, Sir Benjamin Brodie, Dr. Wilson Philip, and others. There is, nevertheless, a concatenation of the whole nervous system by various minute filaments, connected also with the sanguiferous system; and as the function of secretion is effected by the action of the nerves on the blood, it is evident that the different secretions vary in proportion to the supply of nervous power: hence it is that diseases are established by the combined influence of the brain and spinal marrow, employed as they are in forming the secreted fluids, and in supporting the other processes on which the due structure of

every part depends. Hence also arise the phenomena and treatment of disease in general; the restoration of health being, in other words, the restoration of secretions. Now, although I have said that the functions of the sensorial and of the nervous powers are separate, the sensorial power is capable of impressions on the involuntary muscles through the medium of the sympathetic or ganglionic nerves, as is evinced under the excitement of various mental emotions and passions. Again, the temperature of the animal body is maintained by the evolution of caloric from the blood through the agency of the nerves; for the temperature of any part is reduced by whatever impairs the action of the nerves supplying it; and the whole body is reduced in temperature where the whole nervous system is affected. I merely mention these well-known facts in confirmation of the entire subjection of the body to the mind through its material instruments the brain and nerves, and of the immense and universal influence which they possess and exercise over every portion of the animal economy.

The sensorium, evidently residing in and operating at the source of the nervous power, there receives the various impressions transmitted by the nerves, and there influences those nerves which convey its dictates. Thus all the functions of the nervous and muscular systems, by which we are connected with the world that surrounds us, are constantly subjected to the sensorial power; while the functions on which our life depends (with the exception of respiration) are only occasionally so, and under circumstances in which the will has no control. The muscles of respiration are only partly involuntary, for we can accelerate, or retard, and for a few seconds control them altogether, as is instanced in what is commonly called "holding the breath," though the impossibility of existence without the act of respiration very soon compels us to renew it. Were it not that the consequences of the lungs being deprived of atmospheric air predominate over that suspension of sensorial power which occurs in apoplexy, death would be the rapid result of every apoplectic seizure. Yet respiration becomes more laboured, slow, and stertorous, in proportion as the sensibility of the sensorium diminishes, till the last gasp is heaved, and life is extinct.

Enough has, however, been advanced in support of the power of the mind, and of its material agents. The respiration is instantly affected by it; and all the chaos of passion and of mental emotion is most graphically illustrated (as Sir Charles Bell has demonstrated), through the medium of what he terms the respiratory nerves.

Without entering farther, therefore, on the physiology of the nervous system, and retracing the ground which has been so assiduously trodden by those celebrated philosophers who have deeply investigated and ably elucidated that obscure yet interesting mine of science, I have determined to take now a view of the mind of man in a state of disease. I have already represented it in many of its fitful vagaries, and attempted, however feebly, to recal its protean operations to your memory, where, in the zenith of its healthful power, it has partially affected, or wholly subjugated, its fragile encasement.

Over voluntary and involuntary muscles the mind exercises its omnipotence; and be the organ what it may, or the structure what it will, its influence and agency are despotic and supreme! That influence, however, is not confined to it in a state of health, since, when its leading ornament and peculiar human characteristic, Reason, has been overthrown, its many other attributes retain their seat: and memory, perception, volition, passion, sensation, would seem in many instances to have scarcely suffered from the shock. Now, although we began by admitting that the mind and body are distinct, it was also shown that the one was indispensable to the manifestations of the other; and therefore, if its material organ was impaired, the operations of its immaterial tenant would generally be perverted or annihilated. The modifications of disordered action which ensue from its impairment will be principally regulated by the seat of the disease; and a tolerably accurate diagnosis may often be formed accordingly. The form also of the disease frequently betrays the pathology; for the brain, like other organs, being liable to disease of structure as well as to disorder of function, the researches of anatomy have shed a valuable light on the prognosis as well as on the diagnosis of mental diseases.

Insanity exists frequently without any disorganization of the encephalon, is purely functional, and is then infinitely more amenable to remedies; indeed, where it depends on extensive disease of structure, all hope of recovery must be utterly abandoned. Its invasion is generally gradual. There is a period of what has been appropriately termed "Incubation;" and this is the period in which it is the most under our control.

That the longer the disease has existed the less is the probability of recovery, is, I believe, universally acknowledged by all who have devoted themselves to this branch of our profession; and the statistics of the malady prove it. Andral considered it incurable after the expiration of two years; but unless it be dependent on lesion of structure, experience leads me to dispute his opinion. That such recoveries are comparatively rare I am free to admit; but their chances mainly depend on the care, kindness, and comfort afforded them. Many paupers, who had been inmates of workhouses for years, considered incurable, and neglected in consequence, have been restored after a few months' residence in a County asylum, where they have been more carefully treated, and more kindly used.

Since, then, the invasion of insanity is generally gradual, the slightest alteration in the habits or natural disposition (especially where there exists an hereditary tendency), should be carefully observed. Few people are Phrenologists, but all are Physiognomists; and the expression of the countenance, and particularly of the eye, will frequently give the first notice of the incubation. It shrinks from the popular gaze, and catches furtive glances of the visitor; it has a sly, and a fixed and downward look; or it has a vagrant and vacant expression: in some it has a quickness and restlessness; but, be the bias what it may, there is an indescribable character beaming through its glassy surface, which tells the tale to the experienced observer. In the exercise of my office of visiting physician

to the asylums in Essex for the last twenty-four years, I have always studied this feature, and have found it most valuable in assisting me to decide on the existence of mental disease, where the aberration has been so slight, or the part of sanity so ably acted, as to almost deceive the magistrates who have accompanied me in my visitations, and induce them in fact to doubt the propriety of the confinement. Dr. Male says, "Insanity may generally be discovered by a wildness in the eyes; very high or very low spirits; extravagant or inconsistent conversation or action. The eyes are sometimes fixed for a long time on one object, and often on vacuity. These first symptoms (he adds) usually pass unnoticed by inexperienced observers; and it is frequently difficult to convince them that the patient is insane, unless his conversation is absolutely incoherent, or his conduct dangerous." (p. 209.)

The appeals of patients for liberty are perpetual, and generally supported by so positive an assurance that they are unjustly detained, that I have frequently had great difficulty in satisfactorily controverting them; and special visitations, independently of those which are appointed by the Act of Parliament, have frequently been required for that purpose. A young lady of singular acuteness and of finished education, who held the situation of governess in a family, and was sent to the asylum of the late Dr. Allen, of High Beech, addressed me once in these words:—"I understand, sir, that you are the visiting physician to this establishment, and that one of your duties is to see that no person is improperly confined here. Now, sir, as I assert that such is my position, gauge my intellect!" and in the examination which devolved on me, and which lasted a considerable time, I was most forcibly reminded of the words of Shakspeare:—

> ——"How pregnant her replies!
> A happiness that madness often hits on,
> Which sanity and reason could not be
> So prosperously delivered of!"

In this instance the wildness of the eye was discernible, and at variance with her well-dissembled firmness and self-possession.

The acuteness of the insane in disguising their malady is astonishing. In a case of madness tried at Chester before Lord Mansfield, the patient was so clever that he evaded questions in court the whole day, and seemed to every body perfectly sane. Dr. Batty, however, came into court, and, knowing the point of the man's derangement, asked what had become of the princess with whom he had been in the habit of corresponding in cherry-juice? Instantly the man forgot himself, and said it was true that he had been confined in a castle, where, for want of pen and ink, he had written his letters in cherry-juice, and thrown them into the stream below, where the princess had received them in a boat. This man had had sagacity enough, during the whole of the day, to answer correctly all the questions put to him in court, Lord Mansfield being the presiding judge. Even the acuteness of Lord Erskine was insufficient (being unacquainted with his particular hallucination), to detect the insanity of a lunatic who fancied himself to be Christ; and he was indebted for the discovery to the presence of Dr. Sims.

Sleeplessness is another predominant feature in early as well as in matured insanity. The sensorium is too morbidly alive to sanction healthy rest, and the busy imagination is at work by night as well as by day. It is mostly referrible to excess of nervous and vascular action in the brain, like the delirium attendant on fever, and is accompanied by the ordinary indications of preternatural excitement consequent on such excess, and superseding the feeling of exhaustion.

A morbid perversion of the affections and natural feelings, though unattended by any perceptible lesion of intellect, is a very frequent early indication; nay, so constant is this moral alienation, that it is considered by Esquirol to be the proper characteristic of mental derangement. We observe it vividly marked in puerperal cases, and I have witnessed feelings of strong attachment suddenly supplanted by indications of decided aversion to the husband and children. Utero-gestation of itself, independently of any tendency to insanity, is frequently accompanied by extreme susceptibility of impressions, by peevish irritability of temper, by depression of spirits, and other reflections of the womb on the brain and nervous system.

The state of the mother during pregnancy is frequently also communicated to the infant, even where no constitutional liability to insanity exists; and it is in the womb that we are to look for some of the modifications of mental disease. The mother, who would otherwise have had the gratification of witnessing the "mens sana in corpore sano" in her offspring, had the current of life and circumstances run smoothly during that important condition, will, if subjected to fright, or vexation or anxiety, or other causes which disturb her mental serenity, give birth to infants whose brain and nervous systems will be liable to convulsive or spasmodic affections; or, as they advance in life, to imbecility or dementia. This was abundantly proved during the excitement of the French revolution, and is too often exemplified in private life, where the woman has been doomed to suffer unkindness, or unmanly violence, from him to whom she had been taught to look for comfort and support.

In a very considerable majority of cases of insanity in women, much of the disease will, however, be found accompanied by irregularities of the uterine system. This condition arises from, or may be partly attributable to, a state of congestion in which the brain participates, combined with the nervous irritation consequent on an altered state of the system, and is frequently relieved by the abstraction of a few ounces of blood. The practice of venesection during pregnancy (which was more common formerly) would, I have little doubt, tend more than any other measure to prevent both puerperal insanity, convulsions, and other common sequelæ of parturition; but the lancet has lost much of its pristine popularity.

In addition to the expression of the eye and countenance, to sleeplessness and alienation of feeling, there are numberless and various indications of change in the mental condition; such as thoughtfulness, inactivity, neglect of and apparent indifference to former pursuits and pleasures, absence, constipation, vitiated secretions,

sudden impulses, restlessness, extravagant schemes, suspicion, sudden bursts of laughter or of tears, &c. &c. Some forms of insanity, indeed, so closely resemble aggravated cases of hysteria, as almost to identify them, especially in that form which is termed *Erotomania*. Here there is generally some irregularity in the uterine function, together with excited imagination, protracted desire, and great susceptibility of the whole nervous system, of all which the maiden "nulli bene nupta marito" is peculiarly the subject. This is another illustration of the effect of the mind on the body.

The brain is at first only sympathetically affected; but the reiteration of hysteric paroxysms will occasionally induce a morbid action of it, with delirium, and ultimately insanity,—more particularly where the exciting cause is referrible to blighted hopes and affections. And when I speak of this as a cause of mental derangement, I will venture, without fear of contradiction, to assert that *any* strong impression on the sensorium, or *any* passion in excess, may give birth to it, especially where there is a constitutional predisposition to the malady. Dr. Prichard (the late commissioner in lunacy) considered the passions and emotions the principal and most frequently productive causes of madness; and, in common with Pinel, Georget, and others, was of opinion that the moral causes predominate considerably over the physical. In the wealthy and well educated classes of society there can be little doubt of it, for obvious reasons; but amongst the poor and uneducated I believe that the balance will be found in favour of the latter; their intellect, rusty by disuse, is less under the influence of excitement; their feelings are more dull; their nerves less sensitive; and, unless roused into action by spirituous stimulants, their general susceptibility is less acute. Hence it is that amongst the savage tribes, where the mind is totally uncultivated, insanity is comparatively rare. Rush pronounces it to be unknown amongst the North American Indians. Intense study, on the other hand, is an occasional source of it; and the too close application and over-strained mental exertion in some of the forcing-houses for puerile intellect called "Seminaries," frequently lay the foundation of nervous disorders, and even of insanity, in those who are delicately constituted, or in whom an hereditary predisposition exists.

Rousseau considered reading to be the scourge of infancy, and would not allow his Emilius to learn a line by heart till he was twelve years old. Madame de Sevigny says also:—"Je suis persuadée que la plupart des maux viennent d'avoir le cul sur selle!" Children of the present age are sometimes too much confined; and if constrained (observes Dr. Darwin) to sit in the same place for hours together, are liable to acquire a habit of playing with their hands, feet, &c. called "tricks," to exhaust an accumulation of the irritability by which they are goaded.

Where the amount of study exceeds the capability of enduring it, especially in young subjects, fearful consequences may be expected. The susceptibility of the immature brain is stimulated at the expense of bodily power; the forced plant is watered with the blood of life, and nature's

laws are violated irreparably. Thus, in alluding to the budding genius of "unhappy White," Byron exclaims—

"Oh! what a noble heart was here undone,
When Science self destroyed her favourite son!
Yes, she too much indulged thy fond pursuit;
She sow'd the seeds, but Death has reap'd the fruit.
'Twas thine own genius gave the final blow,
And help'd to plant the wound that laid thee low!"

Dr. Andrew Combe observes, "I have lately seen several instances of insanity, and also of total incapacity for future useful exertion, brought on by long protracted and severe study, in subjects whose talents, under a better system of cultivation, would have raised them to eminence. Pope was a remarkable example of this. By excessive application he fell into that state of exhaustion which Smollett also once experienced—a "coma vigil"—a sort of torpid indistinct existence—an affection of the brain when the principle of life is so reduced, that all external objects appear as if passing in a dream: and it was only by giving up study and riding on horseback that he regained comparative health. Sir Humphry Davy brought on a severe fit of illness by over-excitement of the brain in his chemical researches; and, in his interesting life of him, Dr. Paris has stated that "he was reduced to the extreme of weakness, and his mind participated in the debility of his body." (p. 183.)

It is the same with the brain as it is with the muscles: exercise strengthens and refreshes, but labour weakens and exhausts their power; and, as in the lamentable instance of Sir Walter Scott, where, in the decline of life, his embarrassed mind and circumstances compelled him to force the brain beyond what it was willing to supply, it sunk under the exertion.

Let me not, however, by these observations, be branded with the stigma of discouraging literary labour. A man may denounce intoxication without abjuring wine,—and a physician may prescribe opium with advantage, though an overdose may destroy life. The mind of every man is not only capable of, but improved by a definite proportion of exertion. Attention may be, and ought to be, kept up for a certain time; and, by frequent exercise, the study which at first occasioned fatigue may be protracted with facility and pursued with pleasure; and it is worthy of record, that mathematicians and philosophers have generally attained a considerable age,—so that even abstract calculation, or correct thinking, does not appear, with all these delirious visitations, to shorten the duration of life, or Sir Isaac Newton would have died long before he reached his 85th year. Mathematics have, in fact, been considered to be prophylactic of insanity, instead of inducing it; and Plato designated mathematical demonstrations the "purgatives of the soul." Certainly, as the late Sir Henry Halford observed, "nothing more entirely bars the intrusion of 'thick-coming fancies,' by occupying the whole mind, than mathematical studies; and he instances a physician who, whilst he was practising physic with great reputation in the country, became deranged. After a separation from his family of some months, he was advised to resume the study of Euclid, to which he had occasionally dropped hints of his partiality.

He did resume it, and with the happiest effect, and recovered at length so entirely as to be able to recommence business in London, and to continue to practise physic until his death." (Essays, p. 134.)

A certain learned member of the present House of Lords, I am informed, is in the habit of seeking recreation of his mind from abstruse political studies, by solving quadratic equations and stiff problems. Lord Bacon advised that "if a man's wits be wandering, he should study mathematics."

The poet, on the other hand (whose imagination is ever on the wing, whilst his reasoning powers are comparatively at rest), is more liable to insanity than the philosopher; and it is a curious fact that, in one asylum which I visit, the great nephew and niece of one celebrated poet, the son of the author of a poem which has immortalized him, and John Clare (the celebrated Northamptonshire rustic poet), were all inmates at the same time. The "Insanit, et versus facit" was frequently exemplified in Clare, even during my visitations; and I have by me several pretty poetical effusions written by him during his confinement there.

Religion, so called, or perhaps more properly spiritual intoxication, is another and a frequent source of mental aberration; and probably there is not an asylum of any celebrity, public or private, in which some unhappy victims of misguided fanaticism are not to be found. A mind that is by nature weak, and that having been overwhelmed with sorrow for the loss of relatives, or friends, or other depressing events, and, early and deeply imbued with religious feelings, resorts to meditation and retirement for relief, is very liable to melancholia: still more, a man who has been awakened to a sense of contrition from a life of debauchery, by some serious illness, or by the impassioned appeal of clerical eloquence, and, impressed with the idea that he has forfeited all hope of forgiveness by his misconduct, abandons himself to sorrow and despair, may be plunged at once into melancholy madness, or driven to a state of raving and distraction from which he may never be redeemed. I cannot recal to memory a more painful illustration of insanity than has been presented to my contemplation in the restlessness and horror manifested by this kind of patient; nor is there a more frequent cause of suicide.

"In minds broken down by adversity," says Dr. Burrows, "and little acquainted with its genuine precepts, a consequence opposite to that which was sought and expected from religion sometimes ensues. In this case the moral feelings have greater force than the spiritual, and the disappointment is not the default of the principles of the Christian faith. However natural it may be for a devout person to discredit that it is ever a cause of mental distraction, or for him who teaches that religion is the sole duty of life to disbelieve that too much enthusiasm *can* subvert the intellectual system, yet it is clear that, under certain circumstances, insanity *is* occasioned through the agency of religion." Enthusiasm and insanity bear such close affinity, that the shades are often too indistinct to define which is one and which the other. The over-zealous, consequently, should be taught to temper their fervour

with discretion, and be reminded that the calendar of crime is stained with the blood which has been shed by its fanatical exuberance. It is not *Religion*, but the distortion of zeal—which is a very different thing.

Itinerant preachers, who, abounding in zeal but deficient in judgment, endeavour to frighten their motley and illiterate auditors by declamation, have frequently shaken reason from her seat, and laid the foundation of this distressing type of the disease. A young woman (for the female sex are principally the victims) came under my care not long since, solely from listening to one of these spiritual empirics. Even divines of a higher order have exercised and evinced almost incredible influence on their congregation. Thus, during a funeral sermon preached by Bossuet, on the death of Henrietta Ann, the daughter of our Charles I., and wife of the Duke of Orleans, the writers of the time mention that "the whole audience arose from their seats; that terror was visible in every countenance; and that for some moments Bossuet himself was unable to proceed!" The Abbé Caron, who published the life of M. Bridaine, the missionary, states that, at the conclusion of one of his sermons, at Magnole, on Hell, the auditors were so much affected that they all remained motionless; that for three days following his mission all the town remained in consternation and mournful silence; and that, in the streets and public places, young and old men were seen lifting their eyes and hands to heaven, and crying aloud—"Mercy! O Lord, mercy!" Butler states that he was present at a sermon preached by the late Dr. Hussey, the Catholic Bishop in Waterford; "that during one apostrophe the audience was agonized, and that at the conclusion there was a general shriek, and some fell to the ground." (Reminisc. p.257.)

With such startling effects on the nervous system as these anecdotes of pulpit eloquence depict, it cannot be a matter of surprise that the brain should sustain a powerful shock, or that its equilibrium should be upset. I have adduced them as additional illustrations of the power of the mind over the body, and deem it unnecessary to enlarge on the *moral* causes of insanity. Amongst the *physical* may be enumerated hereditary predisposition, intoxicating liquors, congestion of the brain from frequent determination of blood to the head, coups de soleil, injuries to the head, narcotics, gastro-intestinal irritation (of which I spoke in my preceding lecture), epilepsy, apoplexy and paralysis, metastasis, scrofula and other causes of structural disease in the encephalon, masturbation, venereal excesses, and whatever tends to exhaust organic nervous power.

In mentioning *whatever exhausts organic nervous power*, as one of the physical causes of insanity, I find that I am concurring in opinion with Dr. Henry Monro, who, in a very able treatise recently published, asserts his opinion "that insanity is a disease of deficient nervous tone consequent on loss of vitality." Insanity is a disordered condition of the brain or mental instrument, manifesting itself in a disturbance of the *intellectual* faculties by what are termed hallucinations, or erroneous impressions or delusions [and designated *intellectual* insanity by the late Dr. Prichard]; or, a perversion of all the na-

tural feelings, affections, and habits, without any assignable cause [which the same author calls *moral* insanity]; or, an entire absence of reason, in which the mind is more or less annihilated—in other words, *dementia*. The usual divisions are *mania*, *melancholia*, and *idiotcy*.

These three deviations from a healthy or normal condition of mind admit of varied divisions and subdivisions, according to the predominant form or character of the disease. The human mind is such a heterogeneous mass of ideas and propensities, that when reason has lost her control, they break forth in various forms and degrees, rendering thereby a lunatic asylum a chaos of ungoverned passions, hallucinations, and delusions. Thus, under one roof, we find one man singing, another reciting, another standing apparently absorbed in thought, another melancholy and mute, another walking hurriedly, and muttering incoherently to himself, another full of tricks and mischief,—all and each of them regardless and unconscious of the absurdity of their deportment, and holding no intercourse with their companions, but each playing a part in the waking dream of his own disordered imagination. You are in a group of wakeful somnambulists: some will answer you if spoken to; others will remain obstinately silent; some will give not only a rational but a shrewd reply. Nor do madmen always lose the power of reasoning; on the contrary, they are frequently most acute, but their *Data* are erroneous: they labour under delusions,—and their imaginations convert fancies into realities, and so betray the imperfection of their intellect; for, being regardless of censure or of ridicule, they have no concealment, and therefore reveal their hallucination, and are kings, or deities, or statesmen, or poets, or anything else that may be prompted by their visionary impression; and it is in vain to attempt by force of argument to controvert the impression. This "tyranny of fancy's reign" is most vividly pourtrayed by that transcendant delineator of the human mind, Hogarth, who, in his last painting of the Rake's Progress, has represented the diversity with painful fidelity.

Can we, then, approach any nearer to a definition of insanity, asks Dr. Conolly (an authority which admits no question and requires no praise), than by saying that it is the "impairment of any one or more of the faculties of the mind, accompanied with, or inducing, a defect in the *comparing* faculty." These self-styled kings, or statesmen, or whatever be their delusion, are unable to compare their assumed condition with the dress, or the society, or the situation in which they exist. Their reasoning faculty may not be wholly lost, but they are blind to the absurdity of their assumption. Their data are erroneous, and what reasoning powers they may possess are exercised on the vision of their imagination. Converse with them on other topics, and they may appear very rational beings; yet in each case there is a diseased state of mind; and this insane belief (arising as it does from a want of power to compare things which *are* with things which *are not*) constitutes their insanity.

Dr. Millingen attended a judge in the West Indies who fancied himself a turtle! This ridiculous impression did not prevent

him from sitting on the bench, nor from the fulfilment of his judicial office.

There is no end to the variety or extravagance of delusions in this class of lunatics. A patient now in Mr. Tomkins' asylum at Witham, in Essex, though he answers rationally when you converse with him, is tortured day and night with the impression that he has little devils in his stomach, and that they talk to him and tease him. He was actually crying with the vexation when I visited him last week, and asked me if I could not hear them. Even Luther fancied the devil was in him, and that he heard him speak. Dr. Ferriday, of Manchester, Dr. Elliotson informs us, had a patient who imagined that he had swallowed the devil; and so benevolent was he in his feeling, that he would not discharge the contents of his alimentary canal, lest he should let him loose on the world. Bishop Warburton, in a note to one of his works, speaks of a person who thought he was converted into a goose-pie; and Dr. Arnold saw a man who fancied himself in the family way. Even the celebrated Pascal was the subject of a false delusion, and was so entirely impressed with the apprehension of being on the edge of a precipice that was before him, that he insisted on being tied into his chair. This was, as Shakspeare forcibly expresses it in Macbeth—

——————"A false creation
Proceeding from the heat-oppressed brain."

Very many highly interesting instances are detailed in Dr. Conolly's "Inquiry into the Indications of Insanity," all tending to show how persons may be deranged on *one* or more subjects, while the rest of the faculties are sound; or how they may be deranged on *every* subject,—in which case they display a wild association of ideas and inconsistencies.

Their *Propensities* also break forth in exaggerated disorder, and the depravity of their feelings is often variously manifested, whilst their intellectual faculties are comparatively little affected. They have sudden impulses, and probably destroy their children, or their nearest relations, or their sovereign, and with, perhaps, the best possible intentions. A strong instance of this occurred in the person of Hatfield, and with which I will conclude this catalogue of examples; but it is combined with such an extraordinary instance of memory, that it is deserving of record. The late Mr. Baron Garrow asked me, in the year 1825, to visit Bedlam with him. On entering the hospital accompanied by Mr. Wright, the resident medical attendant at that time, and hearing from him that Hatfield was still there, and that we should see him, Baron Garrow cautioned us not to mention his name, observing at the same time that he was counsel for the prosecution on Hatfield's trial, although from the circumstance of twenty-five years having elapsed, and his never having seen the prisoner either before or since that time (and then, of course, only in his wig and gown), it was not to be expected that he should be recognized. Scarcely, however, had we been three minutes in his apartment, when Hatfield, fixing his fierce eye upon the judge, asked him if his name was not Garrow? On being answered in the affirmative, Hatfield said, "Then, sir, I have one favour to ask of you, which is,

that as you were instrumental to getting me imprisoned here, you will exert yourself to get me set at liberty!" Garrow then asked him why he had committed this act of high treason on a king who was so highly respected and beloved? To which Hatfield replied, "Because I wished to make a *God* of him!" Many parents have murdered their children from similar infatuations, or to rescue them from a sea of sublunary cares and privations; and the newspapers of the present day have been recently stained with some of these unnatural records.

In very many instances the seat of irritation appears to be in the cerebellum; and all feelings of morality and decorum are prostrated at the shrine of concupiscence. This form of the disease generally leads to a state of fatuity, and terminates in epilepsy, convulsions, and paralysis. In cases of insanity generally, but perhaps more especially in cases of this character, I have observed a peculiar effluvium to proceed from patients; so much so, that were I to be unconsciously placed where several are congregated, I could at once detect my position. This peculiarity does not appear to be generally noticed by authors, and may probably be occasioned by the influence of the disordered brain on the secretions, unconnected with any want of cleanliness.

To enter into all the divisions and subdivisions of different authors, in their attempts to classify the various forms in which insanity presents itself, would be a work of supererogation in a lecture, and a tedious occupation of attention and of time. Regnault, in his "Competence des Médecins," says—"Les médecins ont voulu classer les Nuances de la Folie, c'est à dire des choses aussi peu susceptibles d'être classées que les Nuages! Quel en a été le resultat? C'est que des mots Grecs ont été substitues à des mots Français, intelligibles pour tout le monde, et des idées contradictoires reunies dans le même mot!" Medical jurists usually class the different forms under the four heads of Mania, Monomania, Dementia, and Idiocy. Nevertheless, medical jurisprudence too frequently enters into subtilties which only serve to perplex a jury, who, from never having given their attention to mental pathology, are of course entirely ignorant of its varieties. These distinctions are occasionally required on a cross-examination by a barrister, with a view to obtaining a verdict for his client, by ingeniously upsetting the evidence which has been elicited by the opposite counsel: he endeavours to entangle the medical witness in the snare of *Definition*—a Charybdis in which the unhappy victim will in all probability be swamped—("a question which," Dr. Paris observes, "a medical witness is always called upon to answer"), it being very difficult to define the invisible line which divides perfect and partial insanity; or he runs him upon the rock of *Lucid intervals*.

"To constitute insanity it is not necessary," as Dr. Male says, "to exhibit the ferocity of a wild beast, nor to perform the antics of a buffoon;" *they* speak for themselves. The grand question in a court of law is to decide whether a party be of sufficiently sound mind to manage his property; or (on being tried for murder or other violation of the laws) whether he

was conscious of the crime he was committing—whether (in other words) he was in such a state of mind as to render him a responsible agent. The verdict (according to Sir Matthew Hale) "must rest upon circumstances duly to be weighed and considered, both by the judge and jury, lest, on the one side, there be a kind of inhumanity towards the defects of human nature, or, on the other side, too great an indulgence given to great crimes."

That it frequently requires close study, acute perception, great tact, and considerable experience, to arrive at a just discrimination, must be admitted by every one. In addition to which, several interviews may be indispensable before a physician can give a satisfactory opinion; for lunatics are extremely cunning. Many have lucid intervals (excepting in a state of utter idiocy or imbecility), and their state of mind varies under different circumstances and positions; so much so that a commissioner would incur a heavy responsibility who should decide a testamentary dispute, or subject a criminal to execution, or even discharge a patient from confinement, without ample previous opportunities of interview and investigation. The physician must adopt his own plans for the attainment of what is required of him, and may bear in mind that which was suggested by Shakspeare in Hamlet:—

> ——————"Bring me to the test,
> And I the matter will *reword*, which *madness*
> Would gambol from"—

a test which Sir Henry Halford states that he found efficient, and which he instances in his Essay on the subject. Professor Taylor also wisely observes, in speaking of wills made by old persons, where, in consequence of alleged imbecility, some disappointed expectant has disputed the will:—"If a medical man be present when the will is made, he may easily satisfy himself of the state of mind of the testator, by requiring him to repeat from memory the way in which he has disposed of the bulk of his property. If a dying person cannot do this without prompting or suggestion, there is reason to believe that he has not a sane and disposing mind." (p. 660.)

In cases of murder, the fashionable plea of Insanity or Monomania is constantly adopted by the counsel for the defence, and in a great majority of instances with success, partly on the score of humanity, and partly in consequence of the prevalent modern antipathy to punishment by death. It is not, of course, my province to enter on a discussion of the validity of this perpetual plea. Each case must rest on the individual facts which appear on the trial. Justice should not, however, succumb to misplaced lenity, or to legal ingenuity; nor should a mawkish consideration for the murderer rescue him from the atonement which the bible authorizes and the legislature demands.

In alluding to the plea of Monomania, many persons consider it to be a state in which the mind is perfectly sound except on one particular subject; and this construction would appear occasionally to have been substantiated by cases which have been recorded. The barrier, however, between sanity and insanity is not so entire but that some few breaches may be detected. It is, in fact, only a species of moral insa-

nity; but the erroneous impression on one particular point is so strongly marked, as to throw the general character of the mental alienation in the shade. The mind is concentrated on one object or train of ideas, so that the insanity is partial. It manifests itself sometimes in a propensity to theft, sometimes to arson, sometimes to homicide; and the subjection of such a criminal to legal punishment must depend on the general evidence of consciousness of action.

Some persons are only guilty of felony when under the influence of spirituous liquors, and then become dangerous to society. A question naturally presents itself whether such person can be legally detained in an asylum. I have known several instances of this; and a patient is at this time under confinement in one of the asylums of which I am the visiting physician, who attempted to murder his wife, but in whom no evidence of insanity is discernible under the regimen and diet of the institution. A prisoner is now in Chelmsford gaol, and has been there for the last fifteen years, for murder, under the influence of intoxication and passion; and though he was acquitted at his trial, on the ground of insanity, he never evinces it now. If, however, a man, under the influence of ungovernable anger, has either taken, or attempted to take, the life of a fellow-creature; or, if prone to intoxication, and when intoxicated, his self-control and reason are not sufficient to restrain him from homicide, public safety demands his confinement. He subjects himself, when at liberty, to one of the leading physical causes of insanity, and becomes insane, being only sane during the lucid intervals of sobriety. Such subjects, Baron Garrow told me, ought undoubtedly to be under restraint.

To return, however, from this digression on medical jurisprudence, let us take a short view of mental pathology. And here Science receives a check, and Philosophy is staggered—for whilst extensive necroscopic examinations furnish a vast variety of disease in the encephalon of the lunatic, many instances of confirmed and protracted insanity can be adduced in which no vestige of disease could be detected, and where all the ravings and distorted features of this fell disease have passed away,

> "And, like the baseless fabric of a vision,
> Left not a wreck behind!"

How is this? Has the perturbed tenant left its cell without injuring its material encasement? Has the sword lost its edge, and rusted in its scabbard, without the scabbard participating in the ravage of time and circumstance? What can we say in answer to this query, than that

> "There are more things in heav'n and earth
> Than are dreamt of in our philosophy."

Amongst the principal diseases of the brain in the subjects of insanity, are—evidence of inflammation and its sequelæ in the tunica arachnoidea and pia mater, viz.: thickenings; serous infiltration; and more or less vascularity; injected state of the brain and its convolutions; morbid changes both in its cortical and medullary substance, with increased firmness of consistence of both. In others, a softening of

its substance; serum in the lateral ventricles; changes in the nerves proceeding from the brain; the bones of the cranium thickened, and harder than is usual, with inequalities in the cranial cavity; alterations in the structure of the pineal gland and the annular protuberance, &c. Many other appearances have been represented as existing; for, as has been observed by Esquirol, "The inspection of bodies of lunatics offers numerous varieties as to situation, number, and kind of morbid appearances. The lesions of the encephalon are, however, neither in relation to the disorders of the mind, nor to the maladies complicated with it. Some lunatics, whose mental and bodily disease had given suspicion of extensive organic lesion, have presented but slight changes of structure in the brain; whilst others, whose symptoms had been less severe, have been the subjects of great and numerous alterations. But what disconcerts all our theories (he adds) is, that not unfrequently, even in the instance of patients who have passed through all the stages of insanity, and have lived many years under derangement, no organic changes whatever have been traced, either in the brain or its containing membranes."

Dr. Millingen expresses himself of the same opinion, and still farther observes:—"All the organic lesions found in the insane may be also observed in subjects who had been free from mental alienation!"

Dr. Haslam details the morbid appearances on the dissection of 38 cases, in *all* of which there was more or less structural disease. Mr. Lawrence detected the same in 100 consecutive cases that came under his inspection at Bethlem. Mr. Davison, the house-surgeon at the Lancaster Asylum, after a careful examination of more than 200 patients who died in that hospital, says that he scarcely met with a single instance in which traces of diseases in the brain or its membranes were not evident: the pia mater and the cortical substance were the parts most frequently diseased. Dr. Conolly's experience confirms this.

It would be easy to recount an extensive catalogue of anatomists and pathologists who have favoured us with the results of their researches, and with their comments and inferences; but Martinet appears to have connected the symptoms which have manifested themselves during life with the appearances which have presented after death as clearly and concisely as most authors.

In cases of insanity consequent on physical causes, such as inebriety, blows on the head, &c. it is most probable that they arise from a greater or less degree of inflammation of the brain or its membranes; and so far I entirely agree with Bayle, to whose authority, from his researches and practical knowledge acquired at the asylum at Charenton, much respect is due; and that such cases, when early submitted, yield to the treatment, in accordance with his theory, is a strong proof of its correctness. Dumas, Calmeil, Vogel, and other high authorities, entertained similar opinions. Hatfield was acquitted on the plea of insanity referred to a wound in the head, which he received in action. For this reason, when it can be established, in cases of murder or felony, that the culprit has formerly sustained a wound or injury to the

brain, an acquittal on the ground of insanity for the most part follows. The well-known consequences also of inflammation, which so frequently are observed in post-mortem examinations, such as vascularity, thickening, effusion, &c., corroborate the connection of insanity with what he terms Meningitis. But irritation may also produce it in a high degree, and yet leave no visible vestige. We know that excruciating pain attends neuralgia, and yet no organic lesion in the nerve affected is discoverable; and, inasmuch as the nerves are processes of the brain, surely the analogical inference may be admitted.

Functional disorder may exist in any organ without structural lesion; but although anatomy may shed no light, nor reveal its cause, the *existence* of disorder is not to be discredited.

There may be a maniacal *Diathesis* as well as a gouty or scrofulous diathesis; and where the disposition is hereditary, this is most probably the case,—and then a slight cause will be productive of its manifestation.

Failing to demonstrate the union of insanity solely with cerebral disease, many pathologists sought for elucidation in the viscera; and the præcordia, the intestines, the liver, the spleen, the uterus, &c. have in turn sustained the etiological imputation; and some modern authorities refer it to the vascular system. Pinel himself considered the abdominal viscera mainly implicated, whilst others assign it to the ganglia and sympathetic system.

I have already alluded to the action of gastric irritation; and the fact that hypochondriasis, melancholy, and even suicide, result from the depression contingent on hepatic affections, cannot be doubted or denied. The frequency of diseased liver in lunatics has been often noticed in the autopsy of lunatics; this may, however, have been sometimes simply the result of that system of intoxication which has terminated in madness, and so extensively induced it.

In treating on Lunacy, inasmuch as its etymology would seem to convey that the moon exercises an influence on the disease, and as the question is frequently mooted, it may not be irrelevant to offer a transient notice of it to your attention. It has certainly been generally admitted that the changes in the weather and in our system are connected with those of the moon—an opinion which, whether true or false, might naturally originate with men who were necessarily most attentive observers of every thing associated with lunar changes, when lunar changes were their sole almanac. In an unlettered age they regulated the movements of the shepherd's life; and whole tribes worshipped this "queen of heaven" with abject veneration, as presiding over every atmospheric phenomenon; and their opinion of her influence over our earth was probable and natural. That the moon has an effect on the tides of the ocean is undisputed; and surely it is reasonable to suppose, *à priori*, that an influence so powerful as this must also have an influence over atmospheric changes; and to this day (whether or not arising from an indirect operation of the moon) changes of weather more frequently are observed to occur at certain lunar pe-

riods than at other times. It is ascertained that the mean barometrical pressure attends the first and last quarters, while its extremes accompany the new and full moon. The electroscope also indicates corresponding changes; and from the observations made by Dr. Allen, of the York Asylum, and subsequently of High Beech, amongst hundreds of insane patients for a series of years, he told me that he arrived at the conviction that an excited and unsettled state of mind prevailed more, on an average, at these times than at any other. Lunar phases are by many thought to influence EPILEPTIC lunatics, but not to act upon cases of mania or dementia. Shakspeare says:—

"Sure 'tis an error of the Moon, that comes
Nearer unto the earth than she is wont,
And makes men mad!"

We spoke (in the first lecture) of the effects of atmospheric electricity on the nervous system,—and though I willingly concede that the influence of the moon, through the medium of any change in the mechanical pressure of the atmosphere, is so inconsiderable as not to repay us for the trouble of its investigation, yet even this lunar influence is admitted by the best meteorologists of the day. There are few, however, who give much credit to the influence of the moon on insane patients.

The relative proportion of male and female lunatics is a question which naturally presents itself when the subject of insanity is before us; but a difference in opinion prevails in this as well as in most things, and the comparative frequency appears to vary in different countries. In Great Britain the proportion gently inclines to males. In France to females. In Germany to males. In London and Middlesex to females. In the sum total of lunatics in the Asylums of various parts of the civilized world, Esquirol calculated 37,825 males, and 38,701 females. The equality is remarkable,—but when the causes of respective liability are considered the balance appears to be equal; for although the nervous susceptibilities of women may subject the softer sex to a greater incursion of moral insanity, the proneness to inebriety in man (acknowledged, as it is, to be so frequent a physical cause) would give men the predominance. Alienation of mind is observed, however, at an earlier age in females, and the uterine functions undoubtedly subject them to a large exclusive additional liability: they are also more under the influence of superstition, and emotion from different causes; but then their minds are less subject to the ravages of speculation and perplexing pecuniary negociations, intense thought, and its anxieties. The predominance of the malady in men in England may be partly attributable to the women being more soundly and religiously educated, to their being more domestic, and less subjected to the excitements of gaiety and mixed society than in France. On this principle it may be explained why celibacy presents a preponderance of lunatics over persons in married life. When persons are married *Le jeu est fait!* and they are, consequently, more settled, and exempt from those hopes and fears, those disappointments and anxieties, which are a perpetual source of excitement to the young and single, who have not yet turned over the principal leaf in the book of life. The statistics as to the ages in which insanity prevails, (which is from

20 to 40), may moreover be admitted in evidence of the prevalence of passion and emotion as inducive of mania.

It may be difficult, however, to say at what age reason usurps her sway over passion, and subjugates her. Suffice it to observe, that few objects are more revolting than "the silver livery of advised age," polluted with morbid juvenile propensities, and incapacitated to control them.

This is, nevertheless, not an infrequent type of *Senile insanity*. As a general rule it may be held that mania in all its forms of excitement appears chiefly in early life,—melancholia in middle life,—and dementia towards the close;—the form of insanity varying much with the respective temperament of the individual, and mostly imbued with the hereditary taint.

Be this as it may, *our passions* may be *considered the chief causes of Insanity*, producing stimulating or depressing effects, which act most generally both on our physical functions and our mental faculties. This circumstance explains the extreme rarity before, and the common prevalence of madness after, puberty, when our relative social condition exposes us to the influence both of our natural passions and their artificial aberrations. When intensity of thought has brought on incoherence, such a confusion prevails in the mental impressions, that no distinct recollection of former circumstances appears to exist. Hence the fact, that subjects who have been insane from disappointment in their fondest attachments rarely mention the name of the object of their love. When they do recollect the person's name, and *appear to be grieved* when it is mentioned, (however violent their outbreakings may be,) we may entertain the most sanguine hopes of recovery. The sensorium in mania is so susceptible, that violent action may restore sanity or may extinguish vitality: A young man, the only son of his widowed mother, and to whom he was most piously attached, was suddenly restored to sanity on being loudly and abruptly told that his mother was dead! He burst into a flood of tears, was awakened to a sense of his temporary delusion, and reason regained her seat. But such sudden terminations are rare occurrences. The duration of mania is extremely various. It may remit, or intermit, and these intermissions constitute what are termed "lucid intervals." The patient appears to be restored, but the ray of light is often transient and fallacious. It is nevertheless cheering to observe the light of reason breaking in upon the benighted mind, evincing as it does, that though reason may have abdicated her throne for a while, her restoration is not only probable, but at hand.

After a careful consideration, it appears, as Dr. Burrows observes, that the prognosis may be summed up in the following order.

Recovery may be anticipated in proportion to the youth of the patient, and the recentness and comparative mildness of the attack.

The chances of recovery are greatest in the first attacks, and diminish with each subsequent invasion, and with the duration of the disease and advanced age of the patient.

Mania is cured most frequently—next, melancholy and monomania—lastly and the least, dementia and fatuity.

Melancholia is difficult of cure in proportion to the degree of depression—a dread of poverty, of poison, and perverted ideas of religion, indicating an obstinate disease.

Chronic insanity seldom recovers.

Puerperal mania generally.

Insanity with a propensity to suicide is a favourable form, if recent, and coming under early treatment.

Acute dementia is curable—chronic dementia and insanity not so.

Hereditary predisposition protracts and diminishes the chances of recovery, but does not entirely prevent it.

Relapses are, however, more to be expected when it exists.

An amendment of personal appearance attended by improvement in mind, indicates recovery.

When the insane preserve or acquire all their physical functions, and eat and rest well, presenting their usual appearance *without recovering their faculties*, recovery is hopeless.

Insanity caused by excessive study, by the slow operation of moral emotions, or attended by hallucinations, by pride, &c. is seldom cured.

Complications with apoplexy, palsy, and epilepsy, are incurable and fatal.

Men are more liable to relapses than women, and one-half of all relapses occur in the first three months after recovery.

LECTURE III.

Statistics of Insanity—Marriage—Necessity of Early Treatment—Mortality—Danger of Depletion—Pathology—Medical Treatment—Dr. Conolly—Dr. Monro—Healthy Condition of the Insane—Advantages of kindness and confidence—Illustration—Suicide—causes of—Hereditary predisposition — Prevention — Idiocy—Speech of Lord Carlisle.—Conclusion.

In taking into consideration the leading characteristics and powerful agency of that gift of God which constitutes the supremacy of man over the rest of animated nature, *The Human Mind*, I began by attempting to give a sketch (how brief soever and imperfect it might be) of its physiology. I traced a feeble outline of the different leading theories of its mode and power of acting on our corporeal organization; illustrating the abstruse consideration by examples of its effects—its agency in generating diseases—and its connection with various mental passions and emotions. I subsequently took a cursory view of the phenomena of its morbid condition, viz. *Insanity;* and I now, in conclusion, propose to resume the subject of what must undoubtedly be considered the most awful visitation which "flesh is heir to." It is much to be lamented that mental alienation, in one form or another is, and must be, perpetually on the increase, for, endowed as it is with an hereditary property more inherent than any other malady, it travels (though "haud passibus æquis") with the increase of population; and I believe that I am not guilty of exaggeration when I state that there are now no less than 80,000 persons in Great Britain and Ireland who are thus afflicted. Dr. Burrows, to whom I have frequently alluded, and whose authority is quoted by all modern writers on the subject, calculated that in six-sevenths of the whole of the patients under his charge the cause was traceable to hereditary disposition. Much of this is attributable to intermarriage, especially in the highest circle of society, where corresponding rank is a principal incentive to that state; and it is distressing to observe how the young of both sexes will rush to the embrace of their wealthy and aristocratic admirers, if a coronet but form the crest, though insanity and scrofula may be the supporters to their arms! Should the families of *both* sides be liable to insanity, the probability of this sad heir-loom is, *à fortiori*, doubled, and the manifestation of the disease will probably be doubled also in the offspring of persons

> "———— mox daturos
> Progeniem vitiosiorem."

Yet, though Insanity is ever on the increase,

for reasons just stated, it is equally true and satisfactory to feel that, since it has become the subject of deeper study and closer observation, our knowledge of the treatment and general management of its victims is much enlightened and improved. An erroneous idea once prevailed that it was commonly incurable; and the melancholy subjects of this infirmity were shut up in dungeons and dark cells, and subjected to coercion and cruelties on which it is painful to reflect. "Cribb'd, cabin'd, and confined," no effort was made to restore their intellect, or contribute to their comfort. They passed their gloomy days and wretched nights, year after year, in straw and darkness, till death in mercy came to liberate them from a state of utter hopelessness and unremitting suffering. No commissioners visited them — no friends were permitted to approach them—and the melancholy all that awaited the poor wretches who were consigned to such infamous Bastilles was

"Lasciate ogni speranza, voi ch' entrate!"

Thanks, however, to the enlarged philanthrophy and enlightened aggrandizements of medical science of the present day, this national disgrace is swept away; and the statistics of insanity clearly show that a very large proportion of the insane are now restored to the light of reason, and to the use of all their faculties. Dr. Prichard states that, in *recent* cases, the proportion was 7 out of 8 in the York Retreat. The different forms of the disease are now more deeply studied; their causes ascertained; their differing character met with appropriate medical and moral treatment; and society is enriched by the resuscitation of many a valuable member that had else been for ever lost to it. So amenable, in fact, is it now considered to proper management, that were it possible to obtain an exact comparison of the number of recoveries from other diseases with those of insanity, more would be found to recover from this than from most others. *Early* treatment is, however, so indispensable to rapid recovery, that, were the same prompt attention given to insanity that is generally given to other diseases, still happier results might ensue; but the invasion of mental derangement is often so insidious, and the relatives are so disinclined either to admit its existence, or to reveal it to any one, that the affliction is neglected till its real character becomes unquestionable. But why? as Horace says,

"——————————— Nam *cur*
Quæ lædunt oculum festinas demere; si quid
Est *animum*, differs curandi tempus in annum?"

Such, however, is the case;—and the malady, becoming more confirmed by duration, is proportionally more difficult of cure. In estimating the Prognosis, it will be necessary to review the particular species, the predisposing or exciting causes, the simple or the complicated character, the age, sex, and constitution of the patient, as well as the duration of the disease—for the curability mainly, as I say, depends upon these circumstances. I gave a summary of them at the close of my last lecture, in accordance with the observation and experience of others as well as with mine own; and the complexion of the malady is now so well understood, that the classification of curable and incurable patients is readily made in every asylum. The cure, however, is not always either permanent

or complete. Relapses and recurrences are ever to be apprehended, and each relapse increases the tendency in proportion to the inherent liabilities of the person, or the excitement of the occasional cause. Sometimes recurrences appear to be periodical or intermittent, and I know one case in which the person so afflicted was so aware of the approaching visitation that he always presented himself for admission at a private asylum before each crisis arrived, and requested to be taken care of! The difference between a Relapse and a Recurrence is that, in the former, the symptoms can hardly be said to have entirely disappeared ere they present themselves afresh: in the latter, the restoration to sanity has been complete. The return in both cases generally arises from exposure to what originally induced it, be the cause what it may, and is ushered in by the same symptoms that first indicated its existence. The longer and the more complete the recovery, the less is the liability to a recurrence, and as the frequency of recurrence or relapse arises mostly from premature discharge, patients should be considered exempt from every indication some time before their *Exeat* is signed. Recovery from mania is mostly gradual—a mitigation of the intense symptoms becomes observable, with occasional lucid intervals. Sometimes it is sudden. I gave an instance of it in my last lecture from the abrupt and sudden intimation of a parent's death: but this is not common. The removal of patients from their own home, and from the circle of their own family, will frequently produce a rapid and strong impression on the malady. The new scene, and the attendance of strangers on patients, awaken the inward inquiry into their situation and position; and the raving state which had hitherto prevailed will lapse at once into a state of tranquillity and silence—"a consummation devoutly to be wished." Where, indeed, the excitement is inordinate, seclusion and confinement become indispensable. By seclusion, I mean simply the removal from noise, or any other excitement, to a quiet apartment, till this turbulent manifestation has subsided; and at the Asylum at Hanwell we find that there are apartments on purpose, the walls of which are all padded, and the floor protected by bedding, so that all possibility of a patient injuring himself is entirely obviated, whilst the irritation of coercion is at the same time avoided. These *derniers ressorts* are, of course, only in extreme cases.

It appears extraordinary that an organ like the Brain, endowed as it is with all the phenomena which regulate existence, and which is so indispensable to life that even the slightest pressure on it simulates death, and annihilates all power both of mental and bodily action, *can* be so utterly disordered as to require incarceration year after year; and that, notwithstanding the privation of its principal functions, life should be protracted in so many instances to so late a period as maniacs attain,—that its intellectual office, in other words, should be totally suspended, and its physical continue unaffected! Yet so it is in some few instances, as the census of the continental asylums, as well as those of this country, can prove. In the comparatively few cases in which longevity occurs, the solution of the problem must be in the strength of the constitution, the absence of any mental anxiety or feeling, and the regularity of life; nor must we omit the care and atten-

tion paid to the health of the inmates of an asylum. Dr. Kitchener used to say that "Glass will last as long as iron if you take care of it;" and perhaps nothing conduces more to longevity in ourselves (I speak on the presumption of our *not* being insane!) than regularity in our regimen as well as in our diet. The average mortality I believe to be about 1 in 4, and those who feel an interest in the subject have only to inspect the registry of different asylums and make the calculation: suffice it to say that, in the aggregate (though there are many exceptions), the mortality of the insane very far exceeds that of an opposite condition, independently of the many fatal complications to which insanity is liable. Of these, by far the most frequent are Apoplexy and Epilepsy, and their concomitants, Paralysis and Convulsion; and these constitute, moreover, the principal fatal terminations. Very many sink from exhaustion, or, as Dr. Henry Monro terms it, "depression of vitality," accompanied sometimes by a general serous effusion and infiltration—the vital energy is exhausted, and the flame goes out because there is no more oil in the lamp. This is especially the case in Melancholia, and also where Mania has degenerated into dementia and idiocy; and inasmuch as insanity is a disease based on debility, such a termination may naturally be apprehended, especially where it has become chronic. In incipient or acute cases there is gradually more or less inflammatory action, with a vascular condition of the brain or its membranes; but then it is of so asthenic a character as not to sanction Depletion in its general acceptation. A few leeches to the head may relieve, and very often do relieve, and the same favourable result is derived from cupping, but the lancet is very seldom admissible, even in raving cases, and is now scarcely ever used. In puerperal cases, or in delirium tremens, we may almost pronounce it fatal, and a discrimination must always be made between inflammation and irritation. The latter state is that which mostly obtains in insanity, and universally in the forms which I have just mentioned. If blood be abstracted, it very rarely exhibits a buffy coat; and what alteration may be observable occasionally is rather to be explained on the ground of that violent exertion and mental excitement which Hunter affirmed would alter more or less its properties. I attended a case of violent mania not long since, in which blood had been copiously taken by the lancet, and the arm had bled afresh after the surgeon had left the house. I found the patient bathed in profuse perspiration, violent as ever, and restrained by a straight waistcoat;—next day he sank and expired. A post-mortem examination was refused. But in very recent cases (and this was only of three days' duration) it frequently happens that no disease of structure can be detected. In no class of diseases is this more frequently the case than in those of the nervous system. The structure of the brain and nerves is so extremely delicate, and there is something so subtile in their mode of action, that considerable disturbance often arises in their functions without our being able to detect a corresponding physical cause. Many of their disorders are consequently termed *functional*, as we cannot demonstrate to any certainty on what species of diseased structure the various forms of insanity depend. The dura mater, except in cases of violent injury, is comparatively little affected.

In Arachnitis we have generally a complete suspension of the mental faculties, and symptoms which progress from disordered intellect to that of complete destruction of it. There is also coma, accompanied with convulsion,—and subsultus. In the *chronic* form, first described by Bayle, the leading character of the attendant delirium is a "heightening and exaggeration of all the ideas." But this state of phrensy gradually subsides into mental alienation, impeded articulation, &c., running on to progressive paralysis both of body and mind. The French pathologists inform us that delirium is more to be expected where the superficial part of the membrane, on the convexity of the brain, is inflamed; but that Coma, Trismus, and Convulsive affections, indicate the Basilary portion to be the seat of disease. The membrane sometimes exhibits *patches* of inflammation; at others the inflammation is more extensively *diffused*, attended with opacity and thickening, and with *adhesion*, consequent on the deposition of albumen or lymph: and it is to the affection of the membranes rather than to that of the brain itself that Bayle, in his "Maladies du Cerveau," attributes insanity, and conceives that the subsequent effusion of serum is (by its pressure on the substance of the brain) the cause of the paralysis and dementia in which it so often terminates. The Pia mater is subject to the same indications of disease as the Tunica arachnoidea; and with these acknowledged evidences of membranous inflammation it appears strange that copious depletion should not be found advisable,—but so it is. Then, again, there is great expenditure of the nervous energy where the brain (from whence all nervous energy proceeds) is thus seriously excited; and this, in my humble opinion, is a main reason why depletion cannot be borne,—why sudden prostration is likely to succeed,—and why death follows fast upon it. Depletion may, and very often does, induce a temporary mitigation of all that tension, throbbing, and other sensations of plethora, which accompany early and acute mania; and those who are comparatively little experienced in such causes are induced to repeat the bleeding, should the Vis vitæ and Vis nervosa be not knocked down by the first bleeding. In inflammation of the pleura, or peritoneum, or other serous membranes, our mainstay is the lancet, and the loss of blood at times necessary to rescue the patient from the grave is scarcely credible. In the MEDICAL GAZETTE of March 1828, I published a successful case of pleuritis under my care, illustrative of such active treatment, in which one hundred and sixty ounces of blood were taken in five days. Dr. Blundell has also recorded two successful and similar cases, in which a gallon and a half of blood were abstracted in the same short period.

In reports of the Ardent Fever (the Καυσος of Aretæus) of the West Indies, Mr. Comrie, a Naval surgeon, says,—"In the course of three or four days above two hundred and fifty ounces have been taken away, and always with success when timely application was made." Here, however, there is no exhaustion of nervous power; the inflammation is confined to a membrane remote from the brain, and unconnected with it; and depletion must be carried on till that inflammation is subdued. The physician must, therefore, use his own judgment in the treatment, taking care not to confound

arachnitis, as an idiopathic affection unconnected with mental aberration, with the delirium ferox of insanity, and the supervention of inflammation on it. What I particularly mean to express is, that although post-mortem appearances in Mania frequently give undeniable evidence of inflammation having existed, and although early depletion may be, and is, necessary to a certain extent (especially where the subjects are young and plethoric, the invasion of the attack sudden and acute, attended with strong arterial action, heat of scalp, contracted pupil, and intolerance of light and sound, &c.), the greatest care should be taken not to exhaust nervous energy to such an extent as to endanger the attack's degenerating into irreparable dementia. Pinel was so apprehensive of this result, and so awake to the deceptive character of vascular plethora in the brain, that he opposed bleeding most strenuously, as tending to retard recovery, and even to render recovery doubtful. Esquirol partly coincides in this opinion, but relied more on leeches occasionally; Dr. Rush was particularly blood-thirsty; and Dr. Haslam placed much reliance on it, but not to the extent recommended by Dr. Rush. Dr. Prichard believed the cases to be very few which would yield to large depletion, and considered that the existence of the patient would be much endangered by it. Dr. Burrows (who, following the example and trusting to the experience of others, tried depletion for several years) admits that he discovered his error, and became so cautious in advising it that he scarcely ordered venesection in six cases of mania or melancholia in the same number of years; and that since he changed his practice the cases had been less intractable and less tedious, for he remarked how suddenly the strength of lunatics gave way on general bleeding!

It sums up (as I said before) in this,—that the physician must exercise his own good judgment on this most knotty point in practice (not only in this but in every case, viz. the propriety or impropriety of bleeding), and prescribe in accordance with it. Suffice it to add, that Dr. Monro, Dr. Conolly, and other eminent physicians of the present day, who have devoted themselves to cases of insanity, deprecate the lancet altogether.

With respect to the substance of the brain, the leading alterations in its structure consist principally of increased firmness of consistence, or of the opposite condition, termed Ramollissement, or softening; and some pathologists are of opinion that either condition may terminate in its opposite. Both are the result of inflammation. Paralysis is the common result of Ramollissement, and when these are combined it is needless to observe how utterly hopeless the case must be.

Lesion of the Cortical substance appears to be mostly connected with the intellectual functions, and disorganization of the Medullary to affect more the motor powers; but disorganization of cerebral substance may exist to a considerable extent without any manifestation of it during life, and large quantities of the brain have come away after severe fractures of the cranium without any deterioration of the intellect. Instances of this are recorded in the Edinb. Med. and Surg. Journ., and I have heard also of a boy, who, on a portion of the brain coming

away through a fissure in the skull, consequent on violent injury, coolly requested that it might be sent to his schoolmaster, in refutation of the schoolmaster having often told him "that *he had no brains*,"—a point in which they were quite at variance! In a word, great difficulty, uncertainty, and difference of opinion, exist on the physiology and pathology of this important organ, notwithstanding the results of dissection and all the researches that have been made: and more experience is yet necessary, and more study must yet be devoted to it, ere we can decide positively on the contingencies of function and lesion of this empire of reason and the soul! The only method (the late Dr. Baillie told me) of advancing medical science, is to compare the appearances after death with the symptoms that manifested themselves during life, wherever and whenever an opportunity presents. But public Hospitals and Institutions are the only places in which anatomical investigations can be efficiently made. In private practice it is always unpleasant to make such a proposal, and, when made, the chances are much against its being granted. I can only say, with respect to myself, I have been so discouraged by reiterated refusals that I now very seldom solicit it. Only it is distressing to think how many a valuable specimen of disease which would have been a most desirable acquisition to our Museum, and which might materially assist the advancement of pathology and science, is, through false feeling, consigned to subterraneous decomposition.

Leaving, therefore, any further discussion of the pathological condition of the encephalon, I will merely allude to the visible and outward aspect of the chronic lunatic. Here the hair is generally dry and stubbed, sometimes neglected, long, ragged, and matted; the skin greasy, cadaverous, sallow, with (in many subjects) a papulated variegation resembling acne; sometimes it is dry and harsh, as though there were little or none of that secretion of insensible perspiration which we find in health and youth. There is, in short, a general want of tone in the skin, as well as in the whole constitution; the clear transparency is ill exchanged for a muddy aspect, and the whole appearance of the patient becomes so aged and altered, that, if ever Beauty reigned, scarce a vestige will be discoverable. And yet that fell disease, that fatal scourge of Europe, so linked with Beauty as to carry off more than half her offspring (Phthisis), is one of the most fatal diseases consequent on insanity. Most lunatics become emaciated; for, ravenous in most instances as is their appetite, the process of nutrition lingers, at least in a large majority, and tubercular cachexia frequently supervenes, or they become atrophied, without the usually prominent features of phthisis. This is, however, by no means universal; for corpulence may be observed here and there in most asylums, and if it were true (which *I* beg leave to deny) that "Fat paunches have lean pates," we might expect a much larger number of them amongst the insane—nay, Bedlam would be crammed with little else! Others die of exhaustion, induced by long-continued excitement, want of sleep, and that smouldering fire of adynamic fever which gradually consumes its fragile tenement. This latter condition is often leagued with a chronic inflammatory state of the mucous membrane of the stomach and bowels,—that subacute "gastro-enterite"

on which some authors seem to imagine insanity to be mainly dependent; for, although constipation is a common event in insanity, yet an opposite condition of a dysenteric character will frequently be found to prevail, terminating now and then in colliquative diarrhœa, and death. Without, however, concurring in so fanciful a theory as that insanity is a quasi-reflex action from the abdominal viscera, it has been shown by the statistics of upwards of one thousand fatal cases in France, that, next to diseases of the brain and its membranes, more deaths were assigned to diseases of the abdominal viscera than to any other cause; and, next to them, to diseases of the heart and lungs. The rate of mortality is greater in men than in women. All these numerical results, however, are uncertain, and of course vary with different contingent circumstances in different asylums.

The allusion to these different diseases to which lunatics are liable, and to which they mostly succumb, naturally awakens our attention to the treatment of them. But the medical treatment of these unfortunate beings is principally comprised in the treatment of the several diseases with which they may be visited; for we have no *antimaniacal* drugs—no Pharmacopœia *Lunatica*. Their diseases must be met much in the same way as the same diseases are met and treated where reason is undisturbed; and the hellebore with which Melampus was said to have cured the daughters of Proteus may be classed in efficiency for the *cure* of *mania* with the pills that were sold to prevent earthquakes! Courses of different medicines, such as mercury, emetics, nauseants, cathartics, narcotics, counter-irritants, tonics, &c, have all been tried, and each of them in turn may have been occasionally attended by the best effects, and by recoveries; and (to be brief) where certain symptoms have shown themselves calling for specific medicines, they have (as might be expected) fulfilled the object of their exhibition. Tonics are undoubtedly much required and much used (as may be imagined where debility is so common), and perhaps *more* than any other class of medicines. Medicines of all kinds are equally necessary, according to circumstances, for the insane as well as for the sane. Nevertheless, there is no *Panacea* in either case! Many cases of insanity present no corporeal disease, though many others are so involved in, or based on it, that they are amenable to cure, in which cases "Sublatâ causâ, tollitur effectus." Hence, a ward in a public lunatic asylum may require as much medicine, and as much variety of treatment, as the patients in a hospital. In fact, they require double care; for the mind is diseased as well as the body, and must be equally ministered to. "No one," as Dr. Davey observes, "can be expected to succeed in the treatment of mental diseases, who fails to regard the brain as the organ of the mind." Again: "As regards the strictly medical treatment of the insane, those general principles of science, physiological and pathological, must invariably direct the practitioner, which he is in the habit of recognizing when engaged in the management of all other diseases, and of every kind of injury; and without great and unremitting attention to the various subjects of diet, ventilation, occupation, amusement, classification, &c., the physician will find all his labour in vain. To these all-important auxiliaries we are indebted more particu-

larly for the successful result of the grand experiment made at Hanwell by Dr. John Conolly, viz. the entire abolition of all kinds of restraint in the management and cure of the lunatic, and the adoption of the humane plan of treatment,—a fact this, than which none other appertaining to medical history is more deserving the gratitude of the philanthropist and the esteem of all lovers of science; and one, moreover, not only well calculated, but destined to give to the name of Conolly a niche in the Temple of Fame by the side of those of Oberlin, Fry, Montague, and Clarkson." I cannot quote this merited compliment to Dr. Conolly, from the work of his former colleague at Hanwell, Dr. Davey, without expressing my unfeigned pleasure in knowing that Lord Ashley (now Earl of Shaftesbury), whose name and exertions in the cause of Philanthropy stand out in such transcendantly bold relief in the present day, has most successfully set on foot and carried out the means of presenting Dr. Conolly with a substantial testimonial of the high appreciation in which he is held by his medical brethren and others for the science he has displayed, as well as the humanity which he has evinced, in the care and management of the insane.

It is remarkable how healthy the insane are. In a visit which I made last week to the Asylum at Hanwell, in company with Dr. Conolly, I was astonished to find scarcely an invalid amongst nearly one thousand patients, — certainly not half a dozen requiring medical treatment for bodily disease. I have observed the same immunity in the Asylums in Essex. Much of this exemption of disease is attributable to the cleanliness, ventilation, regulated temperature, exercise in the open air, regularity of diet and living, and all those known rules and regulations which act as prophylactics generally.

In going round Bethlehem Hospital with Dr. Monro, only yesterday, there was scarcely a patient who had occasion for his professional advice for any bodily disease. There was what sailors call a "clean bill of health" amongst about four hundred of the *detenus*, and the ventilation, cleanliness, and regularity, were striking features of the institution.

The grand principle of modern and improved treatment is to avoid even the appearance of unnecessary restraint, as well as restraint itself; and to treat the insane with a confidence which will almost invariably excite their secret but proudest endeavours to preserve and retain. There is a secret power which holds the helm and guides it more effectually in its controlling and moral influence than the rude restraints applied to the bones and muscles of the human frame. There is no influence so powerful as the sphere of a *moral* influence. Put the padlock on the mind! The *Lock* on the *Human Understanding!* One of the wildest and most violent patients at this time in the Asylum at High Beech is on his *Parole;* and although he is most anxious to be set at liberty, and continually appeals for it on every occasion of my visiting that asylum, and could at any hour walk into Epping Forest and escape in any direction, no inducement can tempt him to open the latch gate which bounds the garden in which he daily walks. "*La Liberté nous rend fidèles.*" The reliance placed on his sense of honour

has awakened a proper pride within him, and strongly illustrates the good effect of moral treatment. "There is a stage" (says Dr. Gooch) "approaching convalescence, in which the bodily disease is loosening its hold over the mental faculties, and in which the latter are capable of being drawn out of the former by judicious appeals to the mind." It is when the icy fetters in which reason has been enchained begin to thaw beneath the genial ray of moral influence, that the prospect and the hope of recovery beam forth. Kindness of manner,—appeals to their sense and sensibility,—cheering promises of cure and liberation,—and dealing with their reason as though she had not been shaken from her seat, soon give the medical superintendent a valuable ascendancy over patients, and materially tend to disperse the thick cloud of delusion in which their intellect had hitherto been enveloped. It obtains their confidence and conciliates their esteem. They look upon their manager as a minister of "balm to their hurt minds," instead of a tyrant and a despot. This feeling was extensively demonstrated during my visit to the different wards with Dr. Conolly last Saturday. Their subservience and affection seemed equal; but

"If e'er it chanc'd, as sometimes chance it must,
That one among so many overleap'd
The limits of control, his gentle eye
Grew stern,"—

and they were instantly subdued. They are brought to consider themselves as visitors instead of prisoners, and to feel that when their minds, which had been in an unsettled state, shall have recovered their serenity, they will return to their business and their friends. In the interim, their attention is engaged, and their time pleasantly and advantageously passed in occupations connected with trade, or in diversified innocent amusements, both in doors and out, according to their fancy and inclination. It is a signal error to suppose that the insane are to be treated as if they were wholly irrational, for they are not so: very many of them are accessible to reason—at all events, and in all cases, they should be treated as if they were; and (if capable of being reasoned with) a well-directed reply will sometimes remove a false impression from a patient's mind. A lunatic, under the care of the late Dr. Allen, imagined himself to be Jesus Christ, and, in proof of it, showed him a scar he had in his side, which, he said, had been occasioned by his having been pierced with a spear. Dr. Allen, remonstrating with him, remarked that our Saviour was wounded on the opposite side. Ashamed apparently at the fallacy of his own reasoning, he hid himself under the bed-clothes, and never again reverted to the impression.—But, to return to the subject of reposing confidence in patients. Nothing but absolute necessity should justify absolute restraint. It only exasperates the furious, and renders the suicide more determined to effect his purpose. The faults of lunatics, like those of children, should be viewed with pity, for they are the ebullition of feeling without understanding. We must visit them lightly, blending firmness with kindness, and tempering our reproof with moderation and prudence, like the

"Father!—whose authority in shew,
When most severe, and mustering all its force,
Was but the graver countenance of love!
Whose favour, like the clouds of spring, might lower,
And utter now and then an awful voice,
Yet had a blessing in its darkest frown,
Threatening at once, and nourishing the plant!"

As soon as their convalescence renders them capable of estimating kindness, they will much more readily submit, and, even in the height of their most furious paroxysms, it is astonishing how much may often be done by liberality and gentleness. This may be extended or curtailed, according to their conduct; making them sensible of greater indulgence in proportion to their exercise of *Self-control*—a virtue and a duty which should be inculcated and impressed on them in every possible way. I will give one instance, and only one, to show the advantage of liberality combined with the precept of teaching this important duty.

Some years ago, a man, about 34 years of age, of almost Herculean size and figure, and very violent, was brought to the York Retreat. He had been often afflicted; and so constantly, during the present attack, had he been kept chained, and so fearful were those who had the charge of him of his violence and his strength, that his clothes were contrived to be taken off and put on by means of strings, without removing his manacles. They were, however, taken off when he entered the Retreat, and he was ushered into the apartment where the superintendents were sitting at supper. He was calm; his attention appeared to be arrested by his new position. He was desired to join in the repast, during which he behaved with tolerable propriety. After it was concluded, the superintendent conducted him to his apartment, and told him the circumstances on which his treatment would depend,—that it was his anxious wish to make every inmate as comfortable as possible, and that he sincerely hoped the patient's conduct would render it unnecessary to subject him to coercion. The maniac was sensible of the kindness of his treatment. He promised to restrain himself, and he so completely succeeded, that, during his stay, no coercive means were ever employed towards him. He was frequently very vociferous, and threatened his attendants, who, in their defence, were very desirous of restraining him by the jacket. The superintendent on these occasions went to his apartment, and though the first sight of him seemed rather to increase the irritation, yet, after sitting some time quietly beside him, the violent excitement subsided, and he would listen with attention to the persuasions and arguments of his friendly visitor. After such conversations, the patient was generally better for some days or a week, and in about four months he was discharged perfectly recovered!

Can it be doubted that, in this case, th disease had been greatly exasperated by the mode of management? or that the subsequent kind of treatment greatly tended to promote his recovery? Surely the case requires no comment.

In descanting on the general nature of insanity, I have hitherto confined myself to those forms which principally come under our notice.

"*Proxima* deinde tenent mœsti loca, qui sibi mortem
Insontes peperere manu—lucemque perosi
Projecere animas!"

And as this is a class of patients whose melancholy exit implants a never-dying horror of the disease, vibrating remotely on surviving relatives and friends, I cannot quit my subject without a few passing remarks on so distressing, but, alas! so common an attendant. Amongst the Greeks,

or still more amongst the Romans, Suicide was, under certain circumstances, not held in horror, but in high estimation, and was preferred to slavery or subjection, or the epithet of "nobile" would never have been added to the "lethum Catonis."

In France, it is comparatively little thought of, and though the English are often stigmatized with the propensity, it is far more rife with our Gallic neighbours than with us. The instances and the promoting causes are many and various, and occasionally the deed is done without any apparent incentive. The emotions consequent on a reverse of fortune may perhaps be considered as the principal; nor, when we admit that even the groundless apprehension of it operates as a fearful cause of, and presents a not uncommon feature in the malady before us, can we wonder at the result of the saddening reality. It springs alike from sudden impulse and from long premeditation. It occurs during delirium and mania, and follows on the depression and anxiety respecting futurity in cases of melancholia. Strange as it may seem, such persons who are goaded to madness by the delusive anticipation of pain and hell, rush into its very jaws by the perpetration of a crime which we are taught would subject them to the eternal punishment they dread! It reminds us of the desperation pourtrayed by Byron in a shipwreck.

"Then rose from sea to sky the wild farewell,
Then shriek'd the timid, and stood still the brave,
And some leap'd overboard with furious yell,
As eager to *anticipate* their grave!"

Some seek it simply as a termination of *ennui*, of satiety of life and of the exhaustion of all its pleasures; some from remorse and self-reproach, from chagrin and disappointment, from blasted prospects and from blighted hopes,

"glad to be hurled
Anywhere—anywhere out of the world,"—

and owing to an impression that the act is almost *inseparable* from insanity, a verdict to that effect is mostly recorded. Could this sudden impetus have been foreseen, or this matured determination been discovered, there is no doubt that it might often have been prevented. A brisk cathartic, or a soothing anodyne, or a calm interposition of consolation or remonstrance, might have at once dispelled the visionary horror which prevailed over their clouded reason; but (as I observed in my preceding lecture) the impulse comes upon them in the stillness of night, when the victim first awakens to a magnified view of his unhappy condition, and when solitude favours the perpetration. The dread of poverty or fear of future damnation is incompatible with life, and drives them on to a madness which no influence of principle can restrain—no regard to consequences can withhold. Occasionally it has resulted from a sort of fascination. Such persons are unable to look down from an eminence or a precipice without an impulse to throw themselves from the top it; they have been known to request that razors may be taken from their possession, so distressing was the desire to avail themselves of the opportunity or the instrument; and the Monument has now been railed in, to preclude the possibility of such an unaccountable propensity, for

it can arise from no process of reasoning. It may be partly physical, affecting the circulation of the brain, which is a reasonable deduction from the accompanying vertigo; or it may arise from a peculiarly high susceptibility, with extreme weakness of the nervous system. Thus we find sudden precipitation occur in nervous fevers and in Delirium tremens. Most frequently, some form of partial insanity is the principal or concurring cause.

In many instances of suicide the influence of hereditary predisposition is fully established. Dr. Gall asserted that he observed it in several successive generations, and M. Falret considers it to be more intimately dependent on hereditary predisposition than any other form of insanity, especially in cases of melancholia. The seasons are by many supposed to operate, or at least to exercise a partial influence; and the gloomy month of November has had this imputation cast upon it. The Census, however, leans to the warmer months, and the instances are found to predominate when the thermometer ranges above 70°. A warm and moist atmosphere is found to depress the energies of the nervous system, connected possibly with the condition of electricity in the air, and depressing the spirits; but these are very insignificant reasons for such an impulse, and we must tax those to which I have already alluded. That the deed is not by any means confined to persons of weak mind is extensively proved when we reflect on those who have committed it; on the contrary, it may be easily traced in such cases to vascular plethora in an organ which has been overstrained in its intellectual occupation; engaged most deeply and responsibly in political and financial measures, in the management of public business or negotiations, by which the equilibrium of the circulation has been disturbed; inducing nervousness, headache, irritability, and other manifestations almost amounting to delirium. In cases such as this, an appropriate medical treatment, with rest both of body and mind, would most probably prevent such a contingency; and it is the duty of relations to watch the manifestation of those changes in the feelings and disposition which may often be observable, and which generally precede the act. Common sense will point out the means to be adopted; and the usual derivatives from the brain, such as local abstraction of blood, cooling saline purgatives, cold water, or evaporating lotions to the head, pediluvia, exercise in the open air, and in some cases (that is to say, where the brain may suffer from *want* of tone) the judicious exhibition of morphia or henbane, should be resorted to, in addition to rest from those labours, or removal (where practicable) of those causes to which the phenomena may be referable or referred.

Where innate and connate idiocy has, from its hopelessness, no further demand on those who are blessed with reason than their mere commiseration, or their Samaritan care, I have nothing to offer beyond the blended breathings of my sympathy with others. In this state, the moral, the intellectual, and the reflecting manifestations are in some nearly, in others entirely, deficient; in some, the instinctive emotions are apparently unfelt or undeveloped—they form the humiliating link of human with animal creation, evincing nothing but brutal propensities and uncontrolled desires—they are rachitic or scro-

fulous, epileptic or paralytic — and their melancholy state is consequent on unalterable physical disorganization. Their faces and features are as destitute of expression as though their respiratory nerves were absent or destroyed; their mouths are gaping and perpetually drivelling, and they, to all appearance, are dead to all perception, emotion, or ideas. Lord Carlisle has very recently, however, in a public meeting convened for erecting a hospital for idiots, depicted their condition in language so replete with an eloquence which my humble ability would in vain attempt, that, inasmuch as it is too appropriate to require any apology for introducing it, and too illustrative of the subject to sanction its omission, I will proceed to quote it:—

"Yet, upon reflection, few descriptions of persons can be conceived more entitled to our generous sympathy and our active assistance. Without being invested with the more solemn and picturesque drapery of tragic dignity, they are exposed, perhaps, beyond all others, to the cold neglect, the coarse jibes, the brutal merriment of a callous and unfeeling world; they are the butt and scarecrow of the village green, often the drudge sent out from the domestic hearth. Take it that they meet with no ill-treatment—that no aggravation of cruelty or scorn embitters their hard lot—nay, that family decencies and family affections gather round them, guide their path, and smooth their pillow: yet what a life of negatives is theirs at best! Nature spreads in vain her witchery of hues, her golden sunsets, and her starry firmaments! To their untutored ears music has no melody; to their stagnant minds literature, and science, and art, and the sacred Muse, utter no varied voice! To their turgid souls devotion points no God! Too often, though dead to pleasure and to virtue, they exercise powers of mischief and annoyance, and though we must believe and hope they are without the responsibilities of crime, they yet incur all its degradation.

"The instantaneous cure, the entire change of the possessed mind, were only the work of Him whose voice the Dæmons heard, and at once came out." "But" (he continues) "there is reason to believe that much may be done—that positive advances may be made—that, by judiciously administering to the requirements both of the physical and moral organization (intimately connected and interlaced as they frequently are with each other), orderly habits, steady employment, rational tastes, kindly feelings, just sensibilities of the affections and the conscience, the sense of right and wrong, the fear and love of God, may be introduced and fostered, and developed into all their multiplied and goodly results; so that, in fact, in the best instances, the idiot may be converted into a decent and creditable member of society; in the *worst*, his existence may be surrounded with an atmosphere of comfort and of tenderness."

But enough! I hope that I have advanced sufficient to give a general outline of my views of insanity, and an abstract of the proper management of its subjects; and more than this is scarcely to be expected in the narrow limits of time assigned to a Lumleian lecture. I have dwelt rather on those divisions of it which are more susceptible of cure, than on the lamentable conditions in which this

happy termination is either far less, or hitherto altogether beyond the reach of medicine or management. Would that the third division (by which I mean dementia, fatuity, and idiocy), were equally under our control! Where, however, it has supervened on that disorganization which is incompatible with reason and intellectual function, be it from age, or be it from disease, I fear that little must be expected, and that little can be done. Let us hope, nevertheless, that these cheering anticipations may ultimately be realised; that the general diffusion of sentiments so strong, clothed as they are in the drapery of so much eloquence and so much beauty, may be the means of extending the blessing of recovery to those who may at present be considered beyond its pale. Would that I had the capability of enhancing such a blessing either in person or in purse. *I* can add nothing to language so powerful and so refined. *I* have not the matter which can contribute more to what little is already known in cases of such a character; neither have I the talent or ability which can justify my trespassing at greater length on your time and your attention. I thank you most cordially for the patience which you have manifested in listening to what I have offered during the lectures which I have had the honour of delivering: and as this is (as I premised) my maiden appearance in the character of a lecturer, I must rely on your kindness to excuse the myriad imperfections in which I grieve to acknowledge they abound.

THE END.

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