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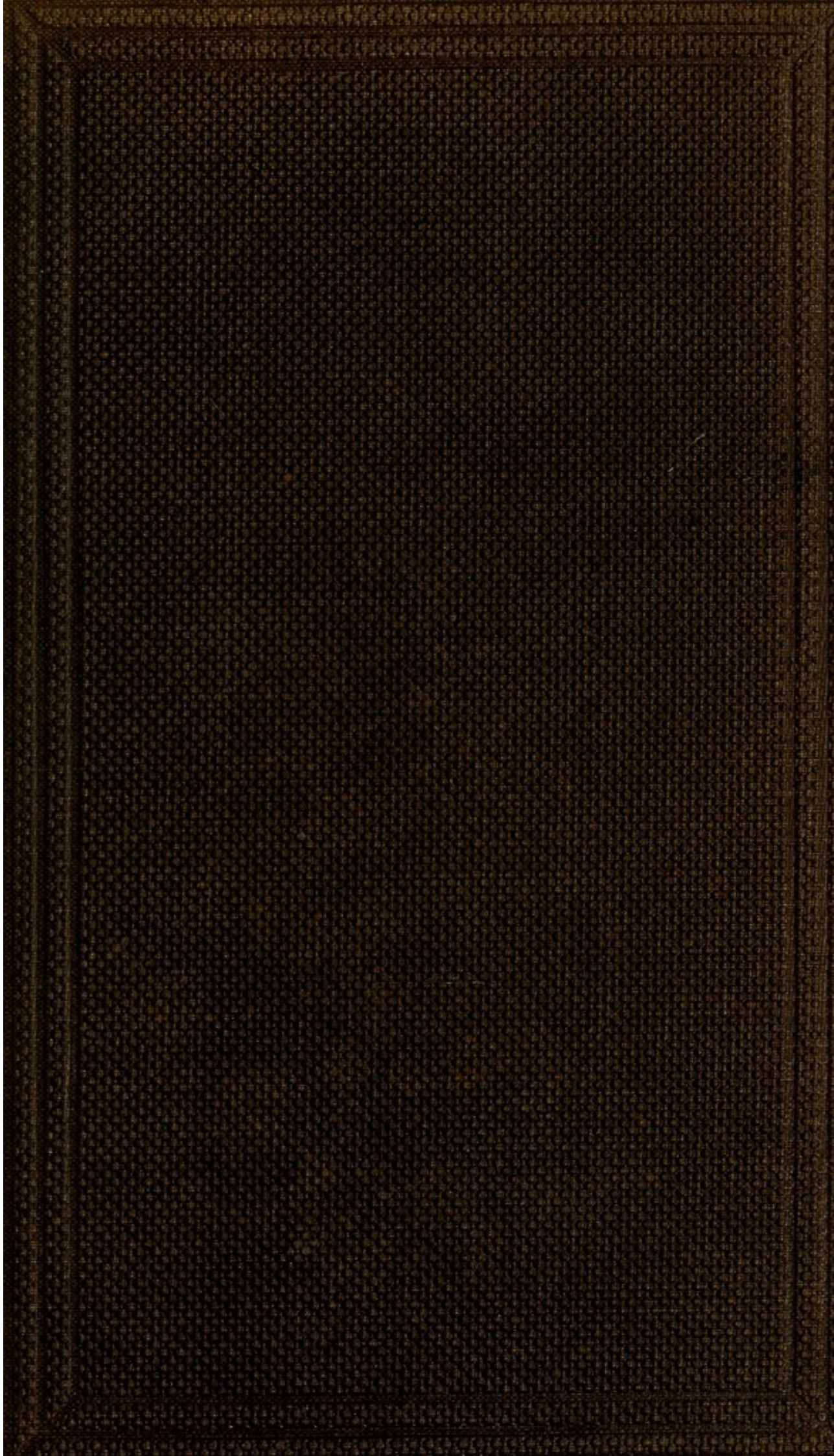
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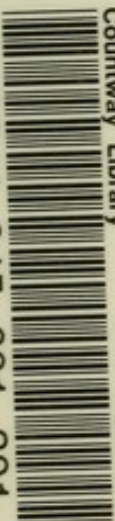
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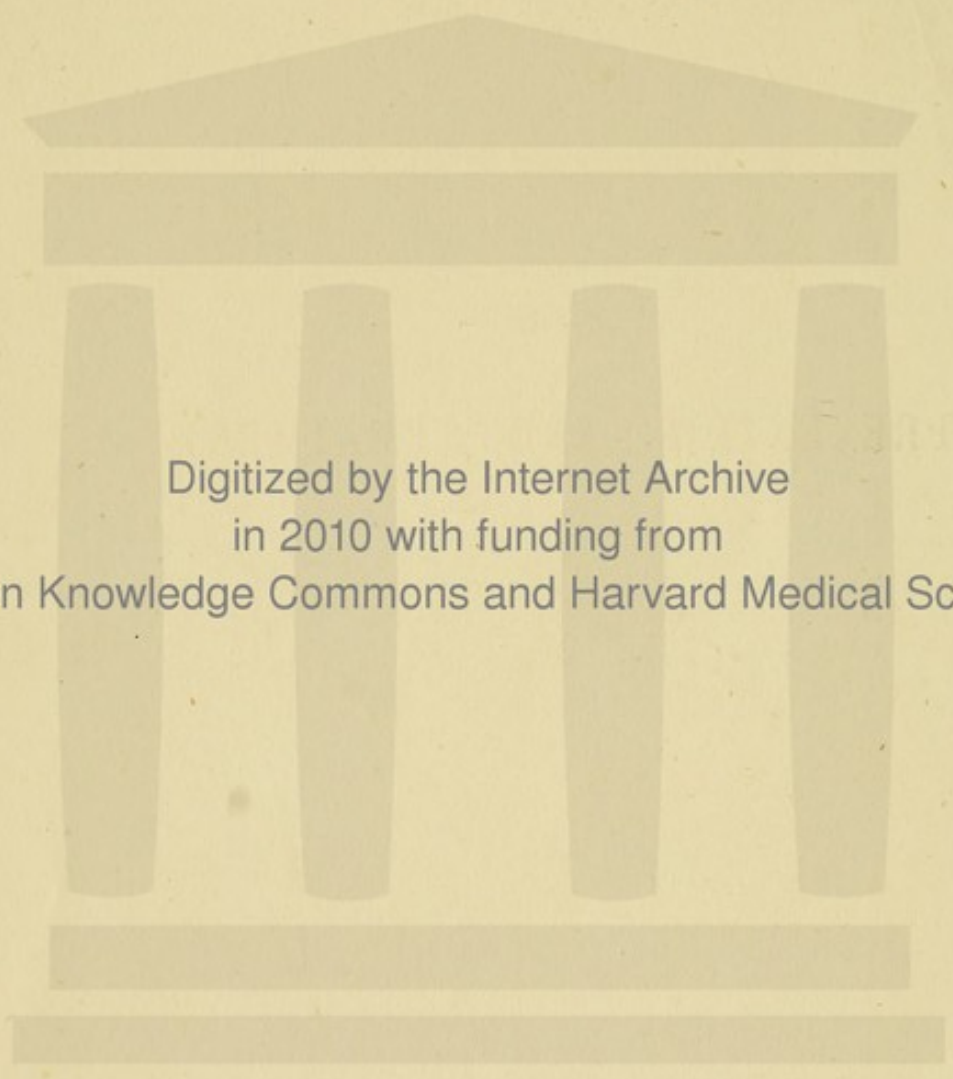


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ON THE
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OF
MENTAL DISORDERS.

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ON THE
PREVENTION AND TREATMENT
OF
MENTAL DISORDERS.

BY

GEORGE ROBINSON, M.D.

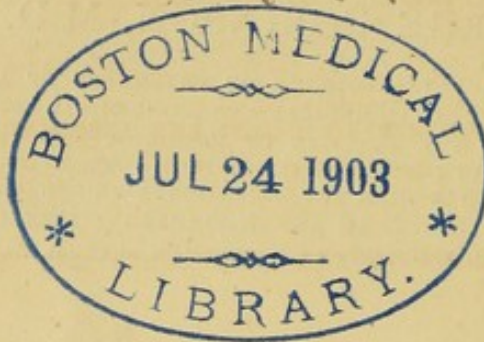
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FELLOW OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY :
JOINT LECTURER ON THE PRACTICE OF MEDICINE, AND LECTURER ON
MENTAL DISEASES, IN THE NEWCASTLE-ON-TYNE COLLEGE OF MEDICINE
IN CONNECTION WITH THE UNIVERSITY OF DURHAM :
PHYSICIAN TO THE NEWCASTLE AND GATESHEAD DISPENSARIES : AND
PHYSICIAN TO, AND PROPRIETOR OF, BENSHAM ASYLUM, GATESHEAD.

Ἀτελες αλογος πραξις και λογος απρακτος.

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PREVENTION AND TREATMENT
OF
MENTAL DISORDERS.

PART I.

INTRODUCTORY CHAPTER.

4
“IN England and Wales alone there are more than 30,000 decidedly insane persons, the annual cost of whose maintenance exceeds 1,000,000*l*. If to this we add the loss of productive labour, the cost of maintaining families thus rendered destitute, the suicidal and criminal acts resulting from insanity, the misery, anxiety, and destruction of domestic happiness which even its minor forms occasion, a mass of suffering will be presented perhaps unequalled by any other source of human affliction. And there is, probably, not a single family in this kingdom which has not, at some period within the memory of its present members, experienced the universality of this evil.

“Unfortunately, too, the proportion of recoveries amongst the inmates of our asylums, notwithstanding

the improvements introduced in the management of the latter, is still so limited as to be incapable of preventing a rapid accumulation of incurable cases in all establishments of long standing. And of the patients discharged as cured, all retain more or less liability to a recurrence of the disorder, and a large proportion are annually readmitted in a worse mental state, as regards the prospect of recovery, than on their first subjection to restraint."— *Thurnam*.

There is, moreover, but too much reason to believe that in England and other highly-civilised countries this class of diseases is rapidly on the increase. After a careful discussion of this important question, the late learned and excellent Dr. Pritchard thus reluctantly intimated his acquiescence in the less favourable view of the subject:—"The period is so recent from which accurate knowledge has been obtained in any country, that we are scarcely authorised in determining that insanity is, or is not, any where an increasing evil; and the reasons pointed out by MM. Pariset and Esquirol in France, and suggested by Halliday and Burrows in this country, explain the apparent increase, or at least prevent our taking the multiplied number of lunatics, and of lunatic establishments, as a full proof that there has been a real augmentation in the numbers of deranged persons. Yet the apparent increase is everywhere so striking, that it leaves on the mind a strong suspicion; and this suspicion, that cases of insanity are far more numerous than formerly, can only be removed by a series of observations that may prove the negative. It is encouraged by the reflection that

the state of society is, in most countries, such as appears likely to multiply the exciting causes of madness."*

It is proper to add, that the Metropolitan Commissioners in Lunacy, in their official reports, express a contrary opinion, and refer the apparently increased number of persons of unsound mind to the circumstance of the greater attention now paid to that class of patients, as well as to their reception in registered houses, instead of being, as it were, concealed in private dwellings. But notwithstanding this eminent authority, an idea similar to that of Dr. Pritchard seems to exist among the majority of persons engaged in the treatment and study of insanity, and the experience of Boards of Guardians and other public bodies having charge of the insane, tends to the same conclusion.† In further confirmation of the same view is the fact, that the large county asylums, erected at an immense cost, are generally filled very soon after their completion, and in some instances, as in Middlesex, they have already been found insufficient for the accommodation of the insane poor of the surrounding districts.

* Treatise on Insanity (p. 350).

† "An official report, just published by the parochial authorities of Marylebone, states that insanity has lately increased to such an extent among the working classes, that none but those whose duties bring them in contact with the sufferers can form an idea of its fearful spread. There are now no less than 494 chargeable to the parish. In St. Pancras insanity prevails to an unusual amount, especially among the humbler classes. It is to be hoped that this painful fact will be made the subject of official and medical inquiry, with a view to tracing its origin, and to retard, if possible, its progress."—*Lancet*.

To what end does this tend? Is insanity, like pauperism, crime, and other great social evils, to continue to flourish amongst us without an effort to check its advances? And can the nation, through its statesmen and its laws, suggest nothing more effective or more hopeful than the multiplication of district asylums, workhouses, and gaols? Local taxation in this country is steadily increasing; the cost of the existing institutions of this character is even now felt to be a most oppressive burden by the middle classes; and a period of continued commercial depression cannot fail to increase this feeling, even to a dangerous extent. For the conviction will gain ground, that these and similar evils which afflict society are not efficiently met by existing legislative and administrative efforts. Any attempt to remedy them as hitherto, either by simple repression or by improving the condition of the unfortunate victims *after* they have become lunatics, criminals, or paupers, is obviously crude, vain, and baseless. And however highly we may respect the motives of those who are indefatigably projecting new institutions of a philanthropic character for the mitigation of the various forms of social evil, every man practically conversant with the existing constitution of society, particularly that of our denser masses of population, must feel and recognise in his own breast that much of that labour of love which has led to the creation of so many reformatory establishments is, as regards its general effect on the nation, but a labour of Sisyphus. It is the application of a mere topical remedy to a foul ulcer

dependent on constitutional disease, and requiring constitutional treatment. To be thoroughly successful in these efforts we must adopt a less simple, but more eradicating course of action. We must trace each evil to its causes, and pursue them again through all their varieties and ramifications; we must scrutinise and weigh them well, and study how best to diminish their respective influences; we must act upon and against them as well as their effects; and in order to accomplish this great work, the veil of conventionalism and routine must be drawn aside, and the light of truth and reason allowed to penetrate into the darker recesses of civilised existence.

Let me illustrate, by a quotation from a writer not prone to exaggerate, and at the same time fully qualified to estimate, our existing national defects, the necessity of such an effort.

“It has been shown,” says Porter in his “Progress of the Nation,” “that since the beginning of the present century this kingdom has made the most important advances in population, in wealth, and in the various arts of life which are capable of ministering to man’s material enjoyments. It is now proposed to consider whether equal advances have been made in regard to his moral condition, and to the general tone of society. If our inquiries on this head do not admit of satisfactory answers—if, while wealth has been accumulated, and luxuries have been multiplied, vice has been thereby engendered and misery increased—the advantages of our progress may well be questioned. An inquiry of this nature, honestly

and fairly conducted, would in all likelihood lead to conclusions of a mixed and partial character. If we should discover, on the one hand, that the general addiction to gross and sensual vices has been checked and lessened, we might on the other hand be forced to admit that we have lost some portion of the manly virtues by which our ancestors were characterised—that in our daily intercourse we have swerved from the road of honesty and truthfulness into the paths of expediency and conventionalism; that, in our individual strivings after riches and position, the feeling of patriotism has been deadened, until our whole existence has become so tainted by selfishness that we suffer ourselves to view the interests of our country only as they may affect our individual ease or progress. It must be owned that our multiplied abodes of want, of wretchedness, and of crime—our town populations huddled together in ill-ventilated and undrained courts and cellars—our numerous workhouses filled to overflowing with the children of want, and our prisons (scarcely less numerous) overloaded with the votaries of crime, do indeed but too sadly and too strongly attest that all is not as it should be with us as regards this most important branch of human progress” (pp. 630-1). And combining the faith of the Christian with the wisdom of the philosopher, the same writer subsequently remarks: “It is seen, and is beginning to be practically acknowledged, that a great part of the moral evil under which societies are suffering is the offspring of ignorance; and that without insisting upon any very high degree of perfectibility in human

nature, we may reasonably hope that the removal of that ignorance will do much towards restoring moral health to communities, and thus fit them for the rational enjoyment of blessings so increasingly offered for their acceptance.

“To suppose that blessings must necessarily be accompanied by countervailing curses, is to impute a capital deficiency to the intentions of Providence, and amounts to a practical denial of the power, wisdom, and goodness of the Almighty” (p. 632).

Notwithstanding, then, the enormous intellectual advances made during the present age, there probably never was a period in the history of this country when happiness and contentment were less generally diffused throughout the different classes of society. The increasing tendency to the concentration of wealth in the hands of a few necessarily produces discontent among the many; while the incessant striving after social elevation, as one of the results of the more general equalisation of education, the intensity of competition, the love of display so unnatural to the old English character, the introduction of many foreign vices, and the frequent faithlessness of men holding important trusts, have all united to engender a state of feeling in the highest degree injurious to the mental condition of the community. And in investigating the moral causes of insanity we shall discover ample evidence of its frequent origin in the vices of a spurious and hollow civilisation.

On considering, therefore, the increased prevalence of mental disease, the limited curability of its con-

firmed forms, and its peculiarly intangible essence, we can with confidence believe that it will be most effectually checked by attention to the circumstances producing it; while it is equally certain that this inquiry will also elicit much important information, and indirectly assist in no slight degree various efforts for the moral and social reformation of civilised communities.

The causes of insanity are moral as well as physical in their nature, national as well as individual in their extent. By whomsoever indicated, therefore, society through its legislators must deal with some, religion through its ministers with others. And if the physician should adopt the earlier stages of inquiry as peculiarly his own, a claim which will, perhaps, be generally recognised, it is evident that the subjects thus proposed for examination, involving as they do several questions of great general importance, connected with the prevalent usages of society and the predominant sentiments elicited by education, must of necessity be treated in a bolder spirit, and with more expanded views, than the ordinary topics of a professional treatise. For it has long been my own conviction, that any really valuable knowledge which we may acquire respecting the prevention and cure of insanity can only be derived from a careful and comprehensive study of *all* the morbid phenomena of the human mind, and that a principal cause of the unsatisfactory progress hitherto made in this department of medico-moral science is to be found in the limited, and, so to speak, too technical, view of mental disease entertained by the compara-

tively few eminent pathologists who have as yet directed their attention to the subject.

Diseases of the mind, including all the morbid exaltations, depressions, perversions, and suspensions of those wondrous percipient and reflective faculties which hourly testify to the lofty destinies of the human race, constitute, indeed, a common territory on which the physician and the philosopher, the statesman and the divine, respectively meet to pursue their various but converging courses of beneficial investigation. But while the moral philosopher regards with interest the successive phases of mental disorder, chiefly from their laying bare the workings of the several elements of man's spiritual nature; while the statesman estimates its cost to society, and its relative influence in retarding human progress; while the divine views it with awe and timidity as one of the inscrutable evils which afflict mankind, the physician is called upon to discharge a more active and more immediately responsible range of duties. He has to interpret the signs of the disease to the general public, and stand between society and its mentally alienated members for the protection of both. He has to assist the legislator in determining the reality of insanity, and in constructing the definitions which assign improprieties of conduct to their respective places in the scale of justice. On him rests virtually the duty of pronouncing a final opinion on the moral responsibility of persons in an uncertain mental state; his judgment, therefore, often decides the question of innocence or guilt, of freedom or restraint; on him, further, devolves the

very important task of tracing each case of insanity to its causes; examining the relative influence of the latter, and thence deciding how far in any instance this affliction is the result of unavoidable bodily disease, or how far it is referable to circumstances over which every individual has more or less control, and for the proper regulation of which he is, therefore, to a certain extent, morally responsible. Lastly, it is the essential province of the physician to ascertain the remedial measures applicable to the treatment of the various forms of mental disorder, and to lay down the rules of life, by attention to which its advent may be most effectually prevented. With powers thus extended, and responsibilities thus multiplied, it is manifestly incumbent on those who assume the direction of all that regards the management of the insane, and the prevention of insanity, to utter in plain and intelligible language their honest convictions, to point out the inexorable connection between any continued violation of moral or natural law and its fearful consequences; and thus, on the one hand, impart vitality to an inert mass of statistical facts, and add, on the other, the weight of actual experience and the authority of personal testimony to the exhortations of the preacher and the assertions of the moralist.

But these duties, though in the highest degree important to the welfare of individuals and the general happiness of mankind, are not in themselves of a very pleasurable nature. Nor did the investigations into the physical causes of bodily disease recently conducted in this country, reveal a darker

back-ground to the boasted picture of modern civilisation than would be afforded by a similar scrutiny of the preventible sources of mental alienation. As the one inquiry disclosed to an astonished and sorrowful public scenes of filth and wretchedness, of compulsory demoralisation and disease, the existence of which had previously been unknown, even so would the other drag to light a number of hideous evils, which have hitherto silently and secretly preyed upon the vital energies of society, polluting and prostrating the very essence of man's nobility. The difficulty of the task is, moreover, greatly increased in the latter case by the circumstance of those evils affecting every section of the community, instead of concentrating their ravages upon the poor to the same extent as the physical causes of bodily disease. And, perhaps, the only hope of effectually checking their growth is to be found in that firm attachment to the general cause of humanity, and that abnegation of selfish and personal interest, which, amidst all their professional toils and personal anxieties, have ever honourably characterised the practitioners of medicine.

But in studying the nature, and endeavouring to check the progress of, mental disease, the physician must look beyond the precincts of the asylum. He must not rest content with there observing the various forms of insanity, recording their progress, and searching for their effects. No one would expect to discover the causes of Typhus in a Fever Hospital, or hope to ascertain the agencies predisposing to malignant cholera by seeing numerous persons previously

prostrated by that pestilence. We have already learnt in reference to these diseases, that the most useful field of study is that constituted by the circumstances and associations, the physical and moral conditions, surrounding the masses from which their victims are taken. And in like manner must the science of mental pathology be pursued in its application to preventive medicine. The psychological physician must disregard the narrow formulæ of his earlier studies; he must no longer view this class of diseases with the eye solely of a medical practitioner, because in reality he has to deal with other than mere bodily and physical seats and sources of disorder; he must invoke and use for the advancement of one great object all the knowledge of mankind which his opportunities, his tastes, his habits, may have enabled him to acquire. The information gleaned by him in the varied fields of professional duty during his intercourse with the rich and the poor, the virtuous and the depraved; amid alternate scenes of gaiety and sorrow, of splendour and want, must all be made to cast its beneficent light on the sources of the great evil under his consideration. And in proportion as we advance in a more perfect knowledge of man himself, may we hope that true civilisation, true philosophy, and true religion will unite in restraining the worse, and developing the better, parts of his nature, and thus add to the happiness and welfare both of individuals and nations.

It only remains for me to apologise for the very imperfect attempt made in the following pages to carry out the preceding views, and at the same time

offer a few practical remarks on the treatment of mental disorders. The subject is one which might well engage the best energies and most profound meditations of a life-time; and though for ten years I have devoted much attention to its study, and enjoyed considerable opportunities, I am fully aware that opinions formed amid the daily distractions of professional life must necessarily be but approximations to reality. They are, however, expressed without reserve, from a belief that the investigations and comparisons resulting from the collision of ideas are the most efficient instruments for the advancement of truth and correction of error. And it may even *in limine* be observed that my inquiries respecting the causation of insanity have led me to one important conclusion—a view not flattering to our age, but at the same time encouraging for the future, inasmuch as it tends to show that in the great majority of cases mental disorder is not an inevitable affliction—that its prevention is, to a very considerable extent, in our own hands, and that an improved moral condition of the nation will as surely diminish the prevalence of diseases of the mind, as the removal of noxious physical agencies has been shown to add to the bodily health and vigour of the community.

CHAP. II.

OF THE GENERAL PHYSIOLOGY OF THE NERVOUS
SYSTEM.

FOR the healthy exercise of the functions of the nervous system, and of the mental actions manifested through its organs, certain vital conditions are requisite, the absence of any one of which is sufficient to induce mental or nervous disorder. Thus the brain and spinal cord, the centres of the nervous organisation, must not only be themselves properly formed and endowed with their characteristic powers, but they must also be duly placed in relation with the other constituent parts of the body, by means of the nervous filaments distributed among its different structures. The normal development or perfect conformation, and subsequent integrity of the various component organs of the nervous system, therefore constitute the first and most essential condition of healthy mental and sensorial existence. If, as sometimes happens, the development of a part of the brain be arrested during foetal life congenital idiocy or imperfect sensation is the result. And in like manner, if the process of formation of the spinal cord, or of any of the nerves connecting it with the rest of the body, be similarly checked, the parts intended to be supplied by that nerve or by the affected portion of

the spinal marrow never possess sensation and motion, and for all the purposes of life are dead and useless. A second indispensable condition for the healthy action of the nervous system is a due supply of arterial blood. But this implies a triple combination of circumstances, for, in the first place, a certain *quantity* of blood must be contained in the vessels supplying the nervous structures; secondly, the blood present in these vessels must *move* through them with a certain degree of velocity or amount of impulse; and thirdly, the blood thus circulating must be *arterialised* and *healthy*.

It is thus evident that the healthy action of the nervous system is chiefly dependent upon and regulated by the state of the circulation of the blood, and that any disorder of the latter, whether general or local, may at once induce corresponding irregularities in the functions of the former. Of the correctness of this observation the pathology of the nervous system furnishes many illustrations, and we shall repeatedly have occasion to notice the intimacy of the relations existing between these two great moving principles of vitality. It is unnecessary to enumerate the facts which prove how essentially the action of the brain and spinal cord is connected with the proper circulation of the blood through their nutrient vessels, as the physiological law establishing the dependence of the former upon the latter action is universally admitted. But as the applicability of the same law to the action of the cerebro-spinal nerves generally does not appear to have obtained equal recognition, it may not be altogether useless to dwell for a moment upon

the phenomena which establish a conclusion so important in its relations to the pathology of local disorders of sensation, wherever seated. It is well known that excessive cold retards the motion and diminishes the quantity of the blood circulating through any exposed portion of the body, and thus *benumbs* the latter, or, in other words, suspends the action of its nerves in the same manner as a tardy circulation through the vessels of the brain, such as that occurring in old age, induces torpor of the mental and sensorial functions. But the truth of the principle contended for may be demonstrated with unmistakable clearness by direct experiment. If the abdominal aorta, through which arterial blood is supplied to the hinder extremities, be obstructed in a living animal, that part of the body is instantly paralysed, both limbs being wholly deprived of *sensation and voluntary motion*. The nerves of the part are untouched and uninjured, they are still in direct communication with the brain; whence then the paralysis? It can only arise from the cessation in the supply of arterial blood to the nerves of the affected limbs; and the correctness of this explanation is verified by the fact of the nervous deprivation disappearing immediately after the removal of the ligature from the artery. Even when the arterial blood has thus been cut off for some time, sensation and voluntary motion have speedily been restored to the paralysed limbs, by again allowing the blood to flow freely into the vessels supplying the affected nervous structures.

The cerebro-spinal nerves distributed throughout the body, which connect the mind with the external

world, at the same time that they maintain an intimate union and sympathy between the component parts of the animal organism, should therefore no longer be regarded as mere passive cords, analogous to the wires of the electric telegraph with which they have so often been compared. They possess higher and more active powers: their vital requirements are, as we have seen, identical with those of the brain itself; and in studying their disorders the medical practitioner will do well to bear in mind the possibility of many perverted sensations and local defects of innervation originating in these delicate and exquisitely-endowed media of vital inter-communication.

There yet remains to be mentioned another and a negative condition essential to healthy mental and nervous action, which almost flows as a corollary from the physiological law just described, viz., the absence of any noxious matter or impurity in the blood circulating through this system. And when it is remembered that various poisons, such as carbonic acid, and the elements of certain noxious secretions and excretions, are generated within the body, some in the blood itself, and are capable of producing their injurious effects with as much certainty and uniformity of action as poisonous substances introduced from without, the importance of attending to this source of interference with the healthy action of the nervous system must be sufficiently obvious. Even in this necessarily brief review of the conditions requisite for the maintenance of the healthy action of the nervous system, the regular recurrence and normal duration of sleep or periodic repose—the most potent invigorator

of the higher functions of that system — must not be forgotten, for its privation, from whatever cause arising, will often be found intimately connected with the production of mental and nervous disorder.

Lastly, it is to be observed that mental and sensorial health is best preserved by the due and regular exercise of the intellectual and moral faculties, in alternation with a certain amount of bodily exertion. But, unfortunately, great errors have prevailed, and still prevail, on this subject from an imperfect acquaintance with the peculiarities of man's natural constitution. It should ever be borne in mind that he is literally, and in sober truth, a compound being, having a body with its physical powers and animal instincts, an intellect gifted with vast capabilities, and a soul endowed with sensitive feelings and ardent emotions. Any one of these constituent elements may be exercised and developed to the neglect of the rest, but not without injury to the being as a whole. If the animal part of his nature be unduly indulged, man becomes brutalised and degraded; if the intellectual faculties be alone cultivated, the bodily powers are enfeebled and the affections blunted; and if he yield himself up without restraint to the impulses of emotion and sensibility, the dignity of his nature as a rational being is apt to be cast away, and the peace, stability, and calm enjoyments of existence are more or less permanently destroyed. It is, therefore, only by the regularly-varied exercise of each of these groups of functions that perfect mental health can be obtained and preserved. Corporeal should alternate with intellectual action, and both will be relieved

by the moderate indulgence of the affections and expansion of the moral feelings. The same counterbalancing principle or normal necessity for the diffusion of vital exertion will, moreover, be found to extend into each of the minor subdivisions of the mental and nervous functions. The depressing emotions are relieved by those inspiring an opposite state of feeling: a change of intellectual labour renders it less debilitating and oppressive, just as the strength of the body as a whole is best conserved by the equal and proportionate development of all its organs and parts. In reference, then, to mental hygiene, we must ever remember that man is not all soul, all intellect, or all body, but a compound of the three. He is, as it were, ever vibrating between the spiritual and material worlds, partaking in his nature of the peculiarities of each. Bound down to earth by the necessities of his corporeal existence, he soars towards heaven by the power of his imagination and the sublimity of his emotions. And hence, while dealing with his mental disorders, we should never forget that there is an immortal spirit within the workings of which we can only imperfectly recognise by its bodily manifestations; and that the tongue may often be silent, and all indications of emotion and suffering carefully suppressed, whilst the soul within is quivering with morbid sensibility, wasted by secret grief, or festered by corroding suspicion.

CHAP. III.

OF THE GENERAL PATHOLOGY OF THE NERVOUS
SYSTEM.

BEFORE entering upon the study of the pathology of mental disorders, it is most essential that a clear and correct idea be formed of the peculiar and complicated relations of the brain. We have seen that for the healthy discharge of its functions, certain physico-vital conditions are requisite, the chief being the natural formation of the organ and the due nutrition and purification of its structures by streams of arterial blood. But even in a state of perfect health the functions of the brain, from their very nature, have a constant tendency to induce more or less disorder in its action. For as the great seat and centre of vital sympathy, it is called upon to receive, and respond to, every vibration indicative of injury or disease, which its attendant nerves may transmit to it from the innumerable organisms of the whole body. And what a boundless field of morbid sensations and other disturbing influences does this connection alone present to the student of cerebral pathology!

We have, however, further to remember that the brain, being the instrument of the mind, is most intimately associated with the intellectual and moral parts of our nature, and is consequently liable to be

disordered in its action by all the varied agencies morbidly affecting the mind itself.

Thus, at the very threshold of our inquiry, we find that the functions of the brain may be disturbed by three great classes of morbid causes, two of which act indirectly, the third directly, upon the conditions requisite for the healthy manifestation of its powers. The ultimate effect of the injurious influences operating upon the brain from the mind on the one hand, and from the rest of the body on the other, is probably to induce in it structural and other changes not very dissimilar to those produced by the noxious agencies seated in itself and directly affecting it. And hence the study of the rationale of the latter is peculiarly deserving of attention in connection with this part of the subject. What, then, are the morbid conditions immediately affecting the brain to which we can most generally refer its disordered action?

1.—Arrested development or original malformation is obviously an insuperable obstacle to the healthy and natural exercise of the cerebral powers; and we are compelled practically to recognise its importance in the melancholy forms of congenital idiocy, imbecility, and paralysis.

2.—The inherent vital powers of the peculiar structures of the brain may be impaired by, or retain an unnatural liability to disorder from, hereditary or congenital agencies, even in cases where the organ is fully developed and apparently healthy. For experience has amply shown, that among other sources of disordered action of the inherent vital powers of the cerebral tissues is to be numbered a

vitiating condition of the parental fluids; and hence, in mental and nervous disorders, as in gout and scrofula, we are often enabled to refer the malady in some degree, at least, to hereditary predisposition. We have, however, the satisfaction of knowing that in the former, as in other hereditary diseases, the morbid tendency may be diminished, and ultimately eradicated, by a strict attention to the dictates of reason and the laws of nature.

In addition to an hereditary proneness to disorder in their inherent vital powers, and consequently in the functions dependent upon the integrity of the latter, the structures of the brain, like those of other organs of the body, may be impaired in their vital efficiency by a great variety of causes. Thus a defective condition may result from invisible and unknown sources of disorder generated within the tissues themselves, or may be induced by excessive stimulation, or insufficient or perverted exercise of the cerebral functions. But by far the most potent agency in exciting disordered action of the brain as a whole, or of its component elementary structures, or of the other organs of the nervous system, is a departure from, or violation of, the great basis of all healthy mental, and sensorial existence, viz. *the normal motion and quality of the blood contained in the innumerable vessels of the brain and its associated nervous structures.*

Before entering upon the consideration of the pathological *effects* of disordered cerebral circulation, it may not be useless to glance for a moment at two important and immediate *causes* of that morbid con-

dition, namely, disease of the heart, and disease of the blood-vessels of the brain itself.

From the intimate dependence of the functions of the nervous system upon the proper motion of the blood, it might *à priori* be inferred, that any disease impairing the efficiency of the great instrument of the circulation would be productive of disordered action of the nervous centres. And clinical experience, as embodied in the writings of many able physicians, has fully established the frequency of the connection between cardiac and cerebral disease. The circulation in the brain may in these cases be disturbed either by nervous regurgitation, as the effect of obstructive disease of the right cavities of the heart, or by the irregular and excessive momentum with which the waves of arterial blood are propelled through the arteries in hypertrophy of the left ventricle. The ultimate effect as regards the brain, is of course to induce in both forms of heart disease a *tendency* to congestion or accumulation of blood in the vessels contained within the cranium.

Disease of the coats of the cerebral vessels, consisting generally of fatty or calcareous degeneration of their proper structures, operates as a source of disordered cerebral circulation by diminishing their elasticity, and thus allowing rupture and extravasation of blood to take place. The morbid deposit generally appears in patches, and the walls of the vessels being thus rendered unequal in strength, give way at the weakest point, either under the natural pressure of the contained blood, or more especially under the

suddenly increased distending force induced by mental excitement or bodily exertion.

Like other vascular organs the brain is liable to that peculiar disorder of the capillary circulation which is termed inflammation, and its mental and sensorial functions are in their turn necessarily deranged by those inflammatory affections of the nervous structures. The degree of disorder varies with the intensity, and its peculiar form is to a great extent determined by the stage, of the inflammatory attack. Where the cerebral inflammation is acute we observe at first an unnatural activity or exaltation of the nervous force, giving rise to intolerance of light and sound, and the rapid continuous flow of unconnected ideas which constitutes delirium. But ere long, this nervous excitement is apt to be followed by stupor and paralysis, the indications of mental and sensorial prostration. The unnatural exaltation of the functions of the brain is in these cases contemporaneous with the increased supply of arterial blood accompanying the first stage of acute inflammation, while the suspension or enfeeblement of the cerebral functions indicates the occurrence of the subsequent phenomena of the same morbid process, the effusion of liquor sanguinis from, and the stagnation of the columns of blood in, the affected vessels. The functional excitement in cerebritis is therefore the result of the excessive stimulation of the nervous structures by the unnatural quantity and impulse of the arterial blood; the subsequent enfeeblement of the cerebral functions being equally dependent on defective nutrition of the same

structures as the result of the partial or complete stagnation of the blood in the capillaries, and its consequently deteriorated quality. The various forms of functional disorder of the brain directly connected with its inflammatory affections are, therefore, evidently referable to a violation of the physiological law previously indicated.

The effect of inflammation in preventing the free flow of arterial blood into, and through, the capillaries of the affected parts not unfrequently leads to further structural changes, which in turn induce or prolong functional debility or defect. To this class of pathological changes and disorders belong the softening, induration, and degeneration of tissues, which in the brain are frequently accompanied by various degrees of imbecility and paralysis. It is, however, important to bear in mind that the same structural deteriorations and their consequences may occur independently of inflammation, though from the same immediate cause. For the diminished supply of blood and defective nutrition may result from the obstruction of the arteries leading to the part, as in the case described by Dr. Peacock in the "*Medico-Chirurgical Transactions*," where coagula of blood were found impacted in the cerebral arteries leading to the seat of disease. Change of consistence constituting disease, or degeneration of structure, may therefore either be simple and direct in its origin, as in the case just alluded to, or it may be induced indirectly and as the result of inflammatory action. A microscopic examination of the liquefied cerebral substance will, according to Professor Bennett, of

Edinburgh, throw light upon the original nature of the complaint; the proper tissues of the brain, in the latter form of softening, being mingled with the exudation-corpuscles of imperfectly organised fibrine, the product of inflammatory effusion. The preceding remarks have reference chiefly to the brain, but the same pathological principles will apply to the inflammatory affections of the spinal cord and the cerebro-spinal nerves distributed throughout the body.

Before leaving the subject of inflammation as a source of functional disorder of the nervous system, it is most essential to direct attention to a great pathological law which had too long been overlooked, and for the establishment of which mankind is chiefly indebted to the careful observation and unprejudiced reasoning of modern medical practitioners. Till within a comparatively recent period the diagnosis and treatment of diseases characterised by disorder of the nervous functions, rested almost solely upon the observation of the more prominent symptoms.

In systematic writings on medicine the phenomena of disease have too generally been viewed by the illusive glare of artificial and pedantic nosologies, rather than by the clear and steady light of nature and of truth. A particular group of symptoms has thus been held as indubitable proof of the existence of a particular disease, which could only be cured by a particular class of remedies. The diagnosis and treatment of disease were certainly thereby materially simplified; and had the principle only been correct, the practice of medicine would have been brought within the grasp of a very ordinary intel-

lect. Unfortunately, however, for these systematic descriptions, some very important classes of disease refuse to accommodate themselves to the hitherto received formulas of medical logic, and in none is the difficulty of satisfactorily connecting the symptoms with the malady greater than in inflammatory and nervous disorders. In acute inflammation we generally observe that the functions of the nervous structures of the affected part are greatly disordered; that if the brain itself be inflamed delirium occurs, and that in other situations pain or disordered action of the sentient nerves is almost invariably the effect and accompaniment of the local disorder of the circulation. The connection between delirium and pain on the one hand, and inflammation on the other, has thus been recognised from time immemorial. But in pathology, as in other departments of natural knowledge, it does not follow that the same effect shall always and necessarily result from the same cause. On the contrary, it is possible for the same morbid condition or process to be induced by causes apparently the most opposite in their nature and mode of action. What, for instance, can be more paradoxical, or more at variance with all preconceived ideas than the various effects of substances of different temperatures upon the tissues of the human body? Who could have anticipated that a red-hot iron and frozen mercury will produce the same pathological effect, vesication; or that while steam at the temperature of boiling water will scald, aqueous vapour at a much higher temperature will fail to produce that effect; or who, that has seen

the frightful burns produced by heated metals, could from previous reasoning have believed that the hand can be passed with impunity through a stream of melted iron? A knowledge of these and many other exceptional phenomena in nature, should therefore produce great caution in generalising upon subjects involving human life, and prepare us to encounter in the disordered actions of the body the operation of laws often utterly at variance with our preconceived and cherished opinions.

Delirium, pain, and other indications of a morbid exaltation of the functions of the nervous system doubtless may be, and often are, the effects of inflammation. But the gradual accumulation of a mass of irresistible evidence, based upon careful clinical observation and the converging testimony of numerous isolated practitioners, have demonstrated beyond doubt the possibility of those symptoms originating in a morbid condition directly opposite to that of inflammation, a condition characterised by debility of the vital powers, by an absence of local plethora, and by an unnatural sensibility of the nervous system amounting to *irritability*.

As guides to diagnosis and treatment local symptoms of nervous disorder, whether of the brain or of its associated structures, are then *per se* in the highest degree dangerous and deceptive, and from this source of fallacy it is but too certain that many lives have been sacrificed to a blind faith in routine descriptions of disease, and to the rash practice of deducing from the presence of particular symptoms indications of treatment of a most improper character. It was at

one time the fashion, in some quarters, to decry scientific medical practitioners, and vaunt the superiority of plain practical men void of any such pretensions. But by those who know how much the cause of humanity has gained from the discovery of the fictitious and merely functional disorders simulating acute inflammation of the brain, the peritoneum, the pleura, the retina, and many other important structures, the labours of Travers, Brodie, Marshall Hall, Todd, and other modern pathologists, will long be remembered as those of benefactors to their race, and as illustrious examples of the inestimable benefits resulting from the scientific study of disease. It only then remains to observe at present that as we find acute pain over the abdomen of a purely functional character simulating peritonitis, as we meet with pseudo-pleuritis, pseudo-retinitis, and a host of local painful affections calculated to impress superficial observers with the idea of their inflammatory nature, so in like manner we may have a non-inflammatory exaltation of the functions of the brain, presenting, so far as those functions are concerned, all the phenomena of meningitis and cerebritis. *Concise*

The precise explanation of this pathological anomaly is difficult, and in the present state of our knowledge perhaps scarcely possible, but we are not on that account to dispute its existence. The true spirit of inductive philosophy leads us to recognise the operation of many laws whose mode of action is mysterious and inexplicable, and in such a spirit every judicious practitioner of medicine will be prepared to regard what may be termed the Great Nervous Paradox. He

will find in it a pathological law, reconciling several conflicting phenomena and elucidating many hitherto obscure points in the treatment of disease. For as the same evidences of disordered action of the nervous structures may arise from opposite morbid conditions, as acute inflammation on the one hand, and irritative debility on the other, may induce the same indications of nervous disorder, so will the practitioner often find it necessary to break through systems, to disregard even prominent symptoms, and to base his treatment of the patient on the general pathological conditions known to be present, and on the morbid causes actually in operation.

In addition to the functional disorders of the brain induced by inflammation and irritative debility, that organ is observed to be liable to a class of affections peculiar to itself, and usually described under the vague terms apoplexy and epilepsy.

Without previous symptoms further than those indicative of some irregularity in the flow of blood to and from the brain, the functions of the latter are suddenly suspended, and the patient sinks into a state of utter unconsciousness, accompanied either by the general loss of motor power, or by convulsions. After continuing in this condition for a certain length of time, the patient in epilepsy generally, in apoplexy often, recovers consciousness and voluntary motion, and may enjoy tolerable health until another attack occurs. Sometimes the person thus affected dies during the seizure, and on post-mortem examination there may be found some extravasation of blood or effusion of serum within the

cranium; or a turgid condition of some of the cerebral vessels may exist; or, lastly, no morbid appearance whatever may be perceptible in the brain or other nervous structures. From the paroxysmal nature of the attacks, and from the occasional absence of all morbid appearances in the affected organ, it has been concluded that these diseases do not essentially depend upon structural lesion or change in the brain; while the premonitory and accompanying symptoms point to disorder of the cerebral circulation as at least a frequent coincidence in these singular maladies. Pathologists have therefore naturally been led to inquire, whether the arrangement of the brain and its blood-vessels presents any anatomical or physical peculiarities, and if so, whether those peculiarities are at all instrumental in producing, or are capable of rendering intelligible the occurrence of, the extraordinary disorders now under consideration.

Anatomy shows that the brain is differently circumstanced from other internal organs by being placed within a bony case which it completely fills, and by its venous blood being collected in large and strong intra-cranial reservoirs, prior to its discharge into the veins communicating with the heart. But while all pathologists agree in supposing these conditions, and particularly the former, to exercise a considerable influence upon the cerebral circulation, they are by no means agreed as to the mode in which its peculiarities operate. Some, reasoning upon the inelasticity of liquids, and fortified by the experiments of the late Dr. Kellie of Leith, have con-

tended that the quantity of blood contained within the cranium is invariable; inasmuch as the brain, with its membranes and vessels, occupies the whole interior of a rigid globe, which, by the atmospheric pressure, is kept constantly filled. Others, disputing the accuracy both of Dr. Kellie's experiments and reasoning, and relying upon the congested appearance of the brain not unfrequently met with, and upon the evident expansion of that organ accompanying the ventricular contraction and the act of expiration (as seen after the operation of trephining), conclude that the quantity of blood in the cerebral vessels may be increased, and by its accumulation give rise to morbid phenomena. The latter view has recently been very ably supported by Dr. George Burrows, of London, while the arguments in favour of the Edinburgh doctrine, countenanced by Munro, Kellie, and Abercrombie, have been urged with equal force and clearness by the lamented Dr. John Reid, who was, however, careful to substitute the word "fluid" for "blood."* I must confess that the discussion of this question, up to the present time, seems to me scarcely to have embraced the point most immediately connected with cerebral pathology, and I feel the more at liberty to give utterance to this opinion, as I can agree, to a certain extent, with the views advocated on either side. The Edinburgh pathologists have, I think, satis-

* This doctrine has also received the able advocacy of Dr. Watson, in his published Lectures; and by no pathologist has the whole question been more philosophically studied, or more effectually reconciled with the results of actual experience.

factorily proved that the variations in the absolute quantity of blood contained within the cerebral vessels as a whole are very limited, and that the brain, consequently, does not present the extreme and rapid sanguineous accumulations which we observe in other organs of the body. And I can, at the same time, equally agree with Dr. Burrows, that the *tendency* to such an accumulation of blood within the cranium may produce pressure upon the brain and its morbid consequences. The peculiar physical conditions affecting the brain, however, not only confine within narrow limits changes in the quantity of blood present in that organ, but, if I mistake not, they also exercise a still more important influence upon *the motion of the blood contained in its capillaries, and, through it, upon the cerebral functions.*

I have previously alluded to the physiological law regulating the action of the nervous structures generally, and stated that the incessant motion of the blood through the capillaries of the brain is essential to the performance of its functions. Whenever, therefore, from any cause, external or internal, that capillary circulation is arrested, the functions of the brain immediately cease. If, then, it can be shown that, during an augmented flow of blood to, or its impeded return from, the brain, the physical conditions under which that organ is placed tend to arrest and obstruct the free passage of the blood through its capillaries, an explanation will, I conceive, be afforded of that sudden suspension of the cerebral functions which forms the most striking phenomenon in epileptic and apoplectic seizures. The brain, as

we have seen, is contained in a rigid bony case, which it completely fills: it is, during life, of a semi-fluid consistence, and therefore capable of transmitting pressure equally in all directions. In its substance, and on its surface, are innumerable minute vessels, the coats of which are extremely thin; and through those vessels, in the healthy state of the organ, streams of blood constantly flow with considerable velocity; at its base are situated the large cerebral arteries, and along its upper and posterior portion are placed the strong and capacious sinuses communicating with the jugular veins. We observe that other internal organs, such as the liver and kidney, are liable to rapid enlargement, as the result of an accumulation of blood in their vessels, originating either in an increased influx through the arteries, or a diminished efflux through the veins. And it is certain, from the observation of symptoms frequently present, as well as from the study of the anatomical, physiological, and pathological peculiarities and relations of the brain, that the arterial and venous tubes subservient to the motion of the blood through its minute vessels, are also subject to similar irregularities in their rate of discharge. What effect, then, will a suddenly-induced disproportion between the rates of influx and efflux of blood to and from the interior of the cranium, exercise upon the motion of that fluid in the minute vessels of the brain?

By a simple hydraulic experiment it can be proved that when the discharge from a tube is diminished by a comparatively slight obstruction, the lateral or

distending pressure of the liquid situated behind the seat of obstruction rapidly approximates to and nearly equals the whole propelling force acting upon that liquid.* And when studying the phenomena of disordered circulation in the kidney, I obtained abundant evidence of the operation of this physical law in the hydraulic apparatus of the living body. For on artificially disturbing the natural proportion between the rate of supply of blood through the renal artery and its rate of discharge through the renal vein, the lateral or distending pressure of the intervening liquid was so great, that the organ contained an additional quantity of blood, equal, in some instances, to twice its original weight. The *enlargement* of the kidney in these experiments was, of course, very great.*

In congestion of the liver we also observe a rapid and considerable *enlargement* as the result of obstruction to the free flow of blood through the hepatic vessels. But when we proceed to study the operation of the same physical principle in the blood-vessels of the brain, we find its effects modified in a remarkable manner by the peculiar position of that organ. For however much the rate of efflux of blood through the jugular veins may be diminished, however much the rate of influx through the arteries may tend to increase, *the brain cannot materially enlarge*; it cannot burst the firm, unyielding walls which have grown around it, and the general accumulation of blood in

* See the author's Contributions to the Physiology and Pathology of the Circulation of the Blood, pp. 75 and 154.

its vessels is thus mechanically prevented. The hydraulic law is, nevertheless, in full operation within the cranium. The venous sinuses will have a tendency to enlarge, the arterial columns will still endeavour to force their way into the smaller vessels, and the pressure and counter-pressure of the arterial and venous blood will thus be in existence to the same extent, and tend to produce the same general enlargement of the organ as in the liver and kidneys. That enlargement being, however, as we have seen, a physical impossibility, the distending force or pressure (which in other organs produces hyperæmia or congestion) is here communicated laterally to the whole semi-fluid mass filling the cranium, and through it to the external surface of all the capillaries of the brain. But these being thus compressed and flattened by the very force which in health propels the blood through them, no longer convey fresh streams of vitalising liquid to the nervous tissues, and the functions of the latter accordingly cease. According to this view, then, the same distending force of the impeded columns of blood, which, in other parts, leads to vascular enlargement, and, through it, to an increase in the bulk of the organ, is, in the brain, communicated to the circumjacent pulpy mass, and thus causes an external pressure which the thin membranous coats of the capillaries are unable to resist. Sudden and extreme irregularities in the flow of blood to and from the brain are therefore capable of inducing the complete and simultaneous stoppage of the capillary circulation in that organ, and with it the

cessation of the cerebral functions, acting in this respect precisely in the same manner as other physical causes producing cerebral compression.

The arguments in favour of this opinion may be thus concisely enumerated:—

1. The incessant motion of the blood in the capillaries of the brain is essential to the performance of its functions.

2. The brain cannot materially enlarge.

3. It is capable of transmitting pressure equally in all directions.

4. The natural proportion between the rates of supply and discharge of blood to and from the brain, is liable to be disturbed, and will then tend to produce a general accumulation in its vessels.

5. From the second proposition it follows that this general accumulation cannot take place in the brain.

6. The distending pressure of the impeded blood, which in other organs produces enlargement, is therefore, in the brain, diffused laterally and equally through the whole mass; it thus compresses and obstructs the capillaries, and, in arresting the circulation through them, it also suspends the functions of the brain itself.

Having fully participated in the opinion expressed by a late eminent pathologist, that this subject required further investigation, I have been led to the conclusions now stated, with reference to the pathology of one class of cerebral disorders. And in leaving for the present the further consideration of

irregularities in the *motion* of the blood as a source of disordered action of the brain, I cannot do better than quote the same writer's estimate of the importance of this study. "The circulation within the cranium," says Dr. John Reid, "possesses several peculiarities, which not only excite the attention of the anatomist, but are constantly referred to by the physiologist and pathologist, in their discussions upon the functions and diseases of the important organ there contained, viz. the encephalon. The derangements of the circulation within the cranium, are so often followed by such serious consequences, that it becomes an object of the highest practical importance to endeavour to ascertain the nature and cause of those derangements."

It will be seen that, according to this doctrine, the sudden compression of the brain (whether produced by an external injury, as by fracture and depression of the cranium, or by an internal disorder of the circulation) in giving rise to coma, acts by the stoppage of the blood's motion in the capillaries of the nervous structures. For the same pathological effect will always follow the same cause, so long as the surrounding conditions are unchanged.

Thus, the tendency to the accumulation of blood in the vessels of the brain, may arise from a suddenly increased influx of arterial blood, as from great excitement or exertion, or from a hypertrophied heart; or it may be induced by any circumstance impeding the return of blood from the lateral sinuses. And both in epilepsy and apoplexy, we observe in the predisposing and exciting causes a frequent proneness

to the occurrence of one or both of those sources of disordered cerebral circulation.*

That the brain is in itself capable of considerable enlargement we see not only in the temporary elevation and expansion of the organ synchronously with respiration, in cases where it has been exposed by the operation of trephining, but also in the tension of the fontanelles in infants during paroxysms of anger or convulsions, and, in a still more striking degree, during the continuous and extreme augmentation of the head in chronic hydrocephalus.

While conversely in cases of death by hanging, it is found that though the eyes are almost forced out of the orbits, and the blood-vessels of the conjunctiva often give way under the pressure of the congestion, the integuments of the face and the scalp being at the same time inordinately swollen and engorged, the brain itself, which is equally exposed to the influence of the same obstructed circulation, remains comparatively unaffected in its appearance, and does not present any thing like the intense degree of hyperæmia which might *à priori* have been expected.

* It has often occurred to me, that the careful examination of the state of the venous opening in the foramen lacerum posterius in fatal cases of epilepsy and apoplexy would materially assist in elucidating the pathology of those diseases. For as the greater part of the cerebral blood flows from the interior of the cranium through those small curved openings in the base of the skull, it is evident that any narrowing of them by thickening of the lining membrane, irregular ossification, &c., would create a constant liability to disordered circulation in the vessels of the brain. And in examining a number of skulls, we find great differences to prevail in the relative size of these openings.

Our attention has hitherto been exclusively directed to irregularities in the *motion* of the blood as a source of disordered action of the brain; but the impaired quality of that fluid may equally induce the same effect. So intimate indeed is the connection between the motion and the quality of the blood, that derangements of the former are in themselves productive of deterioration in the latter. For the very process of arterialisation depends upon the blood's motion, and the degree of its purification and oxygenation is to a considerable extent regulated by the activity of the circulation. Hence, too, the relation which we are sometimes enabled to trace between lethargy and imperfect arterialisation of the blood on the one hand, and the unnatural exaltation of the nervous sensibility accompanying its excessive oxygenation on the other. But changes in the blood of a more serious character, and exercising a much greater disturbing influence over the functions of the nervous system, may either originate in the body itself, or result from the introduction into the circulation of a variety of noxious substances. The mere accumulation in the blood of the principles of certain secretions and excretions, either from retention or reabsorption, will so vitiate it as materially to disorder, and even wholly suspend, the functions of the brain. And we are therefore warranted in the inference that other chemical changes in that fluid, less appreciable because less demonstrable by our imperfect tests and means of exploration, may not unfrequently occur, and that some of these unwonted products are similarly capable of inducing

cerebral disorder. The effect of the quality of the blood upon the nervous structures and their functions is, however, best seen in the disturbance of the latter, manifested in a variety of forms, after the ingestion of numerous chemical and medicinal substances. The exhilaration produced by laughing-gas, the dreamy enjoyments of opium-eating, the excitement, delirium, and subsequent stupefaction resulting from alcoholic drinks and narcotics, the soporific influence of the more direct sedatives, and the tetanic spasms of strychnine, form but a few illustrations of the functional disorder to which the nervous system is liable from morbid alterations in the quality of the blood supplied to its nutrient vessels. It is therefore not unnatural for some pathologists to conjecture, that in mental disorders the essential or most general and immediate cause is to be found in some subtle deterioration of the blood, and the consequent presence in it of noxious or poisonous matter. And in support of this view has been urged the peculiar odour often emanating from the bodies of the insane. As yet, however, animal chemistry has failed to confirm this view by the discovery of any peculiar principle in the blood of patients affected by this class of disorders, and we can only act upon the idea in practice so far as to use every available means of improving the general health, and with it the quality of the blood.

These few remarks may serve to show how numerous are the disturbing causes connected with the circulation of the blood which may interfere with, or derange, the functions of the brain. For defect

or irregularity, either in the quantity, in the distribution, in the motion, or in the quality, of the blood supplied to the nervous structures, may at once occasion disorder in their action, and consequently in the functions dependent upon that action.

Nor must I leave this brief review of the morbid agencies operating directly on the brain without a passing allusion to one very important source of disordered cerebral action, namely, the violation of the physiological law which requires for the cerebro-spinal nervous structures a certain amount of periodical repose. The rationale or precise operation of sleep is not known; but its beneficial effects in strengthening the nervous system is a matter of daily experience. And it is a remarkable fact, that as deprivation of rest and prolonged mental exertion are known to predispose to disorders of the mind, so is insanity from other causes frequently preceded and ushered in by a continued inability to obtain natural and refreshing repose.

I have not hitherto alluded to the morbid anatomy of the brain as elucidating the nature either of mental or nervous disorders; for, truth to say, it has not yet materially contributed to the advancement of this important department of pathology. The principal changes which we see in the brain after those diseases, may be very briefly summed up, and are almost solely referable to the local disorders of the circulation accompanying them. They consist chiefly of an unnatural turgescence or congestion of the smaller vessels, particularly those on the surface of the brain, and in its investing membranes, of the

effusion of lymph or serum from the arachnoid membrane, with or without opacity of the latter, and of softening of portions of the cerebral substance. To these must be added irregular growths and deposits of bone in the membranes of the brain and on the internal surface of the cranium. In connection with Epilepsy they have long been observed; but in cases of mania, unconnected with that disease, I have frequently had occasion to notice them. And my attention has often more especially been called to an unnatural projection of the processes of bone bounding the basilar groove of the occipital bone, and which, when thus unduly developed, may very possibly induce irritation of the posterior columns of the medulla oblongata.

In the preceding observations I have endeavoured to state concisely what is known of the mode of action of the chief causes of disease directly affecting the brain. This study will greatly facilitate the comprehension of the injurious effects frequently exercised upon the functions of that organ by indirect and remote morbid agencies. For since the brain is the medium of communication between the mind and body, and is consequently placed in intimate relation with both, it follows almost inevitably that the conditions requisite for its healthy action are liable to be violated and disturbed by influences originating in either. We shall afterwards see that these remote disturbing causes, both moral and corporeal, are very numerous; but, however diversified their nature, it is probable that they all operate by inducing in the brain itself physico-vital disorders

incompatible with its normal action, the precise laws regulating in individual cases the production of the varied forms of functional nervous disorder being, however, as yet very imperfectly known.

There is, however, one law explanatory of a large and important group of nervous affections which must not be passed over in silence, namely, the law of reflex action, or that productive of excito-motory phenomena. From the operation of this law it follows, as a demonstrable and important pathological fact, that the morbid impression produced by a source of irritation existing in a distant part of the body, may be transmitted by the incident nervous fibres to the spinal cord and brain, and thence reflected to various motor nerves, giving rise to convulsions and other results of disordered nervous action. The causation and pathology of many severe convulsive diseases have thus been rendered intelligible, and their treatment greatly simplified and improved chiefly through the labours of Dr. Marshall Hall.

A law precisely analogous, though less capable of direct experimental demonstration, is also occasionally perceived in disorders of the nerves of sensation; so that reflected morbid stimuli may thus give rise to painful affections in parts far distant from the original seat of irritation, as for instance, in some forms of neuralgia, in sick headache from indigestion, &c. Even in the operations of the mind there are manifestations of a somewhat similar law, by means of which the immaterial parts of our nature are indissolubly linked with the objects and occurrences of the

external world. For what is the peculiar mental process ordinarily termed "The Association of Ideas," but a species of *reflected feeling*, which from the most trivial circumstances can call into existence, and evolve, an elaborate chain of thoughts and sentiments, apparently the most remote and unconnected? And by none—poet, philosopher, or physician, has this law of reflected mental action been more clearly or forcibly expressed than by Byron in the well-known lines, where he tells us that,—

"Slight withal may be the things which bring
Back to the mind the weight which it would fling
Aside for ever: it may be a sound,
A tone of music, summer's eve, or spring,
The wind, a flower, the ocean which shall wound,
Striking the electric chord with which we are darkly bound."

PART II.

CHAPTER I.

OF THE FORMS OF MENTAL DISORDER.

NOTHING has so much tended to confuse the study of Mental Disease, or to impart harshness to the treatment of the insane, as a forgetfulness of the natural constitution and infirmities of the human mind. It has, until recently, been most unjustifiably assumed that a broad and unmistakable line of demarcation existed between the sane and insane; that the detection of insanity was therefore always a matter of facility and certainty; that the lunatic was, as it were, a creature of another world, cut off by his distemper from all sympathy or kindred associations with the rest of mankind, and that the latter were consequently justified in treating him with silent neglect, if not with actual cruelty. But, on what ground rests the primary assumption which has furnished a basis for the hideous superstructure of apathy and inhumanity so tardily renewed by the legislature? Is the distinction between the sane and the insane always so clear, definite, and palpable, as to justify the former in re-

garding the latter as aliens to *their* nature, or as the soulless, heartless Pariahs of Christianity and civilisation? Is there not rather a certain natural range of disorder incident to every mind as regards strength, harmony, and extent of development? And do not the eccentricities, the hallucinations, the proneness to vice and crime, the indulgence of evil passions, the follies, the vanities, the weaknesses of daily life, demonstrate the universality of this inherent tendency to mental disorder?

For as the body, in the creative energies of its original conformation, in the ever-varying combinations and mutations of the matter of which it is composed, in its diversified and counter-balancing functions, in the very delicacy and completeness of its arrangements, constantly engenders within itself the elements and germs of disease, even so the mind, poised in a still more sensitive balance, equally composite in its nature, and infinitely more exquisite in its sympathies, and above all vivified and penetrated by the spiritual attributes of immortality, also carries with it, in its marvellous excellencies and endowments, the weakness of elevation, and the fragility of beauty. Philosophy and Religion therefore alike enjoin humility and humanity in our dealings with the insane. The one forces us to admit that no man is at all moments perfectly or equally rational, and the other in its doctrine of original sin ever recalls to our memory the preponderating tendency of the worst and weaker parts of our mental and moral nature.

In addition to the natural range of disorder incident to every mind, the functions of the latter may

be disturbed by various temporary causes, as in the delirium of fever, the state of drunkenness, &c. These forms of mental derangement are not, however, considered as coming within the meaning of the term insanity; for when the temporary cause is removed, the effect generally ceases. And in like manner the minor deficiencies and irregularities of intellect are also excluded from the class of disorders now under consideration. Permanency and intensity are therefore the characteristics which chiefly determine mental unsoundness in its medical and legal significations.

For practical purposes, moreover, it is necessary not only to determine the state of mind with reference to its healthy or unhealthy condition, but also as regards the question of confinement in an asylum or elsewhere. And in deciding the latter point, the case must be viewed and judged not by abstract conceptions and theories, but by the fitness of the individual to be at large and master of his own actions, as tested by his ability so to comport himself as not to endanger the public peace and decency, or his own existence.

Now, from what has already been stated it must be evident that considerable difficulty will occasionally be experienced in determining whether the degree of mental derangement is, or is not, sufficient to place the individual beyond the limits generally allowed for harmless eccentricity and normal weakness. For, unfortunately, there is no fixed or uniform standard by which to measure the mental condition of the person under examination. To meet this difficulty, the law, as improved by recent enactments, very wisely and

humanely protects the alleged lunatic by requiring specific details and facts to be adduced in proof of the charge of insanity. And in order still further to guard against an unnecessary and unjustifiable multiplication of the insane the important question involving liberty, responsibility, and the social and domestic rights of the citizen, is in a very large proportion of cases now finally decided by the presence or absence of a degree of mental weakness or disorder, fraught with actual danger to the individual or to others. Whereas even at the commencement of the present century, it was possible for a sane person to be immured in a gloomy dungeon, treated with neglect and cruelty, and deprived of all hope of justice or freedom, on the unsupported assertion of a single unprincipled relative interested in his withdrawal from society!

As the determination of insanity itself is not always very easy, it can readily be understood that the classification of its various forms, like every other point connected with this complicated subject, is also beset with considerable difficulties. In the words of an able writer, "The statistics of the *forms* of mental disorders must always be less satisfactory than those which refer to such simple and easily ascertained facts as age and sex, or to such events even as recovery, incurability, and death. It is often very difficult, and requires much consideration, to classify cases under any specific description of mental disorder; and when to this we add the changeable forms which cases often assume, and that these forms are, in many instances, frequently running into, and alternating with, each other, we shall

be justified in attaching for the present only a qualified value to any tabulated reports of the different forms of mental disorder." But as the leading forms of insanity are universally recognised, and observations have to a considerable extent been recorded with respect to their relative prevalence, it may be useful to glance at the present state of our knowledge on this point before entering upon the study of the causation of mental disease.

The following extract from a report on psychological medicine by my friend Dr. C. Lockhart Robertson, published in the Half Yearly Abstract of the Medical Sciences (vol. 7), not only contains an enumeration of the usually received forms of insanity, but also describes in a clear and concise manner the chief peculiarities of each:—

"In the Report of the Metropolitan Commissioners in Lunacy the various forms of mental disease are thus ably distinguished into—

1. MANIA, which is divided into—
 - a. *Acute mania*, or raving madness.
 - b. *Ordinary mania*, or chronic madness of a less acute form.
 - c. *Periodical or remittent (intermittent?) mania*, with comparatively lucid intervals.
2. DEMENTIA, or decay and obliteration of the intellectual faculties.
3. MELANCHOLIA,
4. MONOMANIA,
5. MORAL INSANITY. } These three forms are sometimes comprehended under the term Partial Insanity.
6. CONGENITAL IDIOTCY.
7. CONGENITAL IMBECILITY.
8. GENERAL PARALYSIS of the INSANE.
9. EPILEPSY.

A description of the disorders to which these terms

are appropriated is likewise given, of which the following is the substance:—

1. *MANIA*.—This term is used to designate a particular kind of madness, as affecting all the operations of the mind; hence its synonyme, total or general insanity. Maniacs are incapable of carrying on, in a calm and collected manner, any process of thought; their disorder for the most part betraying itself whenever they attempt to enter into conversation. It likewise affects their conduct, gesture, and behaviour, which are absurd and irrational; their actions being characterised by great restlessness, appearing to be the result of momentary impulses, and without obvious motives. Mania is likewise accompanied by hurry and confusion of ideas, and by more or less excitement and vehemence of feeling and expression. When these last symptoms exist in an excessive degree, the disorder is termed—

Acute Mania, which is the first stage of the disease, and often tends to a fatal termination, through the exhaustion occasioned by perpetual agitation and want of rest. It is also generally attended with considerable disturbance of the vital functions. The symptoms gradually abate, and the disease passes into—

Chronic Mania, which is attended with less excitement of the passions, less rapidity of utterance, and less violence of action. In this stage the disorder of the mind is not always immediately perceptible; but it soon becomes apparent that the patient is incapable of continued rational conversation or self-control, and that his acts are the result of momentary caprice,

and not governed by rational motives. A great proportion of maniacs labour under illusion or hallucination, or false impressions as to matters of fact; but in these illusive notions there is no consistence or permanence. Patients labouring under this chronic form of mania are often tolerably tranquil and harmless, and capable of being employed in agricultural and other pursuits.

Intermittent Mania (the third subdivision of mania) is a variety the existence of which has been much disputed, some medical writers of note denying the existence of such lucid intervals altogether. As the Commissioners justly observe, the fact appears to be, that there are patients subject to occasional paroxysms of raving madness, but who have intervals of comparative tranquillity and rest. It generally happens, however, that after the alternations of raving fits and periods of tranquillity have continued for some time, the intervals become less clearly marked, and the mind is found to be weakened, the temper more irritable, and both the feelings and the intellectual faculties more and more disordered.

2. DEMENTIA.—Chronic and protracted mania is frequently the prelude to a decay and final obliteration of the mental faculties, which is termed Dementia. In some few instances (generally the result of causes of a depressing nature, as sudden grief, &c.) dementia is the primary form of mental derangement. In those instances in which dementia is the sequel of protracted mania, it is not easy to determine the point at which mania ends and dementia begins. It differs from idiocy, in which the powers of the mind have never been developed, while in dementia they have been lost.

These two forms, Mania and Dementia, are the prevailing varieties of insanity in most large asylums, constituting, on the average, two-thirds of the cases.

3. MELANCHOLIA.—Of this disease there are several degrees and varieties. Some patients display merely lowness of spirits, with a distaste for the pleasures of life, and a total indifference to its concerns. These have no disorder of the understanding, or defect in the intellectual powers; and, however closely examined, manifest no delusion or hallucination.

Another class of melancholics derive their grief and despondency from some unreal misfortune which they imagine to have befallen them. Many are convinced that they have committed unpardonable sins, and are doomed to eternal perdition. Others believe themselves to be accused and suspected of some heinous crime, of which they are destined to undergo the punishment; and of this they live in continual dread, &c. &c.

All cases of melancholia have more or less a tendency to suicide.

4. MONOMANIA.—This term is given to cases in which the intellectual faculties are unimpaired, except with relation to some particular topic. A frequent illusion of monomaniacs is that they hold conversation with supernatural beings.

5. MORAL INSANITY.—This term is used to designate a form of mental disease in which the affections, sentiments, habits, and, generally speaking, the moral feelings of the mind, rather than the intellectual faculties, are in an unsound and disordered

state. Cases of this description were formerly looked upon as unaccountable phenomena. They are, however, now regarded as a distinct form of mental disorder in nearly all the public asylums. They are characterised by a total want of self-control, with an inordinate propensity to excesses of various kinds.

6, 7. CONGENITAL IDIOTCY AND CONGENITAL IMBECILITY.—Congenital idiots are persons whose intellectual faculties have never been developed. Congenital imbecility is the result of some original defect which renders the mind feeble in all its operations, though not altogether incapable of exercising them within a limited sphere.

8. GENERAL PARALYSIS OF THE INSANE.—This is a species of monomania in which the individual affected fancies himself possessed of vast riches and power, and which is always attended with a general paralysis, distinguished at its onset by an impediment in the articulation, and gradually progressing to total obliteration of the power of locomotion, with inability to attend to the calls of nature, &c. This specific form of insanity was first pointed out by French Physicians.

9. EPILEPSY.—This disease exists complicated, in various ways, with defects or disorders of the mind; with imbecility, with dementia, with mania; or it may coexist with perfect soundness of mind."

Even in this classification it will be observed that the two last-mentioned affections represent rather the occasional coexistence with insanity of certain bodily disorders than distinct and definite forms of mental

derangement. For the general paralysis of the insane, in its strictly *mental* features, presents in its earlier stages the characteristics of monomania, and at a later period those of dementia. And epilepsy is often not associated at all with actual and permanent insanity.

The term *Partial* Insanity, as applied to certain forms of mental disorder, is also liable to some objection, and it is satisfactory to find that it is not directly sanctioned by the Commissioners in Lunacy. For with non-medical persons, and particularly in courts of justice, its employment might occasionally tend to confuse and mislead, by giving rise to the idea that persons only *partially* deranged, as in monomania and melancholia, were on that account less dangerous or less fit subjects for confinement; whereas in no forms of insanity are suicidal and homicidal attempts more frequent.

But the doctrine of Moral Insanity, as advocated by some of our most eminent writers on disorders of the mind, is, I conceive, still more objectionable. And I cannot but deem its unlimited adoption, and the consequent tendency to exempt from legal responsibility persons apparently of unimpaired intellect who may have committed serious offences, to be fraught with no little danger to the safety and happiness of society.

The general recognition by English physicians of moral insanity, as a form of mental disorder, is chiefly due to the influence exercised by the writings of the late learned and excellent Dr. Pritchard, who, in advocating this doctrine, could only have been actuated

by a desire to guard against the undue punishment by human laws of those afflicted by the dispensations of a higher power. In his admirable treatise on insanity he has fully explained his views on this question, and defended the propriety of regarding with pity and forbearance, as the victims of mental disease, those persons who, under the influence of vicious or criminal impulses, may have committed various offences. He tells us that he was led to this general conclusion by the facts and arguments urged by the illustrious Pinel, who termed this form of derangement *manie sans délire*, or *folie raisonnante*; and that Esquirol ultimately also expressed his conviction of the reality of this form of mental disorder. The extent to which these views have prevailed in this country may be estimated by the fact, that in the statistical tables published by the Commissioners in Lunacy, in 1844, it appeared that of 15,945 admissions into the asylums of England and Wales 704, or 4.41 per cent., were returned as cases of moral insanity. In every respect, therefore, the subject is of sufficient importance to justify its calm and dispassionate examination.

In a paper "on the Mutual Relations existing between Intemperance and Insanity," published in the Journal of Public Health for September, 1848, and to which I am now induced to refer, for the purpose of proving that the opinion above expressed has not been hastily or inconsiderately formed, I thus alluded to this doctrine:—

"Until a recent period the intellectual faculties were alone considered subject to insanity, and we

accordingly find that the various questions formerly discussed by medical writers on this subject, had reference solely to the intelligence of the individual, and to the possession by him of reasoning power. By many modern physicians, however, the boundaries of mental disease have been much extended; and it is now represented as also affecting the moral feelings, and thus inducing various forms of crime and depravity. This latter state of mental disorder, or moral insanity, is described by Dr. Pritchard 'as consisting in a morbid perversion of the feelings, affections, and active powers, without any illusion or erroneous conviction impressed upon the understanding; it sometimes coexists with an apparently unimpaired state of the intellectual faculties.' And with respect to the particular form of moral insanity in which we are at present interested, the same author subsequently remarks that, 'not unfrequently persons affected with this form of disease become drunkards; they have an uncontrollable desire for intoxicating liquors, and a debauch is followed by a period of raving madness, during which it becomes absolutely necessary to keep them in confinement.'

"As I wish to avoid entering upon the discussion of the general question, as to the possibility or expediency of drawing a distinction between moral insanity and vice, my notice of dipsomania shall be very brief. In it, as in all other forms of purely *moral* insanity, the mental disorder is stated to consist essentially in moral weakness, the controlling or governing power of the mind being no longer capable

of repressing its criminal propensities. A person previously temperate, humane, and pious, whilst still in the perfect possession, not only of the intellectual faculties, but of the moral sense, may thus, according to this view, rapidly succumb to an irresistible impulse, and become at once a murderer, a suicide, a thief, or a drunkard.

“In opposition to the high authorities recognising moral insanity, it may seem presumptuous to doubt the existence of such a disease; and, certainly, no one will for a moment hesitate to believe that the facts appeared as described. But, unless we could inform ourselves of the ideas previously occupying the minds of those unhappy persons—unless we could examine the train of thought which immediately preceded the commission of each offence—unless, in short, we possessed that knowledge of the motives influencing the conduct of others which, as mortals, we never can possess, it does appear to me (viewing the question by the light of reason and common sense) a bold and dangerous procedure to exempt the authors of criminal actions, or the slaves of degrading habits, confessedly in the possession of their reasoning faculties, from that legal responsibility which constitutes the chief guarantee for the preservation of social order. If, indeed, we exclude from the category those cases in which crimes have been committed during a fit of delirious excitement, the various forms of moral insanity may be referred to two heads, viz. —

“1. Cases in which the tendency to crime results from the existence in the individual's mind of some delusion, or morbid train of reasoning, which may

not have previously manifested itself in his language or conduct, and which he may possibly never disclose.

"2. The more numerous class of cases, in which a long-continued indulgence of the passions and emotions has almost wholly deprived the person of self-command, and so rendered him the slave of criminal impulses or vicious cravings.

"Among the latter class I would place all cases of dipsomania. For, whatever may be the source of those mysterious impulses which occasionally prompt persons of reputed intelligence and virtue to the destruction of life, there is not, I think, any adequate ground for believing that the habit of intemperance, even in its most irresistible form, ever originates in any other cause than the neglect of moral discipline."

By the more zealous advocates of the doctrine of moral insanity, distinctive terms have been applied to the various forms of moral disorder characterising this affection. Thus, in addition to its homicidal, suicidal, and erotic varieties they have recognised a form constituted by an irresistible tendency to drunkenness (Dipsomania, and more recently Oinomania); another, by a similar propensity to theft (Kleptomania); a third, by an impulsive desire to commit arson (Pyromania), &c.

The premonitory symptoms of moral insanity are said to be very various, some of the more important being caprice, eccentricity, irascibility, change of habits, irrational and absurd ideas, change of temper, restlessness, unsteadiness of purpose, change of affections, &c. And, as more fully elucidating his views,

Dr. Pritchard has quoted from Pinel the following example of this form of mental derangement, which he considers as characteristic of it:—"An only son, of a weak and indulgent mother, gave himself up habitually to the gratification of every caprice and passion of which an untutored and violent temper was susceptible. The impetuosity of his disposition increased with his years. The money with which he was lavishly supplied removed every obstacle to the indulgence of his wild desires. Every instance of opposition or resistance roused him to acts of fury. He assaulted his adversary with the audacity of a savage; sought to reign by force, and was perpetually embroiled in disputes and quarrels. If a dog, a horse, or any other animal offended him, he instantly put it to death. If ever he went to a fête or any other public meeting, he was sure to excite such tumults and quarrels as terminated in actual pugilistic rencontres, and he generally left the scene with a bloody nose. This wayward youth, however, when unmoved by passion, possessed a perfectly sound judgment. When he became of age, he succeeded to the possession of an extensive domain. He proved himself fully competent to the management of his estate, as well as to the discharge of his relative duties, and he ever distinguished himself by acts of beneficence and compassion. Wounds, law-suits, and pecuniary compensations, were generally the consequences of his unhappy propensity to quarrel. But an act of notoriety put an end to his career of violence. Enraged with a woman who had used offensive language to him, he threw her into a well. Prosecution was

commenced against him, and on the deposition of a great many witnesses, who gave evidence to his furious deportment, he was condemned to perpetual confinement in Bicêtre."

But this very illustration of moral insanity, if impartially regarded, furnishes a most conclusive argument against the reception of the doctrine. For it appears to me impossible to avoid the conclusion of the writer of an excellent little work on man's power over himself to prevent and control insanity, when he says, in reference to this very case, "that any cholic man who does in his rage what he is sorry for afterwards, is as much insane as this man was." Nor have there been wanting medical men of eminence and experience in mental disorders, to point out the danger and fallacy of this reasoning. The late Sir Alexander Crichton, in his "Commentaries on some Doctrines of a dangerous tendency in Medicine," published in 1842, does not hesitate to denounce "the attempt to confound vice with insanity, as a dangerous innovation." And Dr. Thurnam, in his "Statistics of Insanity," after referring approvingly to the opinion of the last-mentioned writer, thus expresses himself on the question of the responsibility even of persons admittedly labouring under delusions.

"There are, indeed, it will be allowed by all who have had opportunities of observing the insane, numerous cases of partial, and even of more general mental disorder, occurring in persons who are perfectly able to distinguish right from wrong, in whom the moral sense is neither obliterated nor altogether

perverted, and in whom responsibility to the laws, as regards any crime not directly connected with some specific delusion or insane impulse, must be considered as existing.

“ That delusion or monomania frequently, and perhaps in the majority of cases, is attended by more or less derangement of the moral feelings, I freely admit. With equal readiness I allow that it is often extremely difficult in any particular case to say that a crime, apparently in no way connected with the delusion, was not in reality either a direct or indirect result of it; and in such cases the accused ought to have the full benefit of every reasonable doubt. But whilst we admit this frequent impairment of the moral sense and feelings in the partially insane, we must not forget that there are few in whom the powers of the will, the reason, and the conscience are so far undermined, as to render them altogether incapable of self-control, and consequently irresponsible. Most of the improvements which of late years have taken place in the treatment of the insane, have flowed from the more decided recognition of the principle of more or less power of self-control remaining in the insane; and there could hardly be any thing more inconsistent with modern, and, as I believe, correct, views of moral treatment, than the adoption by medical or legal authorities, or by any considerable part of the public press, of the doctrine that the plea of insanity in *all cases* of crime, in the *partially insane*, ought to be admitted in bar of punishment. There can, indeed, be no doubt that the fear of disgrace and of punishment operates

strongly and often salutarily on many more or less partially disordered minds; and if in our courts of justice, the plea in question should come to be indiscriminately admitted in all cases of insanity, one strong incentive to self-restraint, one important aid in the proper treatment of mental disorders, would doubtless be withdrawn, and with what amount of evil result to society I will not here presume to determine. It can never be too fully impressed on the minds of medical witnesses, in cases which involve this plea, that there is no definition or test of insanity that will apply to all cases, and that the interests of society and of humanity alike demand that every case should be judged by its own merits, and not by reference to any single test or standard whatever.”*

In the same spirit the Rev. Mr. Barlow, the author of the little work above mentioned, even asserts that “a man may labour under a mental delusion, and yet be a responsible agent;” and that “if sanity or insanity be in a great many instances the consequences of a greater or less resolution in exerting the power of reasoning still possessed, the same kind of motives which influence a man in common life are still available, though they may require to be somewhat heightened.” (p. 13.)

And on the very ground that we claim for the insane a continuance of our sympathies as beings possessed of feelings similar to our own, may we contend that in cases where the knowledge of right and wrong, and the general capability of correct

* Op. cit., p. 48.

reasoning still exist, a share of responsibility shall attach to those committing criminal actions.

Before leaving this subject, I may remark that much of the confusion surrounding it seems to have arisen from writers dealing with it rather as a metaphysical than a practical question. Judged abstractedly, all sin, all crime, is insanity; but the point which medical witnesses and courts of justice are called upon to determine, is simply whether certain individuals are or are not capable of controlling their actions. When intellectual unsoundness is manifest, there can be no hesitation in deciding the case. But where this does not appear, how is it possible for any man to speak positively as to whether the impulse which led another to the commission of a crime was or was not controllable?

Indeed, this assumption of the possible existence of "*irresistible*" and "*uncontrollable*" impulses in persons admitted to be intellectually sane, is the root of all the difficulties surrounding the subject. For it begs the whole question; and once admitted as a dogma it necessitates the abandonment of all the ordinary rules regulating criminal responsibility.

The only effective and legitimate mode of reconciling the requirements of social security with the exculpatory recognition of human weakness and man's natural proneness to crime, consists in the mitigation of our criminal laws, and the substitution of the reformatory for the retaliatory principle as the ground of the punishments inflicted by them. Until that change in the legislation of this country is more fully carried out, it may occasionally be de-

sirable to address representations identical in spirit with the doctrines of moral insanity, to eminent persons entrusted with the administration of the law. And even from my own limited experience in cases of this description, I feel certain that the extenuating circumstances constituted by congenital defect, cerebral injuries and diseases, hereditary predisposition to insanity, and neglected education, will always receive due weight from the judges and executive government of this country.

The preceding remarks have had reference chiefly to the medico-legal aspects of the doctrine of moral insanity, and have been dictated by a conviction of the impossibility of drawing a clear and available distinction between ordinary criminal acts and those committed by persons intellectually sane, but alleged to be incapable of controlling criminal impulses. For were that doctrine received in courts of justice, it would henceforth be the interest of every criminal to represent himself as morally insane, the unwilling slave of his passions, led by them to the commission of offences condemned by his own reason, and consequently an object of pity rather than of punishment.

There are, however, other features of this question which require consideration, and on which most men may perhaps agree. Daily experience fully proves that there are at large numerous persons of unaffected intellect, and capable of appreciating moral duties and responsibilities, in whom the governing or controlling power of the mind is nevertheless so far enfeebled, as to render them habitually incapable of

resisting criminal impulses or vicious cravings. This moral weakness is a most fertile source of misery, and too often leads to the destruction of domestic happiness, to poverty, and ultimately to crime or insanity, and premature death. In its minor degrees, and at lengthened intervals, it is to be observed in most persons, particularly in childhood; and in every large school a case of extraordinary proneness to falsehood, theft, or violence of conduct, will every now and then attest the frequent prevalence of a natural disproportion between the moral restraining and the vicious impelling powers of the human mind. In adult life the same preponderance of the evil over the better part of man's nature will often be evinced, and lead the unfortunate person to enter upon the career of a drunkard, thief, &c. In other cases, sometimes from known sources of mental disturbance, and sometimes from inappreciable influences, a complete change of moral feelings and conduct will occur, and persons previously temperate, affectionate, and honourable, will at every opportunity exhibit themselves in directly opposite characters. In like manner a suicidal tendency, generally preceded and accompanied either by delusion or by melancholy, will, in other individuals, without any apparent adequate motive, develop itself. And in rarer cases a homicidal disposition will similarly appear in persons not under the influence of narcotic or intoxicating agents. In the latter class of cases I believe that, generally speaking, some delusion, often on a subject connected with religion, will on careful inquiry be found to exist.

And the same observation will apply to many suicidal cases, even though the particular idea which prompted to self-destruction may never be avowed.

Now since the existence of numerous cases of these various forms of moral weakness is a matter of common observation, an important practical question arises as to the course to be pursued by the community as a whole, towards the persons thus mentally constituted. For it appears to me that the public peace and safety require all these cases to be regarded in a somewhat different light from those of ordinary or intellectual insanity. Homicide, self-murder, &c., are offences which it is incumbent on every legislator by every possible means to endeavour to prevent. And what is extreme and habitual intemperance, followed as it so often is by the temporary insanity, the violence and raving of delirium tremens, and leading as it so often does to penury, degradation, and an early grave, what is it but a slow suicide, aggravated in its character by its very duration, and by the wretchedness which it entails on others?

I contend, then, that in these cases the general interests of the community are involved, even to a greater extent than those of the individuals morbidly affected, and that the recognised guardians of social order are bound to interpose the authority of the State for the *prevention* of the criminal acts originating in the condition of mind now under consideration. That the present laws are, in reference to persons thus mentally constituted, grossly defective, I have long been convinced, and am satisfied that a

careful inquiry into the history of the suicides committed in this country, would show that in a majority of cases the tendency to self-destruction had previously been well known to the relatives and friends, and evinced by delusions, by an avowed desire for death, or by intense melancholy. And the same observation will apply, but of course less extensively, to cases of impulsive homicide.

Even where a person of known suicidal or homicidal tendency has been placed in an asylum, there is at present no adequate guarantee against his being liberated with those feelings still existing in an unmitigated degree. The only security is that constituted by the 75th section of Act 8 and 9 Vict., c. 100, which provides, "That no patient shall be discharged or removed under any of the powers hereinbefore contained, from any licensed house or hospital, if the physician, surgeon, or apothecary, by whom the same shall be kept, or who shall be the regular medical attendant thereof, shall by writing under his hand certify that in his opinion such patient is dangerous and unfit to be at large, together with the grounds on which such opinion is founded; unless the commissioners visiting such house, or the visitors of such house, shall, after such certificate shall have been produced to them, give their consent in writing that such patient shall be discharged or removed; provided that nothing herein contained shall prevent any patient from being transferred from any licensed house or any hospital to any other licensed house or any other hospital or to any asylum; but in such case every such patient shall be placed under

the control of an attendant belonging to the licensed house, hospital, or asylum to or from which he shall be about to be removed, for the purpose of such removal, and shall remain under such control until such time as such removal shall be duly effected."

It will be seen that this clause throws the whole responsibility upon the proprietor or medical officer of the asylum in which the patient may have been placed, but without defining the powers of the former or protecting him against the consequences of his refusal to deliver up a patient to the relatives or friends making the application. It should also be remembered that the question of propriety of liberation is wholly one of opinion, and that the proprietor or medical officer expressing that opinion will be considered an interested person, and his views may consequently appear to others prejudiced and incorrect. From the annoyance and persecution liable to arise from an endeavour to carry out in every case the provision above referred to, it is probable that it generally remains practically inoperative. Besides, no law can compel a man to *express an opinion*, the utterance and attempted enforcement of which would expose him to unmerited odium, injurious imputations, and direct pecuniary loss. In a paper on the Amendment of the Law of Lunacy, published nine years since in the London Medical Gazette, I pointedly indicated the evils resulting from the improper liberation of persons in an unsound and dangerous state of mind. After expressing an opinion that an efficient law of lunacy

has to guard against the liberation of persons whose insanity, and I may now add, whose moral weakness, may render them liable to injure themselves or others, and stating that this evil did occur under the existing law, I thus referred to some cases which at that time were within my personal knowledge:—

“ The first case is that of —, who, on attempting to poison his farm servants by administering to them arsenic, was placed by his relations in an asylum as an insane person; but, after remaining there a few months, was by the same parties removed and set at liberty, in complete opposition to the advice of the medical officer and superintendent of the asylum, who vainly warned the patient's wife and friends of their insecurity. When thus liberated, the man appeared to all ordinary observers rational and harmless, and continued so for a few months, when he one day suddenly and without provocation murdered his wife by strangulation. He was subsequently tried for the capital offence, and acquitted on the ground of insanity. In another case the patient, then the subject of intense melancholia, with a strong suicidal tendency, was in like manner removed by his friends from an asylum, and being by them allowed a greater degree of liberty, he, within a few days of his liberation, committed suicide by throwing himself under a railway train. In a very similar case the patient, who had only a few days previously attempted suicide by cutting his throat, was removed by his friends from the asylum with the wound still unhealed; but his suicidal disposition

was so soon manifested, that they gladly replaced him in the asylum within a few hours after his discharge. Cases of this description must in the present state of the law be extremely numerous, and the proprietors of asylums are certainly placed in no very enviable position when dealing with them ; for, if they hesitate to liberate the patient, they are instantly assumed to be actuated solely by selfish motives, while in setting free persons of known homicidal or suicidal tendencies they must feel that they are imperfectly discharging the duty they owe to society.”*

Much discussion has of late arisen respecting the propriety of secluding for a time persons in whom the habit of intemperance has become absolutely destructive. In Scotland the subject has been very ably considered by Dr. Peddie and Professor Christison ; and I fully agree with the latter eminent authority that, “ As a general rule, when the mania for drink became such as to be uncontrollable by all religious or moral considerations, when it enervated or overwhelmed the mind by continual intoxication, when it threatened danger, or occasioned danger to the persons, family, or affairs, it ought to be regarded as a disease, and treated as a form of insanity.” These cases seem to me to be intimately allied to the suicidal and homicidal forms of moral weakness, the

* Several additional cases of recent occurrence could, if necessary, be adduced to show that suicide and homicide are even now often dependent on the circumstance of persons of unsound mind being at large, either never having been placed under control, or injudiciously removed from it.

reasoning faculties being unaffected and the moral perceptions existing; but the restraining power of the will being quite inadequate to check the tendency to excess. It also not unfrequently happens that these very persons exhibit suicidal and homicidal tendencies either during an outbreak of intoxication, or subsequently. And were medical practitioners generally to record their experience on this subject, it would, I am confident, appal the boldest to contemplate the terrible frequency of the existence of a state of mind in those around us prompting to a destruction of life. For under the influence either of the direct effects of intoxicating substances, or of the delirium following their excessive use, persons at other times respected and affectionate will make the most murderous attempts. I consider, then, that there is no impropriety in viewing these extreme cases of drunkenness in connection with the suicidal and homicidal forms of moral weakness, and applying to them nearly similar principles of treatment.

As tending then to prevent the evils resulting from this source, and facilitating the restoration to a happier and healthier state of mind of persons labouring under this defective restraining power of the will, I will venture to submit the following suggestions for the improvement of the existing laws:—

1.—That in ALL cases of insanity, where the intellectual or reasoning faculties are unimpaired, in addition to the written request of a relative or friend and the usual medical certificates, the autho-

urity of a magistrate or other public officer shall be obtained prior to the reception of a patient into an asylum.

2.—That a similar authority be obtained prior to the discharge of the patient, and that in cases where the proprietor or medical officer of the asylum shall consider the person to be still dangerous, if at large, a written statement of that opinion be transmitted by him to the visiting Magistrates and Commissioners in Lunacy, who shall thereupon take such steps as they may think necessary for the protection of the patient or the public.

3.—That in cases of excessive drunkenness, unaccompanied by suicidal or homicidal tendencies, the same precautions regulate the admission of the patient, but that the medical officer of the asylum shall be empowered to liberate him on trial at any time.

4.—That, in accordance with Dr. Christison's suggestion, it shall not be necessary to deprive the patient of control over his affairs, but that he should be allowed (when capable) to manage them under the guidance of some other party.

As in the forms arising from drunkenness attacks of delirium tremens, accompanied by all the violence of acute mania, may at any moment occur, I do not perceive how they can be advantageously or safely treated in other than institutions provided with the necessary arrangements for maniacal cases. And it certainly appears to me that the present mode of reception and discharge of persons having the full possession of the reasoning faculties, but labouring under "Moral Insanity" (viz., without

the previous authority of any public officer), is not in accordance with the spirit of English law, or the requirements of an enlightened jurisprudence.

With respect to the relative prevalence of the different forms of mental disorder, the following table, compiled from the returns to the Commissioners in Lunacy relative to the forms of insanity, as observed in the cases admitted into the asylums of England and Wales during the years immediately preceding 1844, shows that, of 15,949 admissions, —

941, or 5·90 per cent., were received in a state of acute mania, or raving madness.

4298, or 26·94 per cent., in a state of chronic mania, or ordinary madness (conversation or conduct irrational and absurd).

1020, or 6·39 per cent., were labouring under mania, but with intervals comparatively lucid.

1055, or 6·61 per cent., were suffering from mania, but the precise form was not mentioned.

(Making a total of 7314 cases of mania in its different forms, or 45·85 per cent. of the whole admissions.)

1096, or 6·87 per cent., were cases of dementia, arising from protracted mania.

988, or 6·19 per cent., exhibited dementia from other causes.

(Making a total from dementia of 2084, or 13·06 per cent. of the whole.)

2524, or 15·82 per cent., were cases of melancholia.

924, or 5·79 " monomaniacs.

704, or 4·41 " returned as cases of moral insanity.

230, or 1·44 " congenital idiots.

353, or 2·21 " imbecile from birth.

767, or 4·80 " cases of general paralysis (paralysie des aliénés).

1049, or 6·57 " epileptics.

It only remains to be added, that the cases of idiotcy and congenital imbecility existing in this country, in workhouses and private dwellings, are estimated to be at least as numerous as those of insanity.

CHAP. II.

GENERAL CAUSATION OF MENTAL DISORDERS.

THE ideas which have successively prevailed respecting the origin of insanity illustrate very curiously the predominant mental features of each epoch and community. The Greek philosophers, carrying out their materialistic views, referred disorders of the intellect, as well as the varieties of temperament, to certain peculiarities in the composition of the bile and blood. While among the Jews of the same period, the doctrine of demoniacal possession was invoked to explain the horrible ravings and outrageous conduct of persons mentally disordered. Nor has this doctrine been very long disavowed even by grave and learned men. For it was the basis of the accusations of sorcery and witchcraft which involved so many unfortunate persons, and led to such disgraceful persecutions, within the last two centuries, even in England. On the continent the superstition must have prevailed more extensively, if we may judge from the statement of the illustrious Pinel, who tells us that "at Besançon the fête of Saint-Suaire was at one time celebrated by a numerous concourse of insane persons, under the title of demoniacs, who were brought from a great distance to be cured, under the idea that the demon could not fail to be

driven by the religious ceremony out of the bodies of those possessed. An immense crowd of spectators, placed in an amphitheatre around an elevated spot; some pretended demoniacs, guarded by soldiers and agitated by the frightful contortions of maniacal furor; priests in ceremonial robes proceeding gravely to exorcisms, in the interior of the church and out of the sight of the multitude; the melodious strains of military music; at a given signal—a kind of standard raised aloft, or rather a bloody flag under the name of Saint-Suaire, that was exhibited at three different times to the sound of the cannon of the citadel—a profound commotion excited in the assembled people, who cried out in an excess of enthusiasm, ‘A miracle! a miracle!!’: such was the pompous and solemn spectacle that was presented every year as the effects of a supernatural power exercised for the cure of demoniacs.” (*Traité sur l’Aliénation Mentale*, p. 355.)

Among other eastern nations and Mahometans generally a directly opposite belief existed, namely, that the insane were peculiarly under the protection of heaven, and traces of this idea can still be recognised in the almost superstitious reverence felt by portions of the Irish peasantry for the poor “natural.” As exhibiting the intensity of this feeling in the present Mahometans of India, we are told that an insane gentleman was the only European whose life was spared at the massacre of Cawnpore.

In modern Europe we find that the doctrines of the Greek physicians on this subject were current until the Galenical dogmas yielded to the general ad-

vance of physiological and physical science. Insanity was thenceforth regarded as a disease affecting the higher functions of the brain, and having intimate relations with the other diseases of that organ. Its antecedents were also observed, and its occasional dependence on moral agencies and mental impressions, as well as on mere bodily sources of disorder, fully recognised. About the commencement of this century, indeed, the principal writers on mental disorder were inclined to ascribe the majority of cases to the influence of the former class of causes. Both Pinel and Esquirol lent the authority of their illustrious names in support of this opinion. The former states, as a general conclusion, "*Que l'origine de l'aliénation tient quelquefois à des lésions physiques ou à une disposition originaire, le plus souvent à des affections morales très-vives et fortement contrariées. Parmi ces causes générales, les unes sont fréquentes, les autres très-rares*" (op. cit., p. 10). And Esquirol in one of his earliest publications thus supports the opinion of his friend: "Almost all the insane persons confided to my care have presented some inequalities in their functions, in their intellectual faculties, or in their affections, before becoming disordered, and often from their earliest childhood. With those dispositions, congenital or acquired, there needed only a moral agency to give rise to an outbreak of mania or the prostration of melancholy."

There can be little doubt that the attention thus directed to the influence of moral agencies in inducing insanity would have stimulated further inquiries in this direction, and perhaps have long since led to

some important results, had not the doctrine of Phrenology been introduced and ably advocated by some of the best anatomists of the day. The effect of this doctrine upon the pathology of mental disorder was in a great measure subversive of the conclusions just stated as the results of careful observation and prolonged experience of the peculiarities of the insane. Dr. Spurzheim, the great exponent of phrenology, in his desire to strengthen the general argument in favour of the dependence of the operations of the mind upon the structural perfection of its material origin, "rejected a mere mental insanity, and considered the cause of *every* derangement of the manifestations of the mind as belonging to organic parts." Again, "many physicians speak of diseases of the mind; others admit both mental and corporeal causes of insanity; a few acknowledge only corporeal diseases, and with the latter I agree. The idea of mental derangement must not, however, be confounded with mental causes. Certainly the manifestations of the mind may be deranged; but I have no idea of any disease, or of any derangement of an immaterial being itself, such as the soul is. The soul cannot fall sick any more than it can die. As this point is so important in practice, when it is necessary to act and to cure, I shall enter into more details. I conceive the mind, in this life, confined to the body, of which it makes use—that is, the powers of the mind want instruments for their manifestations; and these manifestations are dependent on the instruments, cannot appear without them, and are modified, diminished, or deranged, according

to the condition of the instruments or organs." In opposition to these views Dr. Hallaran, from whose work (2nd ed. 1818) the above quotations are extracted, very properly observes, "The diseased manifestations of the mind, arising from terror, grief, excess of joy, remorse, shame, loss of property, and despair, prove the sensibility of the mind, though they betray its weakness. To deny the influence of those contending passions would be in some respects to stifle principle, and to sink man below the level upon which Omnipotence had thought fit to place him. If the mind never sickens, conscience, the great inquisitor and monitor of man, would prove of no avail. Yet this conscience, this mind, this soul of man is but too often most sorely afflicted" (*op. cit.*, p. 21). And, to complete the phrenological simile, of what avail is the most perfect instrument, if the hand, which once with graceful ease drew from its chords the melody of sweet sounds, has now lost its cunning, and in fitful gusts and harsh dissonance serves but to proclaim its own enfeeblement?

The difficulties surrounding any attempt to investigate with exactness the relative influence of the various causes of insanity are extremely numerous. All statistical returns are more or less subject to error, and hence very great care is requisite in drawing conclusions, even from those prepared with care and good faith. But when in addition to the general sources of inaccuracy it becomes the temporary interest of the individuals supplying information to suppress facts and wilfully mislead the inquirer, even more than ordinary cau-

tion must be exercised in dealing with statements thus mutilated and garbled. It may not then be altogether useless to review very briefly some of the circumstances which tend to impart so much uncertainty to calculations on this subject. In the first place, the statistical statements transmitted with patients received into asylums, are often either carelessly filled up, or the real cause of the attack is not stated. Thus intemperance, hereditary predisposition, and other agencies disagreeable to the patient's friends, but which they may know to have been the most probable and influential conditions producing the malady, are in the official statement not unfrequently replaced by "blows on the head," "ill health." But, in addition to the obstacle constituted by the necessary imperfection of the statistical registers of the causes of insanity, physical and moral agencies are so inextricably mingled in the production of the morbid operations of the mind that it is often exceedingly difficult, and sometimes almost impossible, to assign to each their relative degree of influence in particular cases. Both are often coincident and simultaneous in their action, and hence full allowance should be made for discrepancies of opinion and unconscious bias in determining the proportional activity of each. And not only does self-interest often prompt the relatives of the insane to conceal the existence of any hereditary or family tendency to the disease, but an affectionate reluctance to publish the vices and moral infirmities of an afflicted friend may in like manner induce the person relied on for information on this subject to

ascribe the calamity to an imaginary or inefficient cause. Thus it frequently happens that a person, in whom there can be traced an hereditary tendency to mental disorder, after attaining maturity and displaying an average amount of intellectual power, either from domestic discomfort or anxiety in business, has recourse to alcoholic stimulants, and eventually acquires habits of intemperance, which result in insanity. In such a case, to which of the three concurrent causes is the disease to be attributed? The relatives and the patient himself will probably ascribe it to the mental anxiety, which "drove" him to intemperance. The materialistic psychologist would connect the disease with the congenital defect in the cerebral organisation induced by hereditary predisposition. And the zealous advocate of temperance would need no other proof than the fact of the patient's habits of intoxication, to convince him that the attack of insanity was due to the noxious effect of stimulants. It is therefore evident, that in reviewing any statistical returns which profess to show the relative influence of hereditary predisposition in conducing to insanity, considerable allowance must be made for the subsequent and unspecified influence of other super-added agencies.

In addition to these direct obstacles to the acquisition of correct information, the study of the causes of insanity is beset by all the difficulties arising from the mysterious and complicated constitution of the human mind. The higher functions of the brain, whether in a healthy or morbid state, necessarily occupy an intermediate and debateable

ground between the moral and physical, the material and immaterial, Kingdoms of Nature. And since intellectual philosophy has not yet succeeded in satisfactorily defining the respective limits, within which the corporeal and spiritual elements operate in the production of the various powers manifested by the healthy brain, it cannot reasonably be expected that the rationale of the causation of mental diseases shall universally be as patent as that of the disorders affecting the less highly-endowed organs of the human body. Pathology is unavoidably based upon physiology, and mental pathology offers no exception to the general rule. Hence the same differences of opinion, which have so long surrounded the study of the mental department of the healthy cerebral functions, must also be encountered in every attempt to trace the origin, and ascertain the nature, of the several derangements to which those faculties are subject. Those differences are in general referable to two opposite systems of philosophy, which have long prevailed, respecting the nature of the connection existing between the human mind and the organ through which its operations are manifested.

According to one doctrine, the brain is not merely the agent and temporary habitation of the emotional and intellectual being, but also stands to it in a higher relation, as the cause of all those processes of thought, volition, and judgment, which the untutored mind instinctively refers to the more subtle and immortal part of its own nature. The other, and I think more correct, theory of the cerebro-mental functions is, that which regards the mind, in

its aggregate of moral, intellectual, and emotional faculties, as a distinct spiritual entity, co-existing with, and so intimately attached to, the cerebral organisation, as not only to demand the vital integrity of the latter for the due transmission of its sentiments and sensations, but as also itself liable to derangement from any causes injuriously affecting the delicate organ selected as its seat and instrument.

In reasoning upon the causation and treatment of mental disease, I shall therefore endeavour to reconcile its phenomena with those physiological and metaphysical views which recognise the immateriality of man's intellectual and moral nature, at the same time that they strenuously insist upon the reciprocal influence of the mind and body. Of the reality of this interchange of power there can be no doubt; for daily experience proves its existence by innumerable facts. It is thus impossible to transact any of the ordinary duties of life without furnishing evidence of the influence of the mind upon the organs of the body. The ever-changing expression of the countenance, the varying action of the heart under opposite emotions, the stimulating and modifying effects of the memory and imagination on various secretions, and the remarkable extent to which even the development of particular muscles and limbs may be regulated by volition, sufficiently demonstrate the truth of this law. And that the physico-vital agencies existing within the body are capable of affecting the operations and condition of the mind, we learn from the frequent disturbance and suspension of the mental functions occasioned by

accidents and diseases impairing the structure of the brain; from the mental imbecility induced by the imperfect development of that organ, or by its inadequate supply with arterial blood; and from the disorder of the various faculties of the mind directly excited by the introduction into the body of any of the numerous substances known as narcotics.

This primary law, then, of the separate existence and mutual influence of the mind and body, being clearly understood, we may proceed to trace the causes of those more serious and permanent disorders of the former which constitute insanity. Reasoning analogically, it might at once be assumed that violent moral disturbances, and continued intellectual exhaustion, will produce mental derangement as inevitably as physical injuries and functional irregularities engender bodily disease; and experience has fully established the accuracy of this opinion. But experience has further shown that bodily disorders, of an apparently unimportant character, are occasionally liable to affect, in a secondary and inexplicable manner, the mental faculties: thus constituting an additional and painful illustration of the influence of physical and corporeal causes upon the mental health of the individual. The difficulties which impede the prosecution of any close inquiry into the origin of insanity, in these mysterious cases, may be estimated, when we remember that no connection can be discovered, by *post-mortem* examination, between bodily and mental disease; that the most minute dissection of the brain, in cases of insanity, does not reveal any lesion of structure, or

special organic change, to which the mental disease can unhesitatingly be referred; that it is not even essential for the brain to manifest any morbid change whatever; and that while many serious diseases and structural defects may exist in the brain, for a considerable length of time, without occasioning mental disorder, a comparatively trifling injury or disease, in some distant part of the body, will sometimes give rise to insanity of the most dangerous and intractable character.

These considerations, which might be indefinitely multiplied, will perhaps suffice to indicate the disadvantages under which the physician is placed, from the absence of any satisfactory link between the presumed physical cause and the apparently inconsequential mental effect. But however perplexing and discouraging may be these facts, we should not forget that they are merely negative conclusions, which time and patient industry may some future day replace by such positive information as shall enable the medical inquirer to detect and remove the peculiar morbid condition of the body in which the mental disorder originated. And we are encouraged in this hope by the reflection that there are often diseases, purely corporeal in their character, the pathology of which is as obscure, and their causation as inexplicable, as insanity itself: for example, the terrible and fatal convulsions, occasionally resulting from a slight injury, and constituting the disease termed tetanus.

The practical inference to be drawn from the consideration of the whole subject seems to be (as I

some years since ventured to observe, in commenting on those pathological views which regard disease as wholly centred and consisting in certain visible structural changes observable after death), that disease, in its widest sense, including both mental and corporeal derangements, is invariably "an attribute of life; it can only exist while life remains, and the physical changes which we see in the dead body are but the effects, and, it may be, the partial and remote effects, of those disorders of the invisible vital powers in which originate all the morbid actions affecting the living organisation."

The determination of the peculiar morbid condition which constitutes insanity being, from the very nature of the subject, impracticable, and it being equally impossible to point out any physical changes in the structure of the body as universally and essentially co-existent with mental disease, we can only attempt to limit its prevalence by indicating and studying the means of removing those causes, which experience has shown to be its most frequent predecessors. And here we at once begin to recognise analogies between the causation of insanity and that of other diseases of the nervous system. In fact, there is scarcely an assigned cause of the former, moral or physical, which may not also induce in other individuals chorea, epilepsy, apoplexy, convulsions, or paralysis. The bodily conditions, ushering in manifestation of mental disease, may be of the most opposite character; and the same contrariety may be remarked in the nature of the moral causes preceding it; sudden joy, anger, and the

intoxication of delight, being almost as apt to disarrange the equilibrium of the mind, as fear, grief, and suffering; mental labour and religious excitement, as intellectual sloth and moral torpor. We must therefore approach the consideration of the diversified causes of insanity with minds divested of any previous ideas which might bias the judgment; we must attend solely to the facts which have been recorded by competent observers, and which, if in themselves imperfect, and affording but a partial glimpse of the truth, are nevertheless infinitely preferable to contracted theories and visionary speculations. By so doing, we may hope in time to trace more clearly the connection between insanity and the more remote agencies occasioning it. And though we may never know with precision the nature and immediate cause of the morbid state itself, we shall at least have the satisfaction of reflecting that the conditions inducing it, over which man is permitted to exercise control, have been pointed out to him, and that it will thenceforth rest with the individual members of society to decide whether those agencies shall still continue to exercise their blighting influence on the happiness of mankind.

The study of the causes of idiocy is in some degree simpler than that of the circumstances leading to insanity, hence the investigation of the former may aptly take precedence. It must, however, be remembered that, as congenital mental defect is necessarily connected with imperfect bodily organisation and endowment, the influence of purely physical causes is in this class of cases relatively great.

“A Report on the Causes of Idiocy, being the Supplement to a Report by Dr. Howe and other Commissioners, appointed by the Governor of Massachusetts to inquire into the Condition of the Idiots of that Commonwealth,” dated 1848, and reprinted with an appendix, is by far the most valuable contribution recently made to the etiology of mental disease; and to it I shall have occasion frequently to refer in the subsequent sections of my subject. From it we learn, that of an aggregate population of 185,942, in one of the most highly civilised of the United States, there were found no less than 361 idiots, exclusive of insane persons. Out of 420 cases of congenital idiocy examined, some information was obtained respecting the condition of the progenitors of 359. In all these 359 cases, *save only four*, it was found that one or the other, or both, of the immediate progenitors of the unfortunate sufferers, had in some way widely departed from the normal condition of health, and violated the natural laws. That is to say, one or the other, or both of them, were very unhealthy or scrofulous; or they were hereditarily predisposed to affections of the brain, causing occasional insanity; or they had intermarried with blood-relatives; or they had been intemperate; or had been guilty of sensual excesses which impaired their constitution.

Of 359 cases, in which the parentage was ascertained, seventeen were *known* to be the children of parents nearly related by blood. From collateral evidence it was concluded that three more cases should be added to the seventeen; thus showing

that more than one-twentieth of the idiots examined were offspring of the marriage of relatives. The statistics of the seventeen families, the heads of which, being blood-relatives, intermarried, tell a fearful tale.

Most of the parents were intemperate or scrofulous; some were both the one and the other: of course there were other causes to increase chances of infirm offspring besides that of the intermarriage. There were born unto them ninety-five children, of whom *forty-four were idiotic*, twelve others were scrofulous and puny, one was deaf, and one was a dwarf! In some cases all the children were either idiotic or very scrofulous and puny. In one family, of eight children, five were idiotic.

The report mentions, that by far the most prolific cause of idiocy is "the low condition of the physical organisation of one or both parents." And among the most prominent of the causes which lead to this sad deterioration of families, the reporters specify intemperance, vice (self-abuse), intermarriage of relatives, abortion. As showing the defective bodily conformation of 574 idiotic persons, it is stated that 21 were affected with blindness or deformity of the eyes, 13 with deafness, 23 with deformity of the mouth and nose, 54 with deformity of the hands or feet, 14 with torpor of feeling, 96 with paralysis in some or all parts, and 125 were subject to fits. And with respect to the influence of hereditary tendencies, the following facts were collected. In 419 cases the idiotic persons were known to be of decidedly scrofulous families, in 114 their parents were known to be habitual drunkards, in 211 some of their near

relatives were idiotic or insane; 49 had 1 near relative also idiotic, 9 had 2, 6 had 3, 4 had 4, 6 had 5, 3 had 10, and 1 had 19. In 50 cases one or both of their parents were also idiotic or insane; 21 idiots were themselves parents. Of the 17 families, where the parents of idiotic persons were near relatives, 6 had 1 idiotic child each, 2 had 2, 3 had 3, 5 had 4, and 1 had 5: the average being 3 in each family. Forty-five parents had each 2 idiotic children, 13 had 3, 8 had 4, 1 had 5, 1 had 7, 1 had 9, and 1 had 11. Fifteen families were met with in which *all* the children, born of one marriage, were idiotic or very puny, while all those of another marriage, by the surviving *healthy* parent, with a healthy person, were sound in body and mind.

As illustrating the frequent complication of causes, and the consequent impossibility of clearly defining the extent to which each has operated, the reporters, in commenting upon a case of idiocy, make the following judicious observations. "In searching for accompanying circumstances which may throw light upon the probable causes, it is found that the father was a very intemperate man. This is not enough, for all intemperate men do not have idiotic children. His wife was related to him by blood, though not within the degree of first cousin, and still less was this a sufficient cause of the idiocy of the son. The wife's family was tainted with idiocy, her aunt having an idiotic child. We find, therefore, both intermarriage and idiotism in the family; but still this was not cause sufficient, because the parents of this boy had seven other children, all of tolerably good parts.

Looking at the mother's condition during gestation, it is found that at an early period of it she was several times very much agitated by terror and mental distress; that at a later one she became ill, and had great difficulty in carrying her child to its full period; and finally, that her confinement was very long, protracted, and painful. May it not be that these circumstances caused idiocy in this case, though they might not do so in ordinary cases, where the intemperance, or the intermarriage, or the tainted blood, or all of them, were wanting? May it not be, likewise, that *any one* of these circumstances occurring alone — the intemperance, the intermarriage, the family taint, the fright, the illness, or the long and difficult parturition — though it would not cause idiocy, or even any very manifest effect, might nevertheless materially *diminish* what would otherwise have been the bodily and mental vigour of the offspring?"

Reprints 1848
The causes of insanity appear to have been investigated at an earlier period in France than in England. Pinel (quoted by Dr. Pritchard), from the observations of five years, computed that cases of insanity, produced by moral causes, were to those occasioned by physical causes, in the proportion of 464 to 219. The following are the particular numbers from which this result is deduced: —

Cases.	Moral Causes.	Physical Causes.
Mania - - - - -	285	165
Melancholia - - - - -	148	46
Suicide - - - - -	31	8
Dementia - - - - -	26	31
Idiotism - - - - -	26	31

In 1818 M. Esquirol concluded that cases of madness, occasioned by moral causes, are to those arising from physical causes, in the proportion of 4 to 1.

The same author also published the following tables, which, however, are evidently imperfect, as no mention is made of intemperance or vice as causes, unless syphilis and mercury, mentioned among the physical causes, represent the latter.

CASES PRODUCED BY MORAL CAUSES.

Domestic grief	-	-	-	-	-	-	136
Disappointment in love	-	-	-	-	-	-	71
Political events	-	-	-	-	-	-	45
Fanaticism	-	-	-	-	-	-	9
Fright	-	-	-	-	-	-	46
Jealousy	-	-	-	-	-	-	32
Anger	-	-	-	-	-	-	16
Poverty and reverses of fortune	-	-	-	-	-	-	91
Offended self-love	-	-	-	-	-	-	17
Disappointed ambition	-	-	-	-	-	-	12
Excess in study	-	-	-	-	-	-	13
Misanthropy	-	-	-	-	-	-	2
Total	-	-	-	-	-	-	490

CASES PRODUCED BY PHYSICAL CAUSES.

Convulsions suffered by mother during pregnancy	-	-	-	-	-	-	15
Epilepsy	-	-	-	-	-	-	13
Irregularities in menstruation	-	-	-	-	-	-	74
Consequences of parturition	-	-	-	-	-	-	73
Critical period	-	-	-	-	-	-	38
Advanced age	-	-	-	-	-	-	64
Coup de soleil	-	-	-	-	-	-	16
Blows or falls on the head	-	-	-	-	-	-	18
Fever	-	-	-	-	-	-	25
Syphilis	-	-	-	-	-	-	9
Mercurey	-	-	-	-	-	-	32

Intestinal worms	-	-	-	-	-	-	28
Apoplexy	-	-	-	-	-	-	76
Total							481

And in 255 cases an hereditary predisposition was traced.

Of 374 cases of melancholia, Esquirol referred 264 to moral, and 110 to physical causes.

M. Esquirol also furnished a later statement of the cases in the Maison Royale de Charenton, which is appropriated to persons of a higher rank in society than those remitted to the other hospitals near Paris.

The following table contains the results of three years' observation (quoted by Pritchard, in his Treatise on Insanity, from the Annales d'Hygiène Publique.) Hereditary predisposition was traced in 93 cases only, though probably existing in many others. And in 36 cases only, out of 448, could the insanity be referred to physical causes. Thus —

"Insolation" was the cause of the attack in	-	-	-	7
Effect of carbonic acid gas	-	-	-	2
Suppressions of habitual evacuations	-	-	-	13
Consequence of parturition	-	-	-	10
Blows on the head	-	-	-	4
Total cases from Physical causes	-	-	-	36

While in the following cases it arose from —

Masturbation	-	-	-	-	-	-	23
Libertinism	-	-	-	-	-	-	24
Use of mercury	-	-	-	-	-	-	16
Abuse of wine	-	-	-	-	-	-	64
Domestic griefs	-	-	-	-	-	-	89
Excessive study and watching	-	-	-	-	-	-	8
Reverses of fortune	-	-	-	-	-	-	20

Passion for gaming	-	-	-	-	-	-	2
Jealousy	-	-	-	-	-	-	13
Disappointments in love	-	-	-	-	-	-	21
Injured self-love	-	-	-	-	-	-	6
Fright	-	-	-	-	-	-	7
"Dévotion exaltée"	-	-	-	-	-	-	18
Excess of joy	-	-	-	-	-	-	1
Reading romances	-	-	-	-	-	-	7
Total cases from Moral causes							319

The immense preponderance of the latter class of agencies, as thus shown, is most striking.

In his work on insanity, published in 1818, Dr. Halloran gave a table of the causes of mental disease, as they occurred in the county and city of Cork Lunatic Asylum, commencing January the 1st, 1798, and ending the 30th of June, 1818.

It furnishes the following results:—

Of 1270 cases the causes were returned as unknown in 623: of the 647 remaining cases, 79 were connected with hereditary predisposition, and 143 were referred to various physical causes, viz:

Epilepsy	-	-	-	-	-	-	57
Injury on the head	-	-	-	-	-	-	21
Palsy	-	-	-	-	-	-	13
Difficult parturition	-	-	-	-	-	-	36
Consumption	-	-	-	-	-	-	8
Fever	-	-	-	-	-	-	8

While no less than 527 were ascribed to one or more moral causes, viz.:—

Terror from the Rebellion	-	-	-	-	-	-	108
Jealousy	-	-	-	-	-	-	45
Pride	-	-	-	-	-	-	10
Grief	-	-	-	-	-	-	40

Religious zeal	-	-	-	-	-	-	20
Loss of property	-	-	-	-	-	-	84
Excess in drinking	-	-	-	-	-	-	160
Disappointment	-	-	-	-	-	-	47
Lues venerea	-	-	-	-	-	-	13

Of 12,033 cases of insanity, admitted into the asylums of England and Wales, and in which the causes were returned to the Commissioners in Lunacy in 1844, an hereditary predisposition was traced in 2557 persons, or 21·24 per cent.

In 6509 cases, or 54·09 per cent., the disease was referred to moral causes, viz. :—

Intemperance	-	-	-	-	-	-	1792
Vice	-	-	-	-	-	-	549
Poverty	-	-	-	-	-	-	1129
Grief	-	-	-	-	-	-	1548
Study	-	-	-	-	-	4	376
Religious excitement	-	-	-	-	-	-	782
Sudden fright	-	-	-	-	-	-	199
Other moral causes	-	-	-	-	-	-	134
Total							6509

In 3358, or 27·90 per cent., insanity was ascribed to physical causes, viz. :—

Puerperal disease	-	-	-	-	-	-	372
Injuries to head	-	-	-	-	-	-	274
Metastasis	-	-	-	-	-	-	55
Various physical causes and constitutional and local diseases							2657
Total							3358

In 2166, or 18 per cent., the cause was unknown.

In the recent valuable work of Drs. Bucknill and Tuke, the same general conclusion is arrived at. But in arranging the statistical tables of M. Par-

chappe, I observe that intemperance and vice (which together occasioned 204 out of the 976 cases referred to) have been placed by those gentlemen under the head of physical causes.

“The statistics of Bethlem Hospital point to the same direction, namely, that the cases arising from moral causes are about twofold those arising from physical causes, viz., 980 to 571.” (Op. cit. 259.) On the other hand, it is stated that in the York Retreat, and in the recent reports of some asylums in Ireland and in America, physical agencies are represented as preponderating in the production of insanity. Drs. Bucknill and Tuke also observe that “on a total number of 29,769 cases admitted into various asylums, they find three-fifths referrible to physical, and two-fifths to moral causes.” (p. 260.)

My own experience is wholly in favour of the idea that in the great majority of cases, insanity is directly or indirectly the effect of sources of mental disturbance originating in the will or feelings of the persons affected, and which may therefore properly be considered as moral in their nature. The mental affection itself may not be immediately produced by the moral disturbing cause, but if the latter excite in the system a series of disordered actions terminating in the former, and which would not otherwise have been in operation, we are surely warranted in regarding it as essentially productive of the attack of insanity. Moreover, in proving that the great majority of cases of insanity arise from moral causes, we prove that it is in general a preventible disease.

Many physical agencies and bodily infirmities can-

not be altogether prevented. But inasmuch as sound religion and sound philosophy alike enjoin constant warfare against the evil tendencies naturally existing in mankind, we are justified in believing that mental disorders arising from those moral weaknesses are by no means necessary and inevitable inflictions. It is no part of man's duty to bow down tamely to miseries of his own creation, and allow the light of his reason and the best and holiest of his spiritual attributes to be polluted by the offspring of his own vices and infirmities. And when educated communities can once be made to understand and feel that the preservation of their mental health is to a very great extent in their own hands, we may expect many of the most fertile sources of mental disorder to be speedily and effectually checked.

CHAP. III.

OF THE PHYSICAL CAUSES OF MENTAL DISORDERS.

IN directing particular attention to the physical causes of mental disorders, it is desirable to dwell chiefly on those which may be considered as to a certain extent preventible. For though it may be well to know the effect of age, sex, and other inevitable conditions, in modifying the liability to this class of diseases, it is evident that we cannot from that knowledge exercise very much influence in diminishing their action. With this reservation, it may be stated, as the result of statistical inquiries, that mental disorders are most apt to occur between twenty and forty years of age, during the prime of life, when the intellect and affections are most active, and when success and happiness on the one hand, or disappointment and misery on the other, have crowned or marred the expectations of youth. Idiocy is of course noticed from the earliest period of life, and in advanced old age the mental powers are almost invariably observed to be less vigorous. But in addition to the diminished acuteness of the senses and the weakened memory, which are the general accompaniments of old age, a more extensive disorder of the mind occasionally supervenes, and there occurs either a state of imbecility, which has been termed *senile*

dementia, or some one of the ordinary varieties of mental disorder.

The moderate exercise of the mind in old age rather tends to preserve than to exhaust its faculties; and we accordingly find that members of the learned professions, and other persons attached to intellectual pursuits often exhibit, at an advanced period of life, much of the vigour and ability which had characterised their earlier career. On the other hand, men of business, whose thoughts had never extended beyond the discharge of routine duties, or the mere accumulation of wealth, may sometimes be seen in declining years possessed of every physical comfort, but having a void within,—an intellectual desert, in which the mind stagnates and rapidly decays.

With regard to the influence of *sex* in predisposing to insanity, very little correct information can be obtained from statistics, and probably there is not much difference in this respect between males and females. For if various moral causes operate more extensively in men, the preponderance of the nervous temperament in women, and their greater liability to mental disorder from sexual peculiarities, act as counterbalancing influences.

Hereditary predisposition is one of the circumstances to which mental disorders are most frequently referred; but its precise extent of operation cannot be very accurately estimated. There can be no doubt of the fact, that the existence of insanity in one or both parents, greatly increases the liability of the offspring to suffer from the same class of disorders. Either the original conformation of the brain or the

quality of the blood, or a mental peculiarity independent of these, in such persons, facilitates the disturbance of the mental equilibrium from causes which, in more robust constitutions, would produce no injurious effect. This innate noxious influence sometimes produces idiocy and imbecility from earliest childhood; most frequently it acts during adult life; and in some rarer instances it does not manifest its operation until the approach of old age. Like other hereditary morbid tendencies, it is known occasionally to remain dormant during a generation, and then re-appear.

The congenital predisposition to mental disorder is of course greatly increased when both parents have this unhealthy constitution. And yet I have known a gentleman and his intended son-in-law to be inmates of the same asylum at the same time, and both labouring under one of the most terrible forms of insanity—*melancholia*, with a suicidal tendency! The neglect, even by the higher and more educated classes, of the simplest dictates of reason in reference to this subject, must materially assist in perpetuating this melancholy tendency. In examining the recorded causes of insanity, we often meet with trifling accidents and distant disorders as the physical agencies to which it has been assigned. Now, when the extraction of a tooth, or a slight accident, is stated to be the cause of an attack of mental disease, we cannot, I think, be very uncharitable in assuming that these circumstances were but the exciting agencies, and that a peculiar susceptibility to this class of complaints was previously inherent in the system.

An hereditary predisposition to mental disorders is very generally associated with the two next causes, namely, Temperament and Scrofula. We shall see that either of these may be acquired, and we know that insanity may also be induced in a person quite free from any family liability to it. But all the peculiarities of constitution, mental and corporeal, which may thus be acquired by parents, and transmitted to their offspring, are, to a very great extent, capable of being eradicated, by attention to the training and external conditions surrounding the latter. The more important measures to be adopted will be hereafter indicated: at present, I shall merely express my concurrence in the subjoined remarks by the authors of the "Report on the Causes of Idiocy." "This subject of the hereditary transmission of diseased tendency is of vast importance; but it is a difficult one to treat, because a squeamish delicacy makes people avoid it; but if ever the race is to be relieved of a tithe of the bodily ills which flesh is now heir to, it must be by a clear understanding of, and a willing obedience to, the law which makes the parents the blessing or the curse of the children,—the givers of strength, and vigour, and beauty, or the dispensers of debility, and disease, and deformity. It is by the lever of enlightened parental love, more than by any other power, that mankind is to be raised to the highest attainable point of bodily perfection. Idiocy (insanity) is found in all civilised countries, but it is not an evil necessarily inherent in society; it is not an accident, and much less is it a special dispensation of Providence: to suppose it can be so, is an

insult to the Majesty of heaven. No! It is merely the result of a violation of natural laws, which are simple, clear, and beautiful; which require only to be seen and known, in order to be loved; and which, if strictly observed for two or three generations, would totally remove from any family, however strongly predisposed to insanity or idiocy, all possibility (probability?) of its recurrence." (pp. 3 and 4.)

By the term *temperament*, the ancients expressed those peculiarities of mental and bodily constitution which separate the inhabitants of the same country into certain natural groups or classes. In the majority of persons, these marks of distinction are not strikingly prominent; but we constantly meet individuals who present in a marked degree the leading characteristics of each temperament. The indications on which this classification rests, are derived from the colour and general physico-vital properties of the skin, hair, eyes, and other external parts of the body, as well as from the relative functional vigour of its organs. Each temperament is also observed to be associated with certain mental peculiarities. By the continued intermarriage of persons of the same temperament, its characteristic features become, in the offspring, more and more developed; and conversely, by the union of persons of opposite temperaments, the extreme peculiarities of both become gradually eradicated. As a general rule, it may be observed, that the possession, in a very marked degree, of the conditions characterising any one temperament, subjects the individual to a greater proneness to mental and bodily disorder. And as regards the former

class of diseases, we can even recognise in each temperament a greater liability to a particular form of insanity. Thus, in persons of the *leuco-phlegmatic* or *lymphatic* temperament, where the mind is generally sluggish, an unusual tendency to imbecility or *dementia* may frequently be noticed. In the *melancholic* temperament, the depressing emotions naturally preponderate, and too often produce a permanent gloom, giving rise to fearful thoughts and utter hopelessness.

The *sanguine* temperament is less intimately associated with any particular form of mental disorder; in it the imagination is active, and the mental energy considerable: and hence, under the influence of powerful disturbing causes, delusions are generated and the reasoning faculties perverted.

The *bilious* temperament of the ancients seems now to be replaced by that termed *nervous*. In it the higher faculties of the intellect, those of the judgment, comparison, &c., are said to be most frequently evinced; but the very sensitiveness or mobility of the nervous system which favours this mental development equally increases its liability to disorder. With this nervous temperament there also generally co-exists bodily debility, both being fostered by the artificial mode of existence, the prolonged mental efforts, the neglect of bodily exercise, and the sensuous refinements incident to modern civilization. This fact of the occasional combination of mental excitement with bodily weakness should be constantly present to the mind of every person engaged in the treatment of any form of mental or nervous

disorder, and to the neglect of the practical inferences which it suggests, much mischief may be traced. The increased prevalence of the nervous temperament is a prolific source, not only of actual mental disease, but also of a host of disorders, some of which, such as epilepsy and paralysis, involve danger to life, and all of which engender much discomfort and suffering, and materially detract from the legitimate enjoyments of existence. For every insane person in this country there are probably at least a hundred labouring under one or more of the protean varieties of *nervous disorder*. It may not, then, be useless to dwell for a short time on the more important features of this subject, and in considering it I shall avail myself of the work of one of my predecessors in Newcastle-on-Tyne, the late Dr. Trotter, author of "*Medicina Nautica*," who, in 1807, published "*A View of the Nervous Temperament*," marked by great natural shrewdness and good sense, and containing the results of prolonged experience and an extensive knowledge of mankind.

From it the following extracts are taken : —

"The last century has been remarkable for the increase of a class of diseases but little known in former times, and which had slightly engaged the study of physicians prior to that period. They have been designated in common language by the terms *nervous, spasmodic, bilious, indigestion, stomach complaints, low spirits, vapours, &c.* An inaptitude to muscular action, or some pain in exerting it; an irksomeness or dislike to attend to business and the

common affairs of life ; a selfish desire of engrossing the sympathy and attention of others to the narration of their own sufferings, with fickleness and unsteadiness of temper, even to irascibility, and accompanied more or less with dyspeptic symptoms, are the leading characteristics of *nervous disorders*, to be referred in general to debility, increased sensibility, or torpor of the alimentary canal." " Sydenham, at the conclusion of the seventeenth century, computed fevers to constitute two-thirds of the diseases of mankind. But at the beginning of the nineteenth century, we do not hesitate to affirm that *nervous disorders* have now taken the place of fevers, and may justly be reckoned two-thirds of the whole with which civilised society is afflicted."

" The physician of a cultivated understanding, who knows how to appreciate the resources of his art, in approaching the sick-bed of any of these persons, would endeavour to investigate the marks and dispositions of body and mind that give the peculiar cast of character to each, before he would attempt to prescribe for their diseases. He would not confound the complaint of the slim, soft-fibred, man-milliner with that of the firm and brawny ploughman ; nor would he mistake the nervous cramp of the delicate lady for the inflammatory pleurisy of a nut-brown country girl. If both expressed pain on the same spot or organ, he would, in consideration of original temperament, along with the concurrence of symptoms, resolve into first principles what belonged to each constitution, and thus analyse the morbid phenomena, so as to give a degree of certainty to his indi-

cations of cure, and a decision to his practice, that would insure success, if the disease was at all remediable."

"The remote causes of nervous diseases are chiefly to be sought in populous towns, and increase in proportion to the deviation from simplicity of living. Where the savage feels one want, the civilised being has a thousand. The state of civilised mankind is thus exposed to causes of bad health which have no power among rude nations, viz., in air, exercise, food, clothing, passions of the mind, intense study, lactation, miscarriages, climate, medicine." "As the use of this article in diet, (tea,) extends among the lower orders of the community, and the labouring poor, it must do the more harm. A man or woman who has to go through much toil or hardship, has need of substantial nourishment; but that is not to be obtained from an infusion of tea." "One of the most common causes of nervous, bilious, and stomach complaints, is excessive or long-protracted grief. Mothers who have lost children particularly suffer under these painful affections." "Next to the heartrending emotions of parental sorrow, may be reckoned the effects of disappointed love in the sensible (sensitive?) female frame." "As the manners of the age must always materially influence diseases of the nervous class, so among their moral causes ought to be reckoned religious melancholy and enthusiasm, jealousy, avarice, insatiable revenge, boundless ambition, envy, misfortunes in business, and some species of pride. All these, in their various operations on the human mind, excite extra-

vagant hope, or abject depressions of spirit: in the issue, harass the nervous system, produce watchfulness, or unrefreshing sleep, engender tumultuous passions, impair the appetite, and disturb chyli-fication. To these succeed spasmodic, bilious, and hypochondriacal complaints; all of which centre in the organs that prepare and assimilate the nourishment of the body."

"All nervous persons are uncommonly fond of drugs, and they are the chief consumers of advertised remedies, which they conceal from their medical friends. Confinement within doors, a uniform mode of living, and sedentary habits, are so commonly met with among persons of the nervous temperament, that a constipated state of body is a general condition of their disease. Hence the frequent recourse to medicine for opening the bowels. A long walk out of doors and a little active exercise and recreation will effect sometimes what large doses of medicine are unable to perform. But *mercury* is the most dangerous of all frequent purges: it never fails in the end to add to the disease, it is peculiarly contra-indicated in the nervous temperament. When long continued, narcotics (including alcohol) are known to weaken the nervous system in a surprising degree, disposing to amentia, epilepsy, palsy, tremors, convulsions, melancholy, &c."

In Dr. Trotter's strictures upon the abuse of tea as an article of diet, and its too frequent substitution for more nutritious food among the labouring classes, I fully concur. From an experience of

several years among the poor of Newcastle, as a dispensary physician and otherwise, I am satisfied that very great injury accrues to the women and children—the former often either pregnant or nursing an infant—from their living almost exclusively upon tea and bread. In such cases, the stomach totally loses the power of digesting animal food, and it is only by careful treatment that it can be regained. Thus not only are the children rendered weak, and unnaturally liable to convulsive diseases, but the mothers are also prematurely debilitated, their blood impoverished, and various unhealthy and exhausting discharges induced.

In one of the reports of the Newcastle Eastern Dispensary, my colleagues and I drew especial attention to this subject, as affecting the health and interests of the poor. How much more wisely the working classes of this neighbourhood formerly expended their earnings, may be learnt from the subjoined passage from Sir J. Sinclair's "Code of Health," p. 175. "Perhaps the best plan for the nourishment of the labouring classes hitherto introduced into practice, is that adopted by the keelmen of Newcastle, who buy fat meat, which they make into broth. The liquid part is given to their wives and children, the solid part they consume themselves, in a cold state, along with bread in slices, taking it with them to their work."

I am also satisfied that the habitual introduction into the system of small doses of mercury, in the form of aperient pills, is fraught with much evil to the debilitated constitutions of nervous women; and

hence, for some time I have carefully avoided such preparations as Pil. Hydrarg. cum Rhæo, Pil. Colocynth. cum Hydrargyro, &c., unless used for special reasons.

As regards the prevention of the nervous temperament, Dr. Trotter recommended more particularly country air, a reversed mode of living, ("the old maxim, *contraria contrariis medentur*, is better exemplified here than in most other diseases,") horse exercise, the cold bath, the sea-side, and other watering-places, change of scene, mineral waters, and *moral regimen*.

Scrofula is a most important cause of mental derangements, and may also be traced to a departure from the conditions regulating healthy existence. It is somewhat difficult to define with exactness the invisible morbid state which produces such a variety of melancholy effects; but it probably acts by, or is connected with, a diminution of the *vis vitæ*, or inherent formative power of the tissues. There is thus induced a low type of organisation, which is evinced in the body as a whole, and in each of its constituent organs, including, of course, the brain. When existing in a parent to an extreme degree, idiocy is often manifested in the offspring; and all the forms of insanity are very frequently observed in combination with the *scrofulous diathesis*. The causes of scrofula are well known to be those comprised in a *defective sanitary condition*, and consist in the privation of the essential requisites of health, such as pure air, a proper supply of nutritious food, sufficient clothing, and the means of obtaining

bodily exercise. It matters not whether those noxious influences act in the crowded lanes of a manufacturing town or on the occupants of hamlets buried in the deep valleys of the Alps. The vital effects are always analogous, and the victims are sure to exhibit, in their conformation and in their diseases, evidence of structural deterioration and innate weakness.

From the rapid increase of town-populations in this country, and the tendency to an accumulation, in large cities, of masses of indigent and helpless persons, the causes of scrofula are most active in those localities; and its prevalence is an evil which ought to command the attention of every enlightened statesman. For from the circumstance just mentioned, it is evident that our armies must henceforth be chiefly recruited from the very districts and classes where the tendency to corporeal deterioration is most marked; and on the success or failure of the attempts now being made to improve the physical and moral condition of the working classes in our great seats of industry, virtually depends the maintenance or decay of our national greatness. In addition to the mere negative aid to health afforded by the removal of the positively injurious influences now operating in our large towns, immense benefits would result from increased attention to physical education and training. Even the moral advantages of maintaining, in a perfect state, the bodily vigour of a population, are by no means inconsiderable; and were athletic games officially encouraged and placed under such regulations as

entirely to preclude the possibility of the taint of intemperance and vice being introduced into them, many a puny body and sickly mind would disappear, and the health and consequent happiness of the working classes be materially promoted. In support of these views, I shall again refer to Dr. Trotter, who, as physician to the fleet during several years of active warfare, may be considered an authority on such a subject.

“All the nations of antiquity,” says he, “of which we read, who trusted to the art of war for safety, found it expedient to train their youth to hardy and active exercises, for the purpose of making them soldiers. The Olympic games, Gymnasium, Palæstra, Campus Martius, Circus, and Arena, were so many places appropriated to the diversions and shows of running, wrestling, fencing, throwing the quoit, &c. Without stated exhibitions of this sort, the inhabitants of large cities could not be well inured to bodily fatigue or become athletic. He must know little of a military life who would trust the defence of a country to sedentary people.”

Dr. Gillies, in his animated description of the Olympic games and gymnastic exercises of the Greeks, says, “Bodily strength and agility were accompanied by health and vigour of constitution. Their athletic hardiness bore, without inconvenience, the vicissitudes of cold and heat; and the firm organisation acquired by perpetual exercise counteracted that fatal propensity to vicious indulgence too natural to their voluptuous climate, and produced those inimitable models of strength and beauty which are so

deservedly admired in the precious remains of Grecian statuary. *There is a courage depending on nerves and blood* which was inspired to the highest pitch among the Greeks."

And Sir John Sinclair thus concludes the consideration of the same subject:—"On the whole, it can hardly be doubted, that the sports and diversions of a people may be turned to the advantage of the nation; and that a wise and prudent government may excite in the husbandman, the manufacturer, and the mechanic, as well as in the sailor and soldier, and persons in the higher ranks and professions of society, such an emulation as may tend not only to the preservation of health, but to promote agriculture and industry, to encourage trade, to improve the wisdom and knowledge of mankind, and to render a country happy in peace and victorious in war." (p. 209.)

It cannot be considered extraordinary that *injuries and diseases of the nervous system* should occasionally be productive of permanent disorder of the mental functions. The wonder is that such an effect is not more frequent, and that extensive injury and structural change in the brain may sometimes exist without any appreciable diminution of the intellect. The most general results of such accidents and diseases, when they do give rise to disorders of this kind, is, as might have been expected, diminished mental energy and acuteness, constituting the disordered states termed chronic mania, dementia, and fatuity. Sometimes, after apoplexy and paralysis, the mental powers are but partially weakened, and

loss of memory or some other faculty constitutes the only manifestation of mental disease. The nature of the diseases of the nervous system most frequently associated with insanity, may be estimated from the following return of cases in which that class of diseases proved fatal to persons labouring under mental derangement in the English asylums. In the following cases death was ascribed to—

Apoplexy	-	-	-	-	-	354
Diseased brain, &c.	-	-	-	-	-	349
Epilepsy	-	-	-	-	-	457
Paralysis	-	-	-	-	-	459
Exhaustion	-	-	-	-	-	281
Water on brain	-	-	-	-	-	54
Ramollissement	-	-	-	-	-	13
Meningitis, &c.	-	-	-	-	-	60
Delirium tremens	-	-	-	-	-	8
Nervous concussion	-	-	-	-	-	1
Dementia	-	-	-	-	-	9
Total						2045

“In certain asylums where the patients admitted have, from the combined influence of poverty and vice, been greatly debilitated, the increased mortality from diseases of the nervous system above that of the general average is most marked. Thus the average mortality from this class of diseases in the various asylums throughout England and Wales is 49·38 per cent.; the average mortality being—

From apoplexy	-	-	-	-	8·54 per cent.
„ epilepsy	-	-	-	-	11·03 „
„ paralysis	-	-	-	-	11·08 „
„ diseased brain, &c.	-	-	-	-	8·42 „

Whereas, in Bethnal House, Bethnal-green, according to the returns made to the Commissioners, of

500 deaths recorded, no less than 350, or 70 per cent., were from diseases of the nervous system, viz. :—

From apoplexy	-	-	-	38, or 7·60 per cent.
„ epilepsy	-	-	-	92, or 18·40 „
„ paralysis	-	-	-	153, or 30·60 „
„ disease of brain, &c.	-	-	-	19, or 3·80 „
„ collapse	-	-	-	48, or 9·60 „

“ The excess of deaths from diseases of the nervous system in this asylum, as compared with the average mortality from the same class of causes in the English asylums generally, was therefore no less than 120. And it is interesting and instructive to compare the above-mentioned excessive mortality with the return of the causes of insanity among the inmates of the same asylum, by which it appears that of 241 cases admitted, 99, or 41·07 per cent., were from intemperance ; 53, or 21·99 per cent., from vice ; and 24, or 9·95 per cent., from poverty ; both the previous physical condition, and the habits and misfortunes of the patients, thus tending to induce general, and particularly nervous, debility and its consequent diseases.”*

The connection between epilepsy and insanity is very intimate ; the epileptic paroxysm being frequently preceded or followed by maniacal excitement of greater or less duration, and continued epilepsy generally terminating in dementia.

The functions peculiar to the female sex, and the natural sensitiveness of the nervous system in the

* From a paper on the Statistics of Insanity, compiled by the author, and published in the “ Medical Times,” 1852.

latter, render them very liable to disturbance of the mind when those functions are irregularly performed. From the commencement of puberty to the approach of old age, this source of disordered nervous and mental action exists, and in every case of insanity occurring in females, the possibility of some bodily functional derangement existing simultaneously with, and perhaps operating as the exciting cause of, the mental affection, should never be forgotten. Amenorrhœa, dysmenorrhœa, menorrhagia, pregnancy, miscarriages, parturition, the puerperal state, lactation, the cessation of the menstrual function, are each occasionally productive of mental disorder, which can only be cured by attention to the exciting cause. This consequence of such ailments is naturally rendered much more probable when moral disturbing causes are also in action, and hence there is an additional reason for maintaining a state of quiet repose at such periods.

insanity
From an examination of the statistical reports of various authors, I am led to the opinion that puerperal insanity is less prevalent in this country than formerly; and I think this gratifying inference, if found to be correct, may chiefly be ascribed to two causes,—the more skilful because more simple management of women during parturition, and the greater caution now exercised in the use of the lancet, when symptoms of nervous disorder supervene on the puerperal state. There is every reason to believe, that in many cases the mental excitement and delirium which occur in nervous women after parturition was formerly mistaken for phrenitis, and

treated antiphlogistically; whereas the cerebral affection was probably in its nature essentially identical with the pseudo-peritonitis, occasionally present at the same period: in fact, a state approaching rather to delirium tremens than cerebritis, and requiring the treatment of the former rather than that applicable to the latter.

Fever of every kind is often accompanied by delirium, and sometimes complicated with inflammation of the brain and its membranes. It is not, therefore, extraordinary that it should occasionally be followed by permanent mental disorder. Typhus, small-pox, the secondary fever of cholera, in short, any form of fever, may either give rise to a subsequent attack of acute mania, or the patient, when recovered from the febrile affection, may pass into a state of chronic mania or dementia. In these cases, also, venesection injudiciously used is productive of great mischief, and the prognosis, under such circumstances, will generally be unfavourable. It may be added, that the diagnosis of typhus from acute mania sometimes requires a little attention, and instances every now and then occur of the former being mistaken for the latter, and patients in the last stage of fever being improperly removed to asylums.

In *gout*, *rheumatism*, *erysipelas*, and some other constitutional diseases attended with local disorder, it is occasionally observed that the latter will cease in the organ first affected, and transfer itself to the brain and its functions, constituting the morbid action termed *metastasis*. The circumstances producing this untoward effect are not always very apparent,

and we can only regulate the treatment of such affections by the ordinary principles of therapeutics.

In like manner, *suppressed habitual discharges*, and *repelled cutaneous eruptions*, are sometimes followed by severe symptoms of disordered nervous action, and even by insanity. Instances of such an occurrence may be found in systematic writings on medicine, and a French physician has collected several cases in a work bearing the somewhat singular title, "*Traité des Maladies qu'il est dangereux à guérir.*"

CHAP. IV.

OF THE MORAL CAUSES OF MENTAL DISORDERS.

FROM the preceding remarks it will have been seen that while many of the physical agencies inducing mental disorder originate in a violation of the laws regulating bodily health and vigour, some even of them can be traced to the neglect of moral duties. And the statistical documents previously adduced, prove that in the majority of cases insanity is directly referrible either to vicious indulgence or mental suffering.

Among the former division, *intemperance*, or the abuse of alcoholic drinks, stands pre-eminent; and having in 1848 published, in the "Journal of Public Health," some remarks on the relations existing between it and insanity, I may, perhaps, be excused for now availing myself of a portion of that communication.

"Of all the movements which characterise the present age, there is none promising happier or more glorious results, none better calculated to improve the temporal and eternal welfare of mankind, than that which encourages us to trace the source, with a view to the prevention and removal, of the various evils, physical as well as moral, which afflict and disgrace society. It has hitherto been too much the custom for those who have considered the question

at all, to refer those evils to agencies over which man possesses no control; whilst the great majority turn from their contemplation as they would from any other hideous and revolting spectacle, and endeavour to forget their existence in the observation of more cheerful and gratifying scenes. Both lines of conduct are, I think, to be deprecated; but the former is much the more pardonable error, inasmuch as it arises from excessive, though misplaced, humility; whilst the latter must, in every instance, be the result either of moral cowardice or of selfish indolence.

“As the unnatural interpretation and forced application of a religious principle may thus possibly induce some persons to view with indifference, if not with dislike and suspicion, attempts to diminish crime, disease, and misery, by removing their presumed causes, I may, before entering upon the proper subject of this paper, perhaps be permitted to say a few words in justification of the general practice.

“Experience, or the knowledge gained by observation and comparison of the events continually occurring around us, has, so far as we can see, fully shown that the mental and moral nature of man is governed by laws as definite in their action as those which regulate the phenomena of the human body. Thus we know that the operations of the intellect can proceed only under certain physical conditions; that its vigour is affected by changes in those physical conditions (being enfeebled, excited, or perverted by structural injury of the brain, and by irregularities in the quantity and quality of the blood

supplied); that the different faculties of the mind bear to each other certain fixed relations; that those faculties are extremely diversified; that their combination constitutes the perfect mind; that an undue preponderance of one impairs the harmony of the whole; and that the minds of different individuals are in general similarly affected by the same physical and moral sources of disorder. In like manner, not only do the same moral faculties exist in a greater or less degree in all members of our race, but certain general principles are also discernible in the growth and government of those faculties. We can thus detect in every human being more or less capability of pity, gratitude, veneration, and benevolence. We find that the same agencies, the same peculiarities of education and habit, produce everywhere the same effect in developing or suppressing the manifestation of those virtues. We recognise in the millions constituting a nation, the virtues and the vices peculiar to its individual members.

“And if among ourselves we can invariably trace a close connection between physical discomfort and defective education on the one hand, and numerous and varied forms of sin and suffering on the other, are we not justified, nay, are we not bound, by every consideration of philanthropy and religion, practically to acknowledge the existence of that connection by using our utmost exertions to remove and prevent the further operation of those causes?”

“Intemperance and insanity, the two greatest curses of civilization, are, in their very nature, so intimately connected, that any examination of one would neces-

sarily be incomplete without some reference to the other. For both exhibit as their essential phenomena perversion or disorder of those mental powers which impart to man his vast superiority over the rest of the material creation. So close, indeed, is the resemblance between the two states, that whoever has carefully observed the language and conduct of a number of intoxicated persons, must have witnessed most of those varieties of mental disorder which are, unhappily, often spontaneous in their origin, and of permanent duration. He will have seen, as in miniature, the excitement of raving delirium, the maudlin sensibility and groundless apprehensions of the melancholic, the bloodthirstiness of the homicidal, the cunning desperation of the suicidal, maniac, the prostration of the moral feelings, the inflation of the mind with delusions as to dignity, wealth, and knowledge; and, finally, in the last stage of intoxication, he will have noticed the gradual disappearance of every manifestation of reason, until the vacant gaze and drivelling smile have for the moment stamped upon the countenance the fearful inanity of idiocy. Since, then, a single dose of an intoxicating substance possesses the power of temporarily disordering the intellect, perverting the moral sentiments, and even wholly suppressing the operations of the mind, it is not wonderful that the continued use of such agents should frequently induce permanent mental derangement. Continuance in that habit may occasion this effect either directly or indirectly. We possess no data by which to estimate its influence in predisposing to insanity; we can, however, readily

conceive that it must be very considerable. It is found that the minds of persons who have once laboured under an attack of mania, are ever afterwards more liable to excitement, and less capable of preserving their equilibrium whilst exposed to disturbing influences, than those which have never deviated from a healthy state. We have seen that each fit of intoxication is, in fact, a temporary attack of insanity. We notice in every-day life, how frequently the intellects of habitual drunkards become impaired, and knowing these things, we cannot avoid the conclusion, that an excessive use of intoxicating substances will, in time, so enfeeble the mind as to render it incapable of bearing ordinary sources of disturbance, and thus act as a powerful predisposing cause of insanity.

“ A series of statistical tables, published in 1844, by the Metropolitan Commissioners in Lunacy, though in many respects incomplete, will enable us to form an estimate of the extent to which intemperate habits operate in this country as the *exciting* cause of mental disorder. Before entering upon their consideration, it may, however, be necessary to premise that the exciting are also often the predisposing causes of insanity, and that an individual born with an hereditary predisposition may discharge all the duties of an active life without any disturbance of the mental equilibrium, unless exposed to unnatural or extreme sources of anxiety or excitement.

“ The following table shows the proportion which intemperance bears to the other exciting causes of insanity, as exhibited in the returns from ninety-

eight asylums in England and Wales, including all those which afford any information as to the relative influence of that cause.

Total number of Cases returned.	Proportion per cent. ascribed to Intemperance.	Proportion per cent. ascribed to Intemperance and Vice.
12,007	17·97	19·57

“Even according to this imperfect return, then, intemperance constitutes the immediate cause of one-seventh of the cases contained in the English asylums; but a very brief examination of the question will suffice to prove that this estimate is greatly below the truth.

“For these reasons I beg to subjoin a second table exhibiting the proportion which intemperance and vice bear to the other causes of insanity, as described

Description of Asylum.	Number of cases caused by Intemperance.	Number of cases caused by Vice and Sensuality.	Total number from both causes.	Total number of Exciting Causes returned.	Proportion per cent. caused by Intemperance alone.	Proportion per cent. caused by Intemperance and Vice.
6 Metropolitan, private . . .	101	44	145	424	23·82	34·19
9 Provincial, private . . .	92	16	108	282	32·62	38·29
10 Provincial, pauper and mixed	495	110	605	2086	23·72	29.
Total . . .	688	170	858	2792	24·64	30·73

in the returns from twenty-five asylums, situated in various parts of England, and admitting different classes of patients.

“It will be seen that these returns refer to intemperance alone one-fourth, and to it, in conjunction with vice and sensuality, nearly one-third of all the cases of insanity admitted.

“These facts may suffice to show the extent to which insanity, with its long train of domestic miseries and public evils, is the result of preventible causes.

“It requires but little observation and reflection to perceive that any permanent improvement in the habits, and consequently in the physical and mental condition, of the great mass of our population cannot be effected merely by reasoning or exhortation. For the accomplishment of this desirable end, we must rely rather upon our efforts to remove the causes which induce a state of mind favourable to the growth of vicious and intemperate habits, than upon words or promises uttered in a moment of temporary remorse or enthusiasm. A detailed examination of the causes of intemperance would be tedious and inadmissible; but there are two agencies which operate so extensively and powerfully in vitiating the habits of the poor, that they may, perhaps, even on the present occasion, be briefly adverted to. They are—1. The excessive depression of the mental and vital powers, caused partly by the impurity of the air which they are compelled to breathe, and, in part, also by the discomfort and squalor of their homes.

“2. The utter neglect of their moral education, in

consequence of which they are left without any check upon their passions and desires, though exposed throughout life to more than ordinary temptations. And until these two evils are obviated, the advocates of temperance, and the friends of religion, will vainly attempt to check the progressive demoralisation of a large proportion of the working population of this country.

“Nor is it difficult to show the connection between these physical and moral defects and the production of insanity. In proof of the influence of physical discomfort in inducing, first, vice, and through it insanity, I may refer to the return of the exciting causes of mental derangement furnished by a large asylum situated in the east of London, near those districts which the investigations of Dr. Southwood Smith have rendered notorious as the seats of filth, disease, and misery. It there appears (Commissioners’ Report, p. 100), that of the 241 cases enumerated, 99 were induced by intemperance, and 53 by vice and sensuality, making the total number of cases from these sources amount to 152, being a proportion of 41·07 per cent. from intemperance alone, and 63·07 per cent. from it and other vices. This proportion is very much higher than that of any other asylum in the kingdom, amounting to nearly two-thirds of the total admissions; whereas in the estimate previously adopted as an average for England, we ascribed to these causes but *one-third* of the cases met with in asylums. And it is impossible to avoid the conviction that this great excess is chiefly referrible to the dissolute and reck-

less habits generated amongst the inhabitants of the adjacent localities, by the discomfort of their homes, and the depressing influence of an impure atmosphere. And with respect to the second cause above specified, it may be observed that all cases of insanity, resulting from the agencies now under consideration, and cases of *moral* insanity, however occasioned, are directly referrible to one and the same radical defect in the mental constitution of those affected, — viz., the absence of an adequate controlling power, whereby to regulate their actions, and to render them amenable to the laws of reason and religion.

“The development of this power of self-government, so indispensable to the personal happiness, the social prosperity, the intellectual vigour, and the moral integrity of each individual, should therefore constitute the unceasing, the first, the all-pervading object of education. And yet how lamentably deficient in this particular are most modern educational systems? It would be folly to hold up for imitation the sternness of ancient stoicism, or to bestow unlimited praise on the harsh training of the Spartan school; but it may be doubted whether our statesmen and public instructors have much surpassed those of Greece and Rome, either in their estimate of the importance of mental discipline, or in the adoption of systems calculated to diffuse throughout the community a spirit of magnanimity and virtue. For what is modern education? The eye is taught to admire the beauties of art, the ear is trained to a nice perception of all the modulations of harmony; the child studies the graceful carriage of its person, and learns to utter in

foreign tongues the empty phrases of social intercourse; and having subsequently acquired a few maxims of conventional morality and economical virtue, the youth encounters the dangers and difficulties of the world, without any adequate provision having been made for the guidance and government of the noble intellect and immortal spirit, of which that highly-cultivated body, with all its symmetry and structural perfection, is but the casket and the tool. In other cases, to use Dr. Pritchard's words, 'too great sacrifices are often made to the cultivation of intellect, or even to the mere acquisition of knowledge, while the education of the moral affections is considered as a matter of secondary importance.' And if the evils consequent on this preference of the material, the mercenary, and the sensual, be occasionally observed amongst the noble and the wealthy, how shall we describe the gloomy gulf of moral and intellectual nonentity into which the poor are plunged? Unprovided with higher sources of gratification, they are driven to seek enjoyment in sensual pleasures; and ignorant of the necessity for exercising over their actions a constant moral control, they yield to vicious impulses, and so swell the number of the criminal and the insane. There are, however, at length, some indications of the advent of a brighter era, and we may confidently hope that an improved system of social legislation will ere long remove many of the existing causes of physical and mental disease, and so save the state much of that unnecessary expenditure which arises from its neglect of one of the first duties of a civilised government."

To these remarks I have little to add beyond the

renewed expression of my conviction, that the spread of intemperance among the working classes will be most effectually checked by raising their general physical and moral condition, and by facilitating the adoption by them of habits similar to those of the more favoured portions of the community. Thus the possession of a comfortable home, and ready access to a library and reading-room, will tend to diminish the attractions of the drinking-saloon. And in acquiring domestic habits, the workman will be led to derive a pleasure from the company of his family in visiting places of public recreation and amusement. The diffusion of education among the industrial classes will also introduce a higher standard of taste, and respectable mechanics will, ere long, shrink from the degradation of appearing in an intoxicated state before their fellow-workmen. It must, however, be admitted, in justice to the working classes of this country, that the public-house is to them an office for the transaction of business most important to themselves and families. It stands to them in much the same relation as the insurance society, the bank, and the advertising columns of the newspaper occupy to the wealthier classes. To the "*house of call*" the workman necessarily goes to try to hear of employment; the place of meeting of "*the sick and funeral club*" he must attend with his contributions; and if still more provident or fortunate, he will bring to the "*benefit*" or "*building society*" an additional portion of his weekly earnings. Now under existing circumstances, and until better provision is made for the industrial classes in these respects, it is evident that

one fertile source of intemperate habits will continue in operation.

And when engaged, a few years since, in some investigations into the condition of the poor, I remember the astonishment with which I learnt of *female* benefit and funeral societies meeting regularly in public-houses, and adopting, as one of their rules, that a certain minimum sum must be spent in drink at each assemblage !

Under the term *vice* are comprised, in returns of the causes of insanity, several evils which cannot be very fully discussed. They consist essentially in sexual excesses and abuses, and in the diseases and impaired bodily health produced by them. They are connected with other extensive social evils, and, like them, generally arise from the neglect of a most important and beneficent law. It is indisputably proved, by multiplied facts, that the married state is that most conducive to mental and bodily health. The proportion of insane persons among the unmarried is invariably greater than among those in the possession of domestic enjoyments. And this occurs notwithstanding that in many cases marriage is not the result of mutual affection, and that the very misery consequent on ill-assorted unions sometimes adds to the number of those mentally afflicted. We also find that "disappointed affection" plays no unimportant part in the production of mental disorders; nor is this extraordinary, when we reflect on the vast influence which these emotions exercise on all the individual's subsequent thoughts and actions.

At the meeting of the Association for the Promo-

tion of Social Science, held at Birmingham last year, Sir Benjamin Brodie strongly advocated early marriage as a preventive of many of the evils which now disgrace society; and on medical, as well as moral grounds, will all right-thinking persons support this recommendation of one of the most sagacious and experienced social observers of the present day. Of the obstacles to the realisation of this benevolent wish, constituted by the love of wealth and display, and the multiplication of unmeaning castes among "society," and of their ultimate effect upon the national welfare, it has recently been observed in a journal devoted to the cause of social progress, "It is no unusual event to witness the sacrifice of youth and beauty at the shrine of luxury and wealth. . . . There is no doubt that the guilt of many of these cruel immolations lies at the door of our high-born matrons; compelling as they do their daughters, and at least training their sons to 'pass through the fire to Moloch.'" Some recent cases "are indications of a depraved condition of society; they show that the contest for wealth is not less earnest amongst the higher and more educated class than amongst those who, not being born great, are eager to achieve at least such greatness as the acquisition of wealth is able to confer. It is true that the wealth of England is one of the chief sources of her dignity and power, and that the desire to attain wealth is, *per se*, a laudable ambition; but when we witness this eagerness to acquire it, not as a means to any worthy end, but for purely selfish purposes, — for personal aggrandisement, and the gratification of a vain and false ambi-

tion, and that, too, at the sacrifice of whatever is good and admirable in human nature,—we cannot but lament the spectacle as a proof of existing corruption, and an evil omen for the future.

“ Were such a state of manners to become general among us, the downfall, which envy has long delighted to predict, for the greatest and most powerful people in the world, could not be far distant. Wealth and luxury, the corruption of morals, the extinction of public and private virtue, and a decay more or less rapid—this is an ‘ old, old story ’ in the history of nations.” (“ The Philanthropist,” July 1st, 1858.)

Poverty and reverses of fortune are among the generally assigned causes of insanity. Both are accompanied by an impaired bodily condition, and the latter is frequently associated with grief and other depressing emotions. *In this country poverty as measured by pauperism is increasing*, and it is to be regretted that more attention is not directed by the Poor Law authorities to the assigned causes of the latter, with the view of checking its progress. Charity as *administered* “ according to law,” is not calculated to exercise a very elevating moral influence upon its recipients ; and there is but too much reason to apprehend that pauperism occasionally becomes an hereditary condition. The poorest classes are known to be the most liable to bodily disease ; they are also disproportionately afflicted by mental disorders. There is an appendix to the American report previously quoted, on the “ Relation of Poverty to Insanity and Idiocy,” which contains the following passages : —

“ There is manifestly a much larger ratio of the insane among the poor, and especially among those who are paupers, than among the independent and more prosperous classes. In this connection, it is worth while to look somewhat at the nature of poverty, its origin, and its relation to man and to society. It is usually considered as a single outward circumstance—the absence of worldly goods; but this want is a mere incident in this condition, only one of its manifestations. Poverty is an inward principle, enrooted deeply within the man, and running through all his elements; it reaches his body, his health, his intellect, and his moral powers, as well as his estate. In one or other of these elements it may predominate; and in that alone he may seem to be poor; but it usually involves more than one of the elements, often the whole. Hence we find that among those whom the world calls poor, there is less vital force, a lower tone of life, more ill-health, more weakness, and more early death. There are also less self-respect, ambition and hope, more idiocy and insanity, and more crime, than among the independent. The preponderance of mental defect and disease among the poor is unquestionably shown by the comparison of the number of lunatics and idiots in the two classes. None could for a moment suppose that the total of these classes, the independent and the pauper, are in this ratio. The whole number of permanent and temporary paupers who were relieved or supported from the public treasury in Massachusetts, during the last year (1854), was 23,125. At the same time, the calculated population of the State

was 1,124,676, of whom 1,102,551 were independent and self-supporting. These are in the ratio of 1 to 47, whereas the lunatics are in the ratio 72·9 independent to 100 paupers. Comparing these ratios, we find that the pauper class furnishes, in ratio of its numbers, 64 times as many cases of insanity as the independent class.

“ A similar law of distribution prevails in England and Wales. The pauper lunatics are stated to be 16,821, and those of the independent classes amount to somewhat over 8000 ; making the ratio of the pauper to the independent insane about 2 to 1. The ratio of the pauper to the independent classes, in the whole population of the kingdom, was about as 1 to 20 ; showing the proportion of lunacy among the poor to be about forty times as great as that among those who were not supported by public charity. Whatever reasonable allowance may be made for the defect in the report of the independent lunatics, it is very plain that the ratio of insanity among the paupers is very much larger than that among the self-sustaining class.

“ A careful examination of the causes of poverty and lunacy, and of the character, and condition, and health of the poor, would lead to the inference that there would be an excess of lunacy among them.

“ It may be supposed, from what has been already said, that much of poverty has a common origin with insanity. Both of them grow out of, and represent, internal mental character, or physical condition, as well as external circumstances.

“ Likewise some physical causes have their doubly

destructive influence upon both the estate and the mind.

“Intemperance in stimulating drinks, and all sorts of dissipation, disturb and exhaust the brain, and affect its power of correct and ready action; and hence the mind becomes wayward, its operations uncertain, and unfitted for the business of life. Hence follow derangements in the affairs of the world, and ill-success, and poverty. Hence, too, follow disorders of the nervous system, and insanity, which, according to hospital records, find their most common origin in the exciting and exhausting effects of alcohol, especially among the poor. Whatever depreciates the vital energies, lowers the tone of the muscles, and diminishes the physical force, lessens thereby the power of labour and of production; it also lowers the tone of the brain, and the capacity of self-management. In this state the cerebral organ struggles, and may be deranged; consequently, we find in the hospital records, that ill-health is one of the most commonly assigned causes of insanity. It has its first depressing effect on the energy of physical action and the soundness of the judgment in worldly affairs, and next on the power and discipline of the mental faculties.” (pp. 73-4.)

As changes in the relative wealth of families are thus constantly and necessarily occurring, it is evident that certain natural laws operate in regulating the distribution, as well as the acquisition of wealth. Hitherto the latter has almost solely engaged the consideration of philosophers; but from the importance attached by Mill, and other recent writers on

political economy, to the laws affecting the distribution of property, it is possible that some beneficial changes may, in this respect, be introduced into our national legislation.

Intense and prolonged *study* was at one time considered a prolific source of mental disorder, it is now known not to be a very frequent cause of insanity. It acts chiefly by preventing sleep; and hence bodily exercise, and a full period of repose, are the best means of guarding against its injurious effects on the mind.

Fear occasionally induces mental as well as mere *nervous* disorders. It may arise from real or imaginary danger; and with the latter may be grouped the supernatural terrors springing from a belief in pseudo-scientific absurdities, such as spirit-rapping, table-turning, phreno-mesmerism, &c. These melancholy exhibitions of folly can generally be traced either to an unacquaintance with the physical laws of nature, or to a temporary forgetfulness and disregard of the Majesty of heaven. Their relative prevalence in a community constitutes a fair test of the efficiency of its educational institutions.

Grief, disappointment, jealousy, anger, remorse,

“And all the thousand ills that render life
One scene of toil, of suffering, and of fate,”

depress and harass the feelings, disorder the imagination, and disturb the judgment, until the mind often gives way beneath the pressure of its own woes.

In other cases, delusions having reference to *religious sentiments* prey upon the unhappy sufferer,

haunting him with the fearful image of a revengeful and offended Deity, until life becomes a burden, and the desire to escape from it outweighs all other considerations.

Religious melancholy is one of the most intractable forms of mental disorder, and it is a saddening reflection that the instruction vouchsafed to us for our moral guidance through this world, should itself be occasionally perverted into an instrument of affliction. The jealousy of rival churches has led to many inquiries with the view of proving that insanity is more prevalent among the members of one than of another; but no such conclusion has been satisfactorily established. For instance, in Catholic France, *dévotion exaltée* appears among the causes of insanity as frequently as "religious enthusiasm" does in Protestant England. It would appear that, in some individuals an actual want of religious feeling leads to a prostration of the intellect beneath the disappointment of long-cherished hope or the reverses of fortune. They have set their affections wholly on material things, and having no higher support within themselves, they succumb to one of those blows which, sooner or later, reach us all. "Religion now only comes forward as a formal usage in the solemn transactions of life; she no longer affords her consolations to the afflicted, or hope to the desponding. Morality founded on religion is no longer the guide of reason in the narrow and difficult path of life. A cold egotism has dried up all the sources of sentiment; there no longer exist domestic affections, respect, attachment, authority, or reciprocal depen-

dence; every one lives for himself; none are anxious to form those wise and salutary provisions which ought to connect the present age with those which are destined to follow it.”*

In other cases, “Religion” is but another term for gross superstition, the offspring of ignorance and fear; and Christianity is no more answerable for the evils resulting from it than for those originating in any other false system of belief. The truth would appear to be that it is not an excess, but a deficiency, of faith in the teachings of Christ, which generally leads to mental aberration. Were religion something more than a mere form and profession, did it enter more intimately into the ordinary affairs of men, were it more extensively incorporated with the business of daily life, its support would be more universally experienced, and, in the hour of trial, its soothing and sustaining influence would take from the sharpness of sorrow, and replace the pangs of anguish and the promptings of despair by the consolations of hope, and the calmness of resignation.

The Christian faith alone teaches us to rejoice in truth, to suffer long, and to be kind; it alone enables us to hope all things, and to endure all things; it alone depicts the Creator as a God of love, more anxious to save than to destroy, as hating nothing that He has made, as loving those whom He chasteneth; and in its lessons may be found the most cheering hopes of futurity ever yet disclosed to man. And were it not

* Esquirol, quoted by Dr. Pritchard in his “Treatise on Insanity,” p. 192.

well for its ministers to dwell chiefly on its simple, and beautiful, and beneficent precepts, and rather discountenance than encourage the efforts of weak minds to penetrate its more hidden mysteries? At any rate, those whose duties bring them in contact with the broken spirit of morbid, mental suffering, find it the most advantageous feature of religion to present to the afflicted, and this consideration alone constitutes my excuse for having thus ventured to touch upon the subject.

PART III.

CHAPTER I.

OF THE TREATMENT OF IDIOCY.

THE increased attention recently directed to the improvement of persons imbecile from birth or early childhood, promises to be so beneficial in its results, and the measures found successful in these cases illustrate so well the general principles applicable to the treatment of *Insanity*, that their examination may very usefully precede the consideration of the latter.

As previously explained, the term idiocy is restricted to those cases in which mental defect has been apparent from the earlier periods of life. Some are literally born idiots, while in others the arrest of mental development is due to disease occurring after birth. Again, the degree of mental weakness varies much in different individuals. The examination of the conditions connected with the original production of idiocy, and with the determination of its degree, may therefore first engage our notice.

We occasionally meet with instances in which

partial arrest of the formative powers of the foetus has given rise to various deformities and monstrosities. One of the most frequent varieties of the latter is that in which the brain is almost wholly wanting, constituting the anencephalous infant, but which is nevertheless capable of discharging for a short time the functions of animal life. A more extensive but still incomplete formation of the brain entails idiocy, and on examination after death it is often found that, in consequence of the arrest of cerebral development dating from the earlier periods of foetal life, the proper structures of the brain are to a greater or less extent replaced by a membranous bag containing serous fluid.

In other cases, which in this country at least are very common, and which have not yet been fully or properly investigated, the infant at the time of birth possesses a brain naturally formed, and with it an average amount of intelligence, but subsequently becomes idiotic. We know that the development of the brain is not completed at the time of birth, that even the bones surrounding it are imperfect, and that during the whole period of infantile existence, the peculiar structures of the brain are undergoing a process of growth and organisation which is accompanied by great sensibility of the nervous system, and a marked liability to convulsions and other cerebral diseases. Even apparently slight and distant sources of irritation, such as intestinal worms, dentition, &c., will then occasion violent and even fatal convulsions. Moreover, during this development of the brain a tendency to congestion occurs, which not

unfrequently gives rise to the inflammatory cerebral disease termed Acute Hydrocephalus. And in other instances we find that many of the *symptoms* of this inflammatory affection of the brain and its membranes are presented in weak and anæmiated infants, constituting the "Hydrencephaloid Disease" of Dr. Marshall Hall. Now all these forms of infantile cerebral disease are occasionally followed by idiocy. Infantile convulsions are analogous to, if not pathologically identical with, epilepsy in adults, and we have already noticed the intimate connection of the latter with insanity. Infantile cerebritis and meningitis (acute hydrocephalus) necessarily tend to induce structural changes in the brain, which may either affect the mental powers or the nerves of sensation, giving rise to idiocy or imbecility on the one hand, or blindness and various forms of paralysis on the other. And in the hydrencephaloid disease, idiocy may either result from the sympathetic but violent functional disorder of the brain, or from the injudicious treatment of the latter by active depletion, just as we sometimes see dementia to occur in adults from the improper abstraction of blood in acute mania or delirium tremens. Idiocy occurring in infants as a secondary disease therefore occupies a similar position to dementia in adults. In support of these views, as to the frequent appearance of idiocy as a secondary affection in the earlier periods of life, may be cited the opinion of Pinel, who thus expresses himself on this subject: — "How many examples have I noticed of idiocy or dementia being produced at a tender age, either during early infancy or at the period of

the first or second dentition, as the consequence of convulsions which have often arisen from the slightest causes." (Op. cit. p. 50.)

It is necessary to bear in mind that the degree of mental deficiency varies very greatly in different cases, and that between the utter idiot who "knows nothing, can do nothing, cannot even desire to do anything," and the imbecile, or person of weak intellect, there are many gradations. The following is the classification adopted by the American physicians:—

"CLASS 1.—*Idiots* of the lowest class are mere organisms, masses of flesh and bone in human shape, in which the brain and nervous system have no command over the system of voluntary muscles; and which consequently are without power of locomotion, without speech, without any manifestation of intellectual or affective faculties.

"CLASS 2.—*Fools* are a higher class of idiots, in whom the brain and nervous system are so far developed as to give partial command of the voluntary muscles; who have, consequently, considerable power of locomotion and animal action, partial development of the affective and intellectual faculties, but only the faintest glimmer of reason, and very imperfect speech.

"CLASS 3.—*Simpletons* are the highest class of idiots, in whom the harmony between the nervous and muscular system is nearly perfect; who, consequently, have normal powers of locomotion and animal action, considerable activity of the perceptive and affective faculties, and reason enough for their simple

individual guidance, but not enough for their social relations."

But the reporters very truly observe, that "the highest of the lower class of idiots can hardly be distinguished from the fool; the least stupid of the latter can hardly be distinguished from the simpleton; and the highest among simpletons stand very near the level of hundreds who pass in society for feeble-minded persons, but still for responsible free agents. These latter indeed are looked down upon by the crowd, but then the crowd is looked down upon by tall men, and these in their turn are looked down upon by the few intellectual giants of each generation who stand higher by the whole head and shoulders than the rest."

In determining the relative position of any individual of weak mind in this or any analogous arrangement, it is desirable to review the whole of the bodily and mental functions, as, for instance, the general conformation, the degree of muscular vigour, the relative activity of the senses as to sensibility of the skin, perception of individual objects, colour, &c., perception of sound and musical relations, perception of odours, the taste of substances, the state of the digestive and other functions, appetite for food, manifestation of various instincts, of a disposition to destroy, to hoard and conceal, to fight, state of memory, perception of time and number, faculty of speech, state of moral feelings as to gratitude, affection, benevolence, veneration, conscience, love of approbation, &c.

The experience acquired during the last few years

in France, Switzerland, America, and more recently in England and Scotland, has amply proved the possibility of effecting an immense improvement in the bodily and mental condition of idiots of all grades. In the United States, where several institutions for ameliorating the condition of these unfortunates have for some time been established, it has been found that though with a few there has been no noticeable success, this was because the idiocy was complicated and aggravated by a morbid condition of the brain or other grave disorders of the system, while with the great majority there has been marked and gratifying improvement. In some cases the change in the appearance and habits of the children has been so great as to amount almost to a new creation. From sickly, gluttonous, stupid, and slothful creatures they have become healthy, self-controlling, active, and comparatively bright children and youths. Some have been rescued from the category of idiocy, into which they had fallen by reason of disease, neglect, or unfavourable circumstances, rather than been born to it. Others have been so far improved as to become inoffensive even to the most fastidious persons, and to be capable of earning their livelihood under the care of kind and judicious friends." (p. 71.) In the report of an Edinburgh institution it is stated that the general result is most gratifying and encouraging. It has been *proved* that even the most helpless of this class are capable of improvement, and that for three-fourths of those who become subjects of the appropriate treatment and education pursued in these institutions much may be done to

rouse intelligence and even to fit for usefulness." In the report for 1855 of the Massachusetts Institution, it is stated by Dr. Howe, that "in one respect the result has been unexpected—namely, the more positive and marked advantage which the school has been to girls than to boys." He adds, "Experience shows, moreover, that it will be wise to give greater attention to mechanical operations and less to mere school exercises, than was originally contemplated." And in their last report, the Metropolitan Commissioners in Lunacy express a similar opinion in reference to the arrangements of the Asylum for Idiots at Colchester.

The great principle on which the success of these efforts rests is *the development to the utmost possible extent of whatever mental and nervous power exists in the individual*, and, as a means to that end, the invigoration of the body. For this purpose the patient should be at once removed from the influence of debilitating agencies, and surrounded by healthful and inspiring conditions. The diet, regimen, and medical treatment will generally require to be of a tonic character, so as to impart as much vigour as possible to the bodily structures. What may be termed the special treatment may then commence by the education, first of the voluntary muscles, then of the senses, and afterwards of the intellect, will, and conscience.

Dr. Howe thus enumerates the chief objects aimed at:—"First, to put the pupils into the best possible condition of health and vigour; to develope strength and activity of body; and to train them to the com-

mand of muscle and limb. Second, to check inordinate animal appetites; to correct unseemly habits; to accustom them to temperance, cleanliness, and order; and to strengthen their powers of self-control, so that they may be at least less unsightly or disagreeable to others. Third, to train them to some habits of industry, so that they may be at least less burdensome to others in after life. Fourth, to develop as far as possible their mental faculties and moral sentiments by exercises and lessons suitable to their feeble condition and capacities, and thus to elevate them in the scale of humanity." A detailed enumeration of the educational measures employed would be tedious; but they may be stated generally to consist in the use of objects appealing directly and strikingly to the senses, and thence subsequently acting upon the appetites and emotions. In fact, the means adopted in the education of infants, intensified and prolonged to meet the exigencies of the feeble innervation of the idiot, naturally suggest themselves as conducive to the end desired.

The actual economy and pecuniary gain to society from the physical, industrial, and moral training of the idiotic portion of the community promise to be considerable. And as this may be an important object with many, I am tempted again to employ the language, and avail myself of the greater experience, of my trans-Atlantic professional brethren.

"This class of persons," say they, "is always a burden upon the public. It is true that the load is equally divided; it falls partly upon the treasury of the different towns, partly upon the state treasury,

and partly upon individuals, so that the weight is not sensibly felt: but still it is not a whit the less heavier for that. There are at least a thousand persons of this class who not only contribute nothing to the common stock, but who are ravenous consumers; who are idle, and often mischievous, and who are dead weights upon the material prosperity of the state. But this is not all. They are even worse than useless; they generally require a good deal of watching to prevent their doing mischief, and they occupy considerable part of the time of more industrious and valuable persons. Now it is made certain, by what has been done in other countries, that almost every one of these men and women, if not beyond middle age, may be made to observe all the decencies of life; to be tidy in their dress, cleanly in their habits, industrious at work, and even familiar with the simple elements of knowledge. If they were all made to earn something instead of spending, wasting, and destroying, the difference would be considerable. It would be an economy to some towns to send a young idiot across the ocean if he could be trained to such habits of industry as to support himself, instead of dragging out a life of two or three score years in the almshouse, and becoming every year more stupid, degraded, and disgusting. Many a town is now paying an extra price for the support of a drivelling idiot, who, if he had been properly trained, would be earning his own livelihood, under the care of discreet persons, who would gladly board and clothe him for the sake of the work he could do."

And in presenting another feature of the cause, they say, "It is true that these children and youths speak and write but little, and that little very imperfectly, compared with others of their age; but if one brings the case home, and supposes these to be his own children, it will not seem a little matter that a daughter, who it was thought would never know a letter, can now read a simple story, and a son, who could not say "father," can now distinctly repeat a prayer to his Father in heaven."

In conclusion, I may observe, that the condition of idiots *of all classes*, even in this country, is by no means creditable or satisfactory. In the idiot wards of our workhouses very slight efforts, if any, are made to rouse the dormant spark of intellect, or evolve the latent capability of affection. And in private families the cellar or the attic is too often the sole and unchanging habitation of the imbecile. I have myself seen, in one of the most wretched tenements of a district, notorious for disease and crime, the idiot mother of a half imbecile youth, a convicted murderer, sentenced to death for brutally killing his own illegitimate infant, and who was saved from the gallows chiefly by the fact of his parents' condition being made known to the presiding judge. And may not such cases as the following, and at any moment, occur in England? "In one instance, where a female pauper idiot lived in one town, the town authorities hired an idiot belonging to another town, and not then a pauper, to marry her, and the result has been that the town to which the male idiot belongs has for many years had to

support the pair and three idiot children. In another instance, where three children had been idiots, they had been kept by their unnatural mother in a close room in the most filthy condition possible, tied with a short rope round their necks, and never suffered to stand or take the fresh air: neighbours and others had remonstrated, but in vain. It is not surprising that under this treatment two of the three had died. It was surprising that they lived to adult age." (*Report of the Commissioners on Idiocy to the General Assembly of Connecticut, May, 1856.*)

CHAP. II.

OF THE MEDICAL TREATMENT OF MENTAL
DISORDERS.

A PERFECT knowledge of the nature of a disease, even where not absolutely essential, is by far the most satisfactory guide to its successful treatment. For by clearly understanding the seat and source of the morbid conditions most intimately connected with the malady, we can more effectually direct our efforts to their removal. In insanity we unfortunately do not possess this desirable knowledge; we cannot refer the varied phenomena of disordered mentality to any one immediately antecedent and constant pathological state or process, and our treatment is consequently tentative in its character, resting as it does upon the uncertain results of individual experience, rather than upon the established principles of therapeutic science. Another effect of our ignorance is, that the treatment of mental disorders is fluctuating, both in its nature and degree of activity, varying with the dictates of medical experience, with the prevalent sentiments of the day, and with the changes in the type of disease, and the relative vigour of the human constitution. Since, then, fashion, and the physico-vital peculiarities of man-

kind, and even experience (in medicine), are apt to change, and since all the actions of disease arise from the disturbance of healthy processes, it cannot but facilitate the treatment of insanity, if we can connect its manifestations with certain definite and co-existent bodily disorders.

Thus, among the insane generally, the circulation of the blood is feebly performed, and in melancholia more particularly, the extremities are, from this cause, cold and benumbed, while the surface of the head is often unnaturally heated. Again, in acute mania notably, and also in other recent forms of mental disorder, the quality of the blood is evidently much impaired. Our means of chemical analysis are too crude to enable us to express in scientific formulæ the precise additions and subtractions which constitute this particular cachexia. Suffice it to state that the peculiar odour and the unequivocal symptoms of disordered digestion, secretion, and excretion present in these cases, clearly show that the blood cannot be properly formed and purified, and that its condition and quality must therefore be faulty. In some forms of insanity there also exists an unnatural sensibility, or irritability of the mind and nervous system, and we have seen that in a certain proportion of cases violent mental impressions have originally induced the disease.

Moreover, we occasionally observe in every form of mental disease a serious impairment of the innate vitality of the bodily tissues generally, so that a slight bruise or a degree of pressure which under ordinary circumstances would produce no morbid

effect whatever, will in the insane be followed by mortification of the parts and ultimate death.

The observation of numerous cases illustrating these statements naturally suggests certain general therapeutic principles, as applicable to the medical treatment of mental disease, though in each of its different forms they will require considerable modifications. We thus recognise the following as objects of treatment: —

1. To promote the vigour of the circulation, and the equal distribution of the blood throughout the body.

2. To improve the quality of the blood by attention to the functions of digestion, sanguification, secretion, and excretion.

3. To allay mental and nervous irritability, and procure a requisite amount of sleep.

4. To support the physical strength, and add to the general tone of the system, and through it, to the inherent vitality of the bodily tissues.

In the application of these principles we must pay attention not only to the particular form of mental disorder present, but also to the probable cause of the attack, the previous habits of the patient, his peculiarities of constitution, the most prominent or urgent of his symptoms, and any accompanying bodily disorder.

In *acute mania* the violent delirium and the general indications of exalted cerebral functions at first naturally suggested the idea of the dependence of the disease on a state of inflammation or congestion of the brain. The treatment was for a long time

influenced by this view, and blood-letting and other depletory measures were accordingly employed. Now it is not, I think, fair to assume that former practitioners were invariably wrong in abstracting blood in cases of acute mania, though modern experience is decidedly against that practice. For it is perfectly possible that changes may have occurred in its type or character, similar to those which have taken place in other acute diseases. Even now, while recognising in all forms of acute mania a certain amount of constitutional weakness, we find that a considerable difference nevertheless exists in the degree of debility presenting itself in a number of cases. Without attempting to define, or even appreciate, all the minor points of difference, we may divide cases of acute mania into the ordinary and the asthenic varieties, the latter presenting itself under several features, but all betraying the same tendency to a fatal result. In the ordinary or *comparatively* sthenic form, the pulse, though quick, is generally soft, the tongue is furred, the skin dry, the scalp heated, and the conjunctivæ are congested; but the patient, though in a state of almost incessant activity and watchfulness, continues to take food freely, and does not evince any extraordinary tendency to exhaustion; on the contrary, it is sometimes wonderful that the excitement should continue so long (for many weeks, and occasionally even for months) without wearing out the physical strength. But in the asthenic varieties, the symptoms of fading vital power are perceptible from a comparatively early period; the precise moment of their manifestation, and their relative

intensity, being, however, materially influenced by the previous bodily condition of the patient, the treatment adopted in the first instance, and the general conditions surrounding him. In one group of cases "typhoid" symptoms will supervene on the maniacal excitement, and a low muttering delirium with sordes on the teeth, a black and dry tongue, clammy skin, and a quick feeble pulse, will terminate in a state of fatal coma. In other cases simple exhaustion will occur, and the patient either sink quietly, or convulsions will present themselves, a paroxysm of which may prove fatal. In another person, shortly after the symptoms of maniacal delirium have been fully established, fatal syncope may take place; while still more frequently a tendency to local unhealthy inflammation will manifest itself, leading to additional constitutional disturbance, and often accelerating death. Of course the more sthenic forms may, by the improper abstraction of blood, and other debilitating measures, or by neglect of treatment, be converted into one or other of the asthenic varieties.

The above remarks may be illustrated by a few cases, which will also serve to indicate the multiplied precautions required in the treatment of acute mania.

CASE 1. *Acute Mania following Fever; speedy recovery.*—S.P., aged 48, single, was admitted into Bensham Asylum, Sept. 26th, 1857, with acute mania of ten days' duration, which had been preceded by continued fever. She is a thin, delicate-looking woman, of bilious temperament. On admission she

was very restless and excited, talking incessantly in a very incoherent manner, very destructive, and inclined to strike those around her. Pulse was 104, tongue white, bowels were torpid, and she had great thirst. She was ordered wine, and a pill consisting of three grains of aloes, and a grain of muriate of morphia three times a day, with beef-tea and ample nourishment.

Sept. 29th.—Is much improved; has been taken out for a walk by an attendant, and seems quiet and rational, but still very weak. Ordered half an ounce of quinine mixture twice a day, in a glass of port wine.

Oct. 1st.—Has rapidly improved in mind and body, and is nearly convalescent.

Oct. 31st.—She has continued to reside at the asylum by her own wish, for the improvement of her bodily health, and was this day discharged quite recovered.

CASE 2. Mania connected with bodily disease, cured by relieving the latter.—L. H., aged 58, single, a clerk, admitted into the asylum on May 23rd, 1857; tall, thin, debilitated, countenance expressive of anxiety; has suffered greatly from stricture of the urethra, and has now a fistula in the perinæum. The mental disorder is characterised by constant excitement and restlessness; he has also threatened to injure his relatives, and has been intemperate and dissipated.

June 1st.—Opium in full doses has been given, together with porter and wine; the stricture has also

been attended to, and the irritation of the bladder relieved by warm hip-baths, &c. He is already more composed.

July 25th.—Progressive improvement both of mind and body has taken place; the fistula is nearly closed, and the stricture much relieved. He was this day discharged recovered.

CASE 3. *Acute Mania supervening on Paraplegia and Hemiplegia; recovery from the maniacal attack and transition of the case into one of Dementia.*—

A.B., aged 27, single, a tolerably robust, well-proportioned gentleman, admitted December 10th, 1857, in a state of maniacal excitement. He had paraplegia with partial hemiplegia of the left side. He could, however, slightly move the right leg, and when the soles of the feet were tickled, the toes moved. He had very slight sensation in either leg. The left arm was completely paralysed, and the fingers flexed. The mouth was slightly drawn to the right side, and his utterance was very indistinct. He had ecchymosis of and around the left eye. The pupils on both sides were contracted, but the irides sensible to the influence of light. He had several bruises and abrasions of the cuticle in his legs and right arm. The right radial pulse was much stronger than the left. He was stated to have had paraplegia for six years, which had been brought on by exposure to wet for a considerable length of time. About a year ago he was attacked by hemiplegia of the left side, occurring apparently in connection

with an apoplectic fit ; and about six weeks since the present illness began.

Though his right arm was the only extremity over which he possessed full power, he had exhibited with it great violence and destructiveness, throwing every moveable article within his reach at his attendants, and dragging himself along the ground to the door, the panel of which he broke with his fist. After admission, the excitement became somewhat less, and he seemed pleased with his new abode and attendant. He manifested several delusions, some on religious subjects, also that his food was poisoned, that there were large treasures hidden from him, &c. He is very capricious and passionate, and when crossed in the slightest degree, he passes into a state of great excitement, and becomes as violent as his numerous infirmities will permit. It is somewhat difficult to induce him to take food, as he fancies it is poisoned ; the most effectual method is to partake of it in his presence. He is very weak, from the previous excitement and want of food, and in addition to opium, which was given in a full dose (three grains) at bedtime, and in smaller doses (half a grain) at intervals during the day, and the most nutritious food, he took porter and wine very freely.

Dec. 20th.—Has somewhat improved in mind, but the bodily weakness is more marked, and a bed-sore has formed over the sacrum. (He retained a certain degree of power over the sphincters.) He was therefore placed on an air-bed, and the stimulants, medicinal and dietetic, given more freely.

Dec. 31st.—Is considerably improved, much more

quiet and easily pleased; takes his meals well; the bed-sore has healed.

1858, *Jan. 15th.*—Has improved very much both in mind and body; he has been visited by his friends, with whom he conversed quietly, and has walked about the gallery with the aid of crutches.

He has continued to remain generally tranquil, and greatly improved in bodily health, but is apt to become excited on religious subjects, and occasionally becomes enraged without any assignable cause, during which he will throw articles at his attendant. He reads and writes a good deal, and expresses himself as happy and comfortable.

CASE 4. *Acute Mania resulting in sudden Death, from the impaction of a fibrinous Coagulum in the Pulmonary Artery.**—On December 29th, 1857, I was requested to visit Miss ——, aged 29, whom I found talkative, restless, and excitable, but intelligent, and capable of answering most questions correctly. She was tall, well made, of the nervous temperament, had enjoyed good bodily health, and the catamenial function was quite regular. I was informed that from infancy she had been clever, but irritable and capricious; that during the last two years this irritability had increased, and that though highly educated, she often exhibited the petulance of a child, and would even strike those around her. Two days previously she had appeared more excited than usual, called at several places unnecessarily, and both mind and body were in a state of abnormal activity. A little ape-

* Published in the "Medical Times and Gazette" of March, 1858.

rient medicine was ordered, to be followed by a sedative mixture; she was allowed plenty of plain, nutritious food, of which she took a considerable quantity. During the two following days she continued in this state of excitement, taking food freely, sleeping two or three hours every night; but the mental disturbance had increased, and the incessant talking betrayed great incoherence in her ideas, and the existence of numerous delusions as to various persons being present in the apartment, &c. There was also a disposition to strike at those around her, and to destroy articles within reach. A suitable attendant was therefore procured, and remained with her constantly. The bowels acted moderately, she took food well, and there were no particular indications of debility or internal disease.

On January 2nd, the case presented all the features of acute mania, and it was the wish of her friends that she should be removed to my asylum at Bensham. In the meantime, cold applications to the head, which had previously been employed, were continued, a dose of a sedative mixture, equal to half a grain of morphia, was given in the morning, without any apparent effect, as regards quietude or sleep. A turpentine enema was administered in the afternoon, and she took a considerable quantity of beef-tea and other food during the day. At 6 P.M. Dr. White and Dr. Dawson called, for the purpose of examining her, with the view of signing the requisite certificates, but were informed that she had an hour previously fallen into a calm natural sleep; and under the impression that this might be productive of a beneficial

change, those gentlemen very properly declined to disturb her. At 9 P.M. I myself called, and understanding that the sleep continued, also abstained from seeing her. It was arranged that another attendant and a servant should remain with her during the night, and we were to meet the next day, and ascertain what effect the sleep had produced. Soon after 5 o'clock on the following morning (the 3rd), Dr. Dawson and I were hastily summoned, and found her dead. It appeared that she had continued to sleep until eleven o'clock on the preceding night, when she awoke, took some beef-tea and part of an orange, and after talking incoherently for an hour and a half, again fell into a sound sleep. The attendant and servant watched her carefully during the night, and observed her to sleep calmly until 5 o'clock, when she drew a few deep inspirations, and expired. The shock to all interested in the patient, was necessarily very great, as nothing in her history or symptoms suggested the idea of an early and sudden death. I could only explain to her relatives, who were persons of intelligence and good sense, that sometimes death did occur suddenly, without any obvious cause, but that there was a possibility of an examination disclosing some unsuspected morbid condition. I further mentioned the additional light recently cast on the causes of sudden death, by the discovery of fibrinous clots obstructing the large blood-vessels, and instanced the case of the late Duchess de Nemours. Having obtained the requisite permission, my friend Mr. Bolton, House-Surgeon of the Newcastle Infirmary, kindly under-

took to conduct the *post-mortem* examination, and as the weather was very cold, no perceptible decomposition had occurred when it took place, on January 5th, fifty hours after death.

The head was first examined. The brain appeared well developed, and the veins on its surface somewhat engorged. On attempting to remove it the crura cerebelli were found to be so much softened, as to render it difficult to lift the cerebellum simultaneously with the rest of the organ. This softening also affected, but in a less degree, the posterior columns of the medulla oblongata. The crura cerebri, and a small portion of the base of each of the anterior lobes, were also less firm than natural, and, as far as the somewhat imperfect light enabled us to judge, there was very little departure from the natural colour of the softened structures. There was no congestion or effusion at the base of the brain, or in the ventricles.

On removing the medulla oblongata, the processes of bone which are situated on either side of the basilar groove of the occipital bone, were observed to be unusually prominent, and that on the left side was developed almost to a point. These processes were in close contact with the posterior columns of the medulla oblongata, the anterior columns resting on the groove between them. The chest was the only part of the body examined. The lower lobe of each lung was much congested; that on the left side being less firm than natural; but, with this exception, the lungs were free from disease. The right auricle of the heart was enormously distended with

dark blood, suspended in which were some fibrinous coagula, and on examining the pulmonary artery, it was found completely filled with a long firm fibrinous coagulum about four inches in length; which, when drawn out, exhibited the bifurcation of the vessel, and the separation of one of its primary divisions into two secondary branches.

CASE 5. *Acute Mania following Fracture of Femur; Death from unhealthy (gangrenous) Inflammation of Arm.* — W. H., aged 49, the mate of a merchant vessel, admitted into the asylum on May 1st, 1857, is of short stature, sallow complexion, and has a partially united fracture of the right thigh. The maniacal attack of eight weeks' duration is stated to have commenced two days after the receipt of the fall which produced the fracture. It does not appear that he received any injury to the head on that occasion. The schedule states that "his conduct was very violent to his wife and family, and that he has the delusions of being robbed of large sums of money, and some very absurd ideas of the construction of ships." Shortly after his admission, he became violent, and attempted to strike with his crutches, which were taken from him, and which he was only allowed to use in his quiet intervals. His bowels acted regularly, the pulse was compressible, and the tongue furred, and slightly tremulous. He was ordered full diet, with porter and opium, and afterwards muriate of morphia, in one grain doses, twice a day.

During the next three weeks he seemed on the

whole better in his mind, and by the aid of his crutches, took exercise in the open air, but was subject to sudden paroxysms of excitement, during which he shouted loudly, threw himself on the ground, and struck with his hands and head at imaginary persons. When this tendency exhibited itself, he was of course instantly carried to a bed or couch, so as to prevent him from injuring himself. On May 22nd, he appeared more rational, but weaker. He had rubbed and slightly abraded the skin covering the right hand and elbow. He was ordered to be constantly watched, to have extra stimulants, and to take quinine and opium in full doses. On the 23rd, the symptoms of general prostration were more marked, his right hand was also a little swollen, from the slight bruise inflicted yesterday, and a poultice was applied.

May 24th. His hand is very much swollen and discoloured to-day, and he appears still more prostrated.

25th. The unhealthy diffused inflammation which has attacked his hand is spreading rapidly, and he is more incoherent.

26th. Is getting worse; inflammation extending up the fore-arm; vesicles have appeared on the back of the hand.

On the 30th gangrene commenced in the hand, typhoid symptoms supervened, the gangrene spread up the arm, and on June 2nd he died.

CASE 6. *Acute Mania with unhealthy Inflammation of Hand; Death from Dysentery and Bronchial Effu-*

sion. — J. G., aged 50, a farmer, admitted into the asylum March 12th, 1858, is a tall, well-made man, much emaciated. This is stated to be his second maniacal attack, the former one having occurred two years since. The duration of the present attack is said to be one month, and since it commenced he has been very violent, having struck his relatives, broken windows, &c. His bodily health is very bad, he has taken but little food lately, has some bronchitis, and his right thumb is in a frightful state of suppuration and ulceration, occasioned by an unextracted thorn, and the subsequent neglect of the seat of injury. He has also an eczematous eruption over the body.

He addresses imaginary persons, fancies that he sees witches in the room, &c. His pulse is slow and feeble, tongue slightly furred and tremulous.

He was placed on extra diet, took beef-tea three times a day, with four ounces of brandy, and full doses of opium at bed-time. The ulcerated hand was first poulticed, and dressings of ung. resinæ and ung. terebinth. were subsequently applied. Under this treatment he seemed to improve, and with a little effort could answer questions correctly; the sore on the hand also appeared much healthier; when on March 19th, diarrhœa manifested itself, the discharges being dark-coloured, and exceedingly fœtid. A considerable expectoration of frothy mucus simultaneously occurred. Sinapisms were applied to the chest and abdomen; enemata of starch and laudanum were administered; he took arrow-root and brandy freely, with a chalk mixture containing tinc-

tures of catechu and opium, and was placed on an air-bed, lest sores should form.

Under this treatment the diarrhœa ceased for a time, and the patient appeared stronger; but it returned on the following day, and notwithstanding the administration of acetate of lead, and other powerful astringents, with opium and stimulants, and the application of external warmth, the dysenteric discharges and the accumulation of mucus in the bronchial tubes, continued until death took place on March 21st, the fatal event being preceded by sub-sultus tendinum, and other indications of exhaustion.

CASE 7. *Acute Mania, with unhealthy Inflammation of the Parotid Gland and Integuments of Face, preventing Deglutition; Death from Exhaustion.* — A. M., aged 44, a very tall lady, of spare habit, bilious temperament, admitted into Bensham Asylum, September 16th, 1857, in a state of acute mania, stated to have been of a week's previous duration, and to have come on without any perceptible exciting cause. She had been subjected to "constant forcible restraint" by her friends during that time, being strapped down in bed, in a close apartment. It was also stated that she had been in a delicate state of health for upwards of a year, and had suffered from two "hysterical" attacks shortly before the development of the maniacal paroxysm. On admission, she appeared very much debilitated, being scarcely able to stand without assistance, and was also very excited and restless, continually talking in an incoherent manner, and striking and catching at

persons or objects around. If left to herself, she would instantly divest herself of clothing, and injure herself by striking the walls of the room. On admission, patches of ecchymosis existed in different parts of the body from this cause. There appeared to be nothing abnormal in the state of the heart and lungs. The pulse was small (65). The tongue dry and brown, the skin hot. The urine was passed unconsciously, and the bowels were moderately acted on. She refused to take food. In order to prevent her from bruising herself, which in her feeble bodily condition might be followed by unhealthy inflammation of the part, the whole floor of the apartment was covered with beds, and an attendant remained constantly with her. A mixture, containing tinctures of opium, hops, and hyoscyamus, was given, with beef-tea and wine.

Sept 18th. The patient has been more tranquil, but has not slept. A warm bath and an aperient were added.

19th. As the bowels had not acted, an enema with oil of turpentine was administered with good effect. She now lies quietly in bed, but is weaker, and still watchful and sleepless. A mixture, containing muriate of morphia, with aromatic spirit of ammonia and tincture of lavender, was given with wine every four hours.

21st. Has slept several hours through the night, and has also taken a considerable quantity of beef-tea, arrow-root, and wine.

22nd. Great exhaustion has taken place, she now lies in a semi-comatose state, and unable or unwilling

to swallow any food, which has to be administered by the stomach-pump. The left side of the face and parotid gland are slightly inflamed and swollen, and seem to give her pain. The stimulants, &c. were continued.

23rd. Is much more prostrated this morning. The inflammation of the face is greater, and appears to be of an unhealthy character, the skin being of a dusky reddish-brown hue. A free incision was made in the swelling, which relieved the tension, and a solution of nitrate of silver was applied to the integuments around. A turpentine enema was administered, and the food, &c. injected into the stomach.

24th. The prostration has increased, pulse irregular and feeble. The bowels were acted on, but unconsciously. The swelling of the face and of the parotid gland is now so great, as to prevent the administration of nourishment by the mouth. An enema of beef-tea and wine was therefore given every four hours. The nitrate of silver still to be applied.

10 P.M. The prostration is still increasing, although she is now able to swallow, the swelling of the face having greatly subsided; and she now takes small quantities of wine.

25th. She continued to sink during the night, and expired this morning at 8 o'clock.

In cases of acute mania having a decided tendency to a fatal result, either from simple exhaustion or unhealthy inflammation, a constant restlessness, with violent jactitation will often be observed. The jactitation is a symptom of considerable importance, and will

occasionally betray the existence of this untoward tendency when the actual physical power exercised by the patient may be very great. It consists not only in a violent jerking of the extremities, but sometimes the whole body will be thrown into sudden and extreme oscillations, the paroxysms lasting from a few minutes to an hour, or even longer.

During the passage of this chapter through the press, I was enabled to anticipate the subsequent danger of exhaustion by the observation of this symptom in a young married woman, suffering from puerperal mania, whose extraordinary strength during maniacal excitement astonished the attendants. But though for some days the vital powers seemed thus vigorous, the recurrence of sudden and violent paroxysms of jactitation, almost amounting to convulsions, and affecting the whole body, excited my alarm, and led me to administer stimulants more freely, and enforce more than usual precautions against the possibility of the patient's bruising herself. Very shortly afterwards the necessity of these precautions was proved by the sudden manifestation of symptoms of vital exhaustion, and it is evidently only by the utmost care in supporting the strength, that life has been preserved.

With respect to the doses of medicines required in acute mania, it may be observed that generally speaking, the gastro-intestinal mucous membrane is in an abnormal state, being less sensitive than natural, and its absorbing power probably diminished. Hence ordinary doses of aperient and sedative medicines do not produce their usual effects, and must be in-

creased twofold, or even threefold, before their action becomes apparent. But for this very reason greater care is necessary in giving them, and not only should the administration of medicines be entirely in the hands of a competent medical practitioner, a precaution not always observed by the relatives, but considerable care and closeness of observation are essential, even to the most experienced physician, in proportioning the exact doses of his remedies to the peculiarities of each individual case.

With respect to the employment of particular remedies in the treatment of acute mania, a few remarks may be made.

General blood-letting is at present never used with advantage, and when practised, it too generally leads to a fatal result. Even *local blood-letting*, in the form of leeches, arteriotomy, and cupping, is not very frequently indicated, and a similar effect in relieving any cerebral congestion present may be obtained, with less danger of increasing the debility, by purgatives and diaphoretics, and by the judicious use of baths. In a case of obstinate intermittent mania, in which a violent maniacal paroxysm recurred every six weeks, and where the bodily strength was considerable, I once had the temporal artery opened at the commencement of an attack, and 12 ounces of blood abstracted, but without any perceptible amelioration of the symptoms.

Counter irritants are most useful where congestion of the brain is threatened, and where there is reason to apprehend that a semi-inflammatory condition accompanies or may follow the functional excite-

ment. If an injury on the head, or a suppressed discharge has immediately preceded the maniacal attack, benefit is also often experienced from the application of a blister or seton to the nape of the neck. Thus, in some puerperal cases where the lochia had suddenly disappeared, and in men who had received severe blows on the head prior to the appearance of maniacal symptoms, I have known considerable benefit to arise from counter irritants. The production of pustules in the scalp by tartrate of antimony and croton oil has also been recommended, but I have not employed this measure, preferring the insertion of a seton. Several years since, I remember to have seen some cases in which the longitudinal incision of the scalp, recommended by Dr. Pritchard, seemed to promote recovery.

Mercury, as a general rule, is contra-indicated in mental disorders; its depressing effect on the vital powers, and the danger of severe ptyalism being induced, rendering its administration objectionable. Even as an alterative, I see no special indication for its use, as colchicum, hellebore, ipecacuanha, &c., will fulfil similar purposes. The only cases in which it has appeared to me to be absolutely required, are those of sub-acute or chronic meningitis, and particularly where this has been produced by an external injury. In such instances the continued action of a seton, with the administration of mercury in small doses for a certain length of time, and afterwards of the iodide of potassium, have apparently been instrumental in effecting a cure.

The potassio-tartrate of antimony, from its nauseat-

ing and sedative effects, and from its general action on the organs of secretion and excretion, would seem peculiarly adapted to fulfil some of the leading indications in the treatment of acute mania, and it has received an ample trial. From its debilitating tendency, it is evidently quite inadmissible in the asthenic forms of the disease: and hence, it is only where a certain amount of strength exists that it can with propriety be given. It is impossible to deny that in such cases it often produces a calming effect, irrespective of the influence of any evacuations which it may occasion; but the dose sometimes requires to be very large, and the benefit is not of long duration. Thus I have known a strong person labouring under a paroxysm of maniacal excitement to take six grains of tartar-emetic, which speedily emptied the stomach and bowels, but within a few hours the patient was as noisy and mischievous as ever. It can only then be regarded as an adjuvant to other more direct sedatives, with which it may sometimes be usefully combined, and the beneficial action of which its previous administration will occasionally be found to facilitate.

Hellebore and colchicum, in the same class of cases, have sometimes appeared useful adjuncts to purgative medicines, particularly at the commencement of a maniacal attack. They assist in clearing out the primæ viæ, and pave the way for the administration of sedatives. *Ipecacuanha* has also not unfrequently seemed to me a beneficial accompaniment, both of aperient and sedative medicines. It acts as a mild alterative, promotes the various secretions,

and checks in some degree the constipating effect of opium upon the latter.

Narcotics and Sedatives constitute probably the most important class of remedies in the treatment of acute mania; and of these, opium and its preparations chiefly command our confidence. It requires, however, very large doses of any of these remedies to produce a decided effect, and commencing with what would be considered an ordinary full dose, it is well to increase the quantity until the desired result is obtained. It is not unusual to combine sedatives with stimulants, particularly in the decidedly asthenic forms of mania, and in those cases in which the disease presents many of the features of delirium tremens. Additional benefit is also frequently derived from the simultaneous administration of several medicines of the same nature. And for some years I have been in the habit of prescribing a mixture of the wine or tincture of opium, or the camphorated tincture, with hyoscyamus, conium, cannabis indica, or belladonna.

For it is more than probable that each narcotic or sedative substance, either exercises a peculiar effect on the whole nervous system, or acts with full force on a particular set of nervous structures and functions. And there are, doubtless, innumerable medicinal agents of this class yet to be discovered, whose specific effects may be of the utmost importance in restoring to a healthy state the disordered cerebral functions. Our knowledge of the chemico-vital properties of narcotics and sedatives is yet very crude, and it is much to be desired that further researches be made

in this direction. Of the preparations of opium, the liquid are generally preferred, as being more speedy and certain in their action. I have been better satisfied with the operation of the *vinum opii*, and the *liquor opii sedativus*, than with the tincture, and have often found from one to two drachms of the former, with an equal quantity of tincture of *hyoscyamus*, procure tranquillity and sleep. The tincture seems frequently to disorder the stomach, and its constipating effect is greater. Where a stimulant is required, together with a sedative, the camphorated tincture, in half-ounce doses repeated every few hours, is a valuable remedy, and it may be given with a tonic infusion and bitter tinctures, and diffusible stimulants. For the production of sleep, morphia is generally employed; but there is great reason to fear that this important drug is frequently impure. When properly prepared, its dose may be much less than that of solid opium; but it is now found generally requisite to give it in the same quantities as the natural drug. It is on this account very difficult to fix the precise dose of morphia which may be required to produce sleep in any given case. I have known as much as six grains given at one time, without the desired effect resulting. The safest plan is to give a full dose, which in acute mania may be estimated at about three times the quantity which would be administered for the same purpose in a case of ordinary disease, and afterwards repeating it in smaller doses every six hours, until sleep be obtained. In a case of acute mania supervening on the secondary fever of the malignant cholera of 1853,

which I attended with Mr. Manford, of Newcastle, the resistance to the soporific effect of morphia was extraordinary, and the total quantity given very great. The maniacal excitement lasted six weeks, and the fear of the cholera was present throughout the whole of the patient's ravings. A state of intense irritability of the nervous system therefore existed, and the leading indication of the treatment was to allay this condition. While allowing ample nourishment and wine, my directions therefore were to administer the morphia until sleep, or a decidedly sedative effect was obtained, without regard to the quantity taken. This patient perfectly recovered. The muriate of morphia is a more stable preparation than the acetate, but it is better to prepare the salt from the alkaloid itself when required, or at any rate not to preserve the solution for any great length of time, as it is apt to decompose.

Hyoscyamus is chiefly useful as an adjuvant to more powerful sedative medicine, and the same remark applies to *cannabis indica*.

Conium, in the form of tincture, may also be given in combination with other narcotics.

Baths or the external application of water at different temperatures, and in various modes, constitute a very important auxiliary in the treatment of acute mania.

To discuss their influence at length would occupy considerable space, and I must, therefore, briefly notice the more important questions connected with their use in acute mania.

We know that the *warm bath* tends to equalise

the distribution of the blood, to promote perspiration, to maintain the heat of the extremities, to relieve internal congestions, to allay nervous irritability, to induce sleep, and in the case of women, often to restore suspended discharges. Its utility, therefore, in states of bodily derangement, where all these objects are frequently desirable, is very great; and, as it is unattended by unpleasant sensations, it can generally be employed with the patient's own concurrence. By some modern practitioners it is used for several hours continuously; but in acute mania I should dread the subsequent debility, unless the patient were unusually strong, and the temperature of the bath moderate. The combination of the continued affusion of a gentle shower, or small jet of water upon the head, simultaneously with the warm-bath, adds materially to the effect of the latter in relieving cerebral determination, allaying nervous irritability and promoting sleep, and like the warm-bath itself, this measure is often grateful to the sensations of the patient.

The *douche* is a much more severe and dangerous remedy; very powerful in subduing violent excitement, but liable, particularly in persons debilitated, or labouring under insidious visceral disease, to be followed by extreme, and even fatal syncope. It is now but seldom employed, and in Bensham Asylum it has been abolished.

The *shower-bath* answers a similar purpose, in cooling any excessive heat of the scalp, and in soothing and invigorating the nervous system; and many

patients will ask for it, or voluntarily place the head under a tap, in order to obtain the same relief.

The *vapour-bath*, carefully and judiciously employed, is also useful in acute mania, and may be followed by a cold or tepid shower-bath.

In fact, water furnishes us with very potent and varied therapeutic agencies, and, with the exception of sedatives, there is perhaps no remedy of greater value in the treatment of acute mania.

Purgatives are generally required in the earlier stages of the disease, and subsequently they often relieve the intensity of the excitement. At the commencement of the attack, the hydragogue cathartics are most useful, and a free action of the bowels is often followed by a mitigation of the symptoms, during which sedative medicines act with greater effect. Afterwards, milder purgatives may be given, and at a still later period, and in the various stages of the asthenic forms, either the mildest laxatives, or some of those substances which combine a stimulating with an aperient action. Thus croton oil, senna, jalap, colchicum, hellebore, elaterium, gamboge, colocynth, and the stronger saline purgatives, may be given in the first stages; aloes, rhubarb, castor oil, and the milder salines, as Rochelle salt, &c., in the second; and in the third, either castor oil in small doses, or laxative food, or substances like the oil of turpentine.

Of the beneficial effect of the latter in acute mania I must speak very highly. It has been tried in Bensham Asylum in several cases, with the most beneficial effect. In a case of intermittent mania pre-

viously alluded to, in which every remedy employed to diminish the violence of the paroxysms had previously failed, the oil of turpentine in purgative doses (ʒiv. to ʒi.) cut short the attack, and the patient, instead of remaining in a state of violent delirium for ten days or a fortnight, was within three or four days in a quiet and sensible state. In several other cases the sedative influence of the turpentine, which bore no relation to its mere purgative action, was most marked, and it now forms one of the remedies in which I have the greatest confidence. Its taste and smell are the chief objections to its administration; but in acute mania the senses in question are often not very nice, and by promising a more agreeable draught immediately afterwards, it will generally be taken. It may in some cases be given with castor oil, and in smaller doses (ʒi. to ʒiii.). The beneficial and powerfully stimulating effect of turpentine when used in enemata in various diseases characterised by debility is generally known, and in the latter stages of acute mania it has often been employed in this way with advantage. As evidencing its direct influence on the brain, I may refer to the cases cited by Pereira, in which it gave rise to "a disordered state of the intellectual functions, compared by several persons to intoxication," to sleepiness, and to "a kind of trance, lasting twenty-four hours, without however any subsequent bad effect." (*Materia Medica*, p. 1194.)

Emetics were at one time used freely in the treatment of the various forms of insanity, but in acute mania they are very seldom given. Both ipecacuanha

and potassio-tartrate of antimony are however useful as alteratives, and may be combined with sedatives and aperients.

Tonics and stimulants are most important remedies in the treatment of acute mania, the latter especially, as there is often not time for the gradual invigoration of the system by the former. Of tonics, calumba, quinine, and other bitters, with the mineral acids, and in cases of greater debility with ammonia and aromatic tinctures, are chiefly employed. And as medicinal stimulants, in addition to the last-mentioned remedies, ether, chloroform, tinct. lavand. co., tinct. cardam. co., &c., may be administered. I can also strongly recommend phosphorus as a stimulant in the latter stages of maniacal exhaustion. Its great restorative power is noticed in one of the cases subsequently related, and it has been observed in others. It was used in the form of a solution in chloroform (probably nearly saturated), of which from one to ten drops were given in a tumbler of spirit and water. It is of course difficult to separate its action from that of the other stimulants simultaneously given, but they had been employed previously in every case with much less perceptible advantage.

Alcoholic stimulants are of such essential service in affording temporary support to the system during the exhausting excitement of acute mania, that they constitute medicinal agents of the first importance, and in different cases the particular form may be varied with advantage. Thus, where sleep is much required, and there is a state of mere irritability uncomplicated with cerebral congestion, or marked

disorder of the digestive organs, malt liquor, and particularly porter and strong ale, given with sedative medicines, will greatly promote the action of the latter. And during the convalescence from a maniacal attack, bitter beer constitutes an excellent tonic. Where but little solid food is taken, the debility being considerable, wine is generally indicated, and, as in fevers, it is found to support without sensibly stimulating, even where taken freely. Spirits are useful chiefly in the latter stages, where the tendency to exhaustion and sinking is marked, and also in cases where the patient has been in the habit of living freely.

Puerperal Mania generally presents considerable excitement, and often violent delirium. Its treatment, when it assumes this form, is to be conducted on the same principles as other cases of Acute Mania. It has been justly observed by the late Dr. Pritchard, that "the principal danger which menaces life, in cases of this description arises from extreme debility" (op. cit. p. 309), and to the exhaustion created by the disease is sometimes added the debilitating effect of depletory medicines. It can readily be understood that the sensitive female system rendered still more susceptible by the anxiety, the physical suffering, and loss of vital fluid incident to parturition, and perhaps still further disordered by the temporary cessation of the lochia, will not endure with impunity the depressing effects even of free local blood-letting, or mercury, or drastic purgatives. Generally speaking, these cases are susceptible of a speedy cure, unless the constitution

be deteriorated by previous mal-treatment or loss of time; and the re-establishment of the suppressed secretion, the administration of a gentle aperient in combination with carminatives and sedatives, the use of the warm bath, with the simultaneous application of cold to the head, nutritious diet, sometimes even wine or porter, with full doses of sedative medicines, and, if particularly indicated, a blister to the neck, will very often suffice to restore the mental health, and a course of tonic remedies will complete the cure.

Sometimes acute mania presents a *remittent* or *intermittent* form, the former being the most frequent, and the latter often, but not necessarily, complicated with epilepsy.

There is now at Bensham a well-marked case of remittent mania, in a lady who has been the subject of insanity for upwards of twenty years. She is generally in a state of chronic mania, clean, and rather vain of her personal appearance, incoherent in her conversation, and mistaking the identity of every person around her, but harmless. After continuing in this tranquil state for a period varying from three to five months, she becomes violent and noisy, will strike those near her, undress herself, and in fact exhibit all the violence of the delirium of acute mania. This state generally lasts from six weeks to two months, and she then gradually lapses into the quieter stage.

We have also in the same asylum a young man who has for several years been subject to maniacal paroxysms of a very violent character, each lasting

about a week in its full intensity, and then gradually receding. During the interval he is quiet, docile, and, within a certain range of subjects, intelligent and rational.

Cases of intermittent mania connected with epilepsy are much more frequent. The following is a well marked example which fell under my notice a few years since, and there is now a similar case at Bensham.

S. B., aged 34 years, married, of lymphatic temperament, states, that when fifteen years of age, she had an epileptic fit (becoming suddenly insensible, &c.). She remained in health for four years and then married. About four months after the birth of her second child (which, as well as her first, she nursed), she had an attack of acute mania, preceded by an epileptic fit, and since that period has regularly every few weeks (varying from five to nine) had a similar maniacal attack, lasting for a fortnight, and recurring six weeks after her recovery. She feels heated and out of temper a day or two before each attack; appetite good, bowels very torpid, menstruation regular but scanty; suffers from severe headaches and dyspeptic symptoms; has been four years in an asylum, is perfectly sane in the intervals, is ignorant of everything that passes during the paroxysm.

These cases of remittent and intermittent mania, during the periods of excitement, require to be treated on the same principles as acute mania, but, generally speaking, the tendency to exhaustion is less marked than in the primary forms of that disease.

During the intervals of relative or absolute quiet, their treatment must be conducted in the same manner as that of cases of chronic mania.

The medical treatment of *chronic mania* does not often require to be of a very active character. In it we have to attend to the various bodily functions, to allay, and as far as possible prevent, paroxysms of maniacal excitement, and to discover and remove any internal disease that may supervene.

The first object is accomplished by ordinary hygienic precaution, and the second by relieving symptoms of cerebral excitement by measures similar to those required in the management of the more sthenic forms of acute mania, but less active in degree; such as purgatives, the warm bath combined with a slight cold shower-bath on the head, and sometimes leeches or counter irritants, followed by sedatives. But in chronic cases of mental disorder, of whatever form, the general treatment plays a more important part than the purely medical.

With regard to the detection of internal disease,† great care is required, as many of those symptoms on which the practitioner generally relies as aids to diagnosis are wholly suppressed. Insane persons frequently evince either great insensibility to, or power of enduring pain, and hence the light afforded by painful and morbid sensations is absent in the internal and constitutional diseases affecting persons of unsound mind. From this cause examinations after death occasionally reveal organic lesions and changes which had not previously been supposed to exist, and it requires careful attention to the physical

signs present, and a close observation of disordered functions and constitutional peculiarities, in order to discover the disease which is perhaps secretly undermining the vital powers.

Next to acute mania, the form of mental disorder which most urgently requires, and is capable of receiving the greatest benefit from, medical treatment, is *Melancholia*. This disease also presents itself in a variety of forms, and though the characteristic features of each are less distinctly marked than in mania, we can often recognise an acute, a chronic, and, occasionally, a remittent and an intermittent form. We further observe that it sometimes alternates with mania and monomania, the patient passing from an excited to a depressed state of feeling, or *vice versâ*. During the existence of any form of melancholia, the general tone of the system is lowered, and all the bodily functions, more particularly those connected with the formation and motion of the blood, are greatly disordered. Hence coldness of the extremities, a weak slow pulse, torpid bowels, a foul tongue, and loss of appetite are generally found to usher in and accompany the mental and moral depression. In acute melancholia the scalp is sometimes hotter than natural and the face is flushed, while the extremities are cold and the hands in particular will, if unattended to, become livid and swollen from the inactive state of the circulation. In the treatment of this disease we have to act upon principles very similar to those which prove beneficial in acute mania, but the organs of digestion require even greater attention

than in the latter. The loaded state of the tongue and offensive breath would often seem to justify the administration of emetics, but melancholic patients are so apt to be prejudiced against both food and medicine, that it is generally desirable to avoid the production of vomiting and rely upon the depurating effects of suitable purgatives. Any of the ordinary saline and vegetable cathartics may be given in an aromatic water or combined with carminatives. But in acute melancholia, as in acute mania, there is no purgative from which I have seen more benefit derived than oil of turpentine, given either alone or with castor oil. It not only cleanses and relieves the gastro-intestinal mucous membrane, but exercises an advantageous stimulating effect on all the secretions. Its internal administration may very properly be preceded by an enema. If, as sometimes occurs, pain or uneasiness in the epigastric region be complained of, a blister may be applied there, or the more persistent action of a pustular eruption be obtained by a suitable ointment or liniment. Where heat of the scalp is noticed in connection with acute melancholia, I have often observed a marked improvement from the application of a large blister to the nape of the neck. From the feeble and irregular state of the circulation, baths are obviously indicated in this disease, and the warm bath, followed by a slight shower bath, is often of signal benefit, inducing a more equal distribution of the blood and consequent maintenance of heat throughout the system, together with increased mental activity and cheerfulness. Stimulants and tonics, both medicinal

and dietetic, are generally indicated in melancholia, and may often be advantageously combined with sedative and soporific medicines. Morphia itself does not seem to be so well adapted to this as to some other forms of mental disease, and very large doses may sometimes be given without producing much perceptible effect. I therefore often prefer the administration either of solid opium or the camphorated tincture, or a combination of it with other sedative tinctures. In some of the bad forms of melancholia, a tendency to unhealthy inflammation from slight causes, similar to that noticed in acute mania, will at times present itself, and extreme care is then required in order to prevent a fatal issue. The cure of all these forms of mental disorder is also materially impeded by the remissness of relatives in allowing the patient to remain at home, frequently without any medical treatment whatever, during the earlier and more tractable period of the disease. And it is to be feared that a large proportion of the incurable melancholics who are to be found in asylums have been condemned to the lifelong endurance of this distressing malady solely from the almost criminal neglect and selfishness of the persons most nearly related to them. This evil occurs with melancholic patients even to a greater extent than in mania, because the former cases are less annoying and dangerous to others, the victims of this form of mental disease being generally inoffensive, and hurtful only to themselves.

Some of the preceding observations may be illustrated by two or three cases; but as regards the

remittent and intermittent forms of melancholia, it is only necessary to observe that even of the confirmed cases many present perceptible exacerbations and remissions, and that many cases occur in ordinary medical practice where mental depression exhibits itself either periodically or in connection with dyspepsia, pregnancy, miscarriage, or other bodily source of disorder, on the cessation of which the melancholic attack disappears.

CASE 1. *Acute Melancholia with delusions—speedy recovery.* A. B., aged 35, a clerk, admitted into Bensham Asylum April 15th, 1858. He is a short active person, having a very melancholy expression of countenance, and is in poor bodily health, having eaten very little for several days prior to admission. This is his first attack, and is stated to have been aggravated, if not induced, by intemperance acting on an excitable disposition and an overworked brain. His tongue was much furred, his bowels were constipated, the pulse feeble, the extremities cold, and the scalp hot. As regards his mental state, he was the subject of religious melancholia with numerous delusions, believing that he had sinned so much as never to be forgiven, that his food was poisoned, that he was in hell, &c. As he had obtained no sleep for some time previously, a full opiate was administered on the night of his admission, being preceded by a warm bath and exercise in the open air, and, under its influence, he slept for a few hours. The following day he for a long time refused to take food, and it was only by the assurance

that it would be introduced by the stomach-pump if he persisted in his refusal, that he ultimately consented to swallow the nourishment offered. A brisk purgative was afterwards given and repeated until a free action of the bowels was obtained. A blister to the nape of the neck was also applied.

17th. He expressed a wish to remain in bed, but took his food without so much persuasion being required. His tongue also appeared less loaded, but he still groaned a good deal, and doubted whether he could be saved, &c. A tonic mixture with quinine was given twice a day; and he took a sedative draught at night consisting of morphia with sedative tinctures.

May 1st. Has continued to improve; is more cheerful, reads, and occupies himself in the garden. He still, however, retains some delusions on religious subjects.

18th. Has been visited by his friends, and has got the better of his delusions; he talks freely on the subjects to which they related, and expresses himself as perfectly convinced of the folly of his former ideas.

20th. Discharged recovered.

CASE 2. *Acute Melancholia, with suicidal delusions, tendency to unhealthy inflammation, partial recovery, and transition of the case into imbecility.* —

B. C., aged 20, single, an apprentice, admitted January 9th, 1858, is a tall thin young man, of a very woe-begone appearance, pale anæmic complexion, and restless disposition. He is by appearance

and report phthisical, though no physical signs of pulmonary disease can be detected. The present attack, which is the first, is stated to have lasted a month, and is supposed to have been caused by a vicious habit. He has been under no decided treatment, but change of air and similar measures have been employed without any benefit. He has repeatedly expressed an intention to commit suicide, and has attempted to conceal himself for the avowed purpose of carrying into effect that impulse. On admission he was in a very weak condition from the want of sufficient nourishment, he having been for several days without food. He laboured under the delusions that he had deceived everyone and was hence despised, that every place was too good for him, that he had incurred God's anger, and could not be forgiven; that he had been a glutton, that everyone desired to kill him, that his food was poisoned, &c. His groans were loud and incessant, he had not slept for some time, and obstinately resisted every effort to induce him to take food. By the aid of a stomach-pump beef-tea and brandy were with some difficulty administered three times a day; more than once he bit through the flexible tube used for that purpose. His bowels were exceedingly torpid, but at length yielded to turpentine injections and the combined action of castor and croton oils. He slept very little, and three grains of muriate of morphia were given for several nights without producing any continuous repose. He constantly attempted to strip himself naked, tearing his clothes for that purpose, and would then pray aloud with loud groans. He always

imagined that his stomach was full, and that we desired to kill him by forcing more food into it. He evinced great obstinacy in doing exactly the reverse of anything required of him, so much so that this characteristic was employed to guide him.

Jan. 15th. Appears somewhat improved, has taken his meals without forcing. He still persists in taking off and destroying his clothes, and groans incessantly.

23rd. He has wilfully knocked his head against the wall with the intention of destroying himself, and produced a slight abrasion which he will not allow to heal, picking at it with his fingers. He has also produced several abrasions on his legs by fruitless attempts to take off the locked boots. He annoys the other patients very much by his continual groaning, and is still very weak from the continual state of mental excitement and from want of sufficient sleep, though he now sleeps better than before. Stimulants, medicinal and dietetic, were freely given, and he was kept in bed and carefully watched; but at every opportunity he attempted to irritate and scratch the abraded surfaces.

25th. Is still in a very bad condition, the sores on the legs present black sloughs on their surface, and he has lately passed his urine in bed though quite conscious and able to rise. The skin in the gluteal region is reddened and seems tending to the formation of sores. He tears off the dressings applied to the various sores, and shows great cunning and determination in his efforts to impede his recovery. He was placed on an air bed, had a warm bath of ten

minutes' duration twice a day, the hips were then washed with vinegar, and his hands restrained so as to prevent him from tearing off the dressings or injuring himself still more. The stimulants, &c. were continued freely.

Feb. 3. Is improving, and the sores look healthier.

8th. Is stronger, and as noisy as ever, especially when anyone appears to notice him; refuses to continue taking porter, but swallows the wine given him. The sores are healing.

March 2nd. Has improved in bodily health greatly, and is not quite so vociferous, but tears his clothes and has destroyed two strong locked dresses.

March 16th. Is less noisy, and with much persuasion will do various little jobs. He has still a suicidal tendency, having been detected to-day in the attempt to conceal a knife, with which he says he intended to cut his throat.

May 20th. Is much improved, both mentally and bodily. Many of his delusions, however, are still present, and he still contemplates suicide.

July 8th. Is now in a much more contented and happy condition. His mind, however, is exceedingly weak, and his remarks and actions are generally very childish.

August 4th. Is in much the same state mentally, being childish and happy, but is much stouter and improved in his bodily condition. He takes a good deal of exercise in the open air, and has been to several places of amusement.

CASE 3. *Acute Melancholia, improperly treated by blood-letting before admission, death from exhaustion, preceded by numerous epileptiform convulsive paroxysms.* — G. C. M., aged 28, a farmer, admitted June 12th, 1858, a tall well-made man, much bruised on admission. This is stated to be his first attack, and to have been brought on by religious excitement. He had refused his food for some time, and had had very little sleep for a week. He was at first pretty quiet and sensible, and continued so for about an hour, when, on attempting to administer some medicine he became violent, and endeavoured to bite everyone who approached him. He was then placed in a warm bath for half an hour, and on undressing him, it was observed that his fæces had been passed in his clothes. The bath had a sedative effect, and he continued quiet and comparatively sensible for three hours, and took some food, after which he again became excited, tossing himself about violently, and shouting "glory," that there was no chance for him, that he was damned, &c. A blister was applied to the back of the neck, and 4 grains of morphia given in two doses along with porter. It should be mentioned that, a few days before admission, he had been bled largely from the arm, and that, in one of his subsequent fits of excitement, a further loss of blood had occurred from the same wound. He obtained about three hours' sleep after the morphia.

June 13th. He was quiet this morning and walked in the open air for nearly three hours. He for some time refused to take any food, quoting scripture in

support of his views, but was ultimately persuaded by similar quotations of an opposite tendency to eat some meat, and drink a pint of ale containing 4 grains of morphia. He afterwards slept for three hours, when he suddenly awoke, uttered a loud cry, his left arm became convulsed, and his whole body rigid. This continued for two minutes, during which time his face became blue, and his teeth were clenched on his tongue. He was in a semi-comatose state for nearly an hour afterwards, when he gradually recovered consciousness, and once more became excited. It was afterwards ascertained that before admission he had experienced some similar convulsive fits. He was ordered a turpentine injection, with beef-tea and stimulants, as his pulse, though jerking, was readily compressible.

June 14th. He took a considerable quantity of beef-tea and wine during the night. The attendants who sat up with him state that he had six fits, of a similar character to that above described. His whole body was suddenly convulsed, the twitchings continuing for about ten minutes: he then became perfectly rigid for about the same period, and afterwards passed into a soporose state. After a very violent fit at 6 A. M. he appeared so much worse that the attendants called Dr. Robertson, the medical superintendent, who found him apparently moribund. It appeared to be with the greatest difficulty that respiration was maintained, for after slowly drawing two or three inspirations he did not breathe again for at least a minute. His pulse was 90, and exceedingly feeble. His jaw had partially fallen, and the

teeth were coated with sordes; the tongue was dry; the skin was sodden with perspiration; and he seemed as if he would sink very rapidly. He appeared insensible, but on touching the eyelids they were firmly closed. Dr. Robertson, in relating the case, then proceeds to state, "I immediately ordered whiskey to be administered frequently in very small doses, as he could only swallow a very minute quantity at a time. In this manner we succeeded in getting the greater part of two glasses administered. As he still, however, seemed to be sinking, I tried a solution of phosphorus in chloroform, of which I gave him five drops with a little whiskey. After swallowing this he seemed to revive, his breathing became easier, his pulse somewhat stronger, and he appeared in every way improved. I accordingly continued administering this solution with whiskey and beef-tea, and of these he took during the day the following quantities:—of solution of phosphorus, 29 drops; whiskey, 7 glasses; beef-tea, two basins full (about three pints). The change that has occurred in him is perfectly marvellous. In the morning I scarcely expected him to live above an hour, and he now (in the evening of the same day) can talk, stand, walk, and attend to the calls of nature. His uncle and aunt saw him in the afternoon, having been sent for under the impression that he was dying, and he conversed freely with them." He unfortunately, however, began again to refuse food, but the fits did not return. The turpentine injection operated this evening.

June 15th. Has continued to improve, but is still very feeble. His pulse is 150 and feeble, his face

flushed, hot, and covered with sweat. He has taken, since the last report, 5 glasses of whiskey, 2 basins of beef-tea, about 4 ounces of minced beef, and 20 drops of the solution of phosphorus. He, however, complains of pain in the abdomen, and his bowels have been rather freely opened this evening. The phosphorus has accordingly been discontinued.

June 16th. He was very restless and noisy during the night, but took food and stimulants. He seems somewhat weaker, and does not take food so freely as we desire. His father called and saw the patient to-day, who recognised him, and said that he wished he had been allowed to drown himself in a well at home. His bowels are still somewhat relaxed. He is very restless, tossing his arms violently; and to prevent him from bruising himself, he was placed on an air bed, and protected by beds and mattresses. He has obstinately refused all medicinal stimulants.

June 17th. He was last night, at eleven o'clock, seized with a very severe fit, which lasted about an hour. At 1 A. M. he experienced another paroxysm even still more severe, the whole body becoming alternately convulsed and rigid for upwards of an hour, after which he appeared to fall asleep. He awoke about 4.30 A. M., and ten minutes afterwards had another fit. The convulsive stage lasted only two or three minutes, and was succeeded by one of deep coma. He continued in this state until 2 o'clock, P. M., when he opened his eyes and became more sensible, but the comatose symptoms again supervened. Stimulants were administered as freely

as his state allowed, but without producing much effect. His pulse is at present extremely weak, his breathing feeble, the extremities cold, and the body bathed in a cold sweat.

June 18th. He continued comatose, becoming gradually weaker, until after two or three laboured inspirations he expired at 1 A.M. this day.

CASE 4. *Acute Melancholia with obstinate suicidal tendency; death from rapid sinking without any apparent immediate cause.* — L. C. H., æt. 22, single, draper, admitted into an asylum 27th October, 1846, of rather stunted growth, high cheek bones, dry skin, straight hair, melancholic temperament, of good education, and who has always been temperate and well behaved, exhibited four months since, for the first time, symptoms of mental derangement, characterised by incoherence in his writing and conversation, on which shortly supervened an impression that it was his duty to destroy himself, and this illusion has continued up to the present period. Within an hour after his admission he attempted to grasp a knife, and when put to bed endeavoured to smother himself in the bedclothes. No cause is mentioned as having excited this disorder of the intellectual and moral feelings, nor on examination can any other than the confinement of a draper's life, acting upon a constitution hereditarily predisposed to insanity, be suggested; nor does there appear to have been any acute attack of disease ushering in the mental disorder. His general health is tolerably good; at present his tongue is loaded. He occasionally refuses to take

food from a reluctance to prolong life, but when he does so he eats heartily. On the whole his disease is most probably connected with some physical disorder of the brain; his domestic relations are more than usually comfortable. He has been confined in an asylum near York, from which he managed to escape.

Nov. 2nd. Had his bowels freely opened by croton oil, and has since continued to take his food regularly, though his suicidal delusions are as strong as ever. He denies having experienced any pain in the head or felt otherwise unwell, but some ten years since received a blow on the side of the head which has left a distinct cicatrix. A seton was introduced into the nape of his neck; his bowels continue extremely torpid; he will not take exercise nor do anything; says he knows it is required of him to take his own life, that he is a curse to every one, that he must go to hell, &c.

December 3rd. No improvement: has repeatedly attempted suicide, by thrusting his head in the fire, refusing food, hanging, &c.

December 15th. Has most obstinately refused food, and become extremely sullen, because foiled in his suicidal attempts, often refuses to answer questions and sometimes swears at his attendants, expresses his conviction that all treatment is useless, that he is doomed, &c. His feet and hands are generally cold and his head hot, and there have also been occasional attacks of epistaxis. Wine and ale have been administered daily, and he has for the last week been taking quinae sulph. gr. x., acid sulph. dil. ʒij., inf. cascaril. ʒ viij., coch. ij., bis in die.

It should also be observed, that in consequence of his food having to consist of fluids (introduced by a boat) he has become very much emaciated.

18th. Continued in his usual state till 5 P.M. to-day, when, without any premonitory symptoms, he expired. The medical superintendent conversed with him about two hours previously, and as he was moaning, asked him if he felt any pain or uneasiness; he answered in the negative. A post-mortem examination, the necessity for which was pressed upon the friends, was by them obstinately refused.

He had no symptoms of pulmonary disease, nor did a repeated examination of the chest reveal any physical signs of phthisis.

The medical treatment of *chronic melancholia* is comparatively of less importance, as the probabilities of recovery are greatly diminished. So long, however, as bodily disorder accompanies the mental affection, the treatment of the former should be perseveringly continued.

Monomania, in its confirmed forms, does not generally admit of benefit being derived from medical treatment in anything like the same proportion of cases as acute mania and acute melancholia. It nevertheless occasionally happens that the particular delusion constituting the disease arises from, or is intimately connected with, disorder of some function of organic life, by rectifying or relieving which the mental aberration will cease to exist. For instance, the delusion sometimes met with, that an animal or an evil spirit, or a cobbler, a mason, &c., had taken

up his residence in the patient's stomach, and there inflicted on the latter pain and misery, clearly indicates a disordered condition of that organ leading to abnormal sensations in it. In other cases, again, an unfounded idea as to certain acts having been committed in the patient's presence, can often be clearly traced to a diseased state of that portion of the brain subservient to the sense of vision.

In one case of this kind, which recently fell under my notice, the mental disorder supervened on an attack of apoplexy, and the original delusion associated with the sense of sight, was afterwards followed by others having reference to the sense of hearing.

In treating monomania, it is, therefore, important not only to attend to the bodily functions generally, but further, to examine the latter with special reference to the existence of a connection between any local disorder and the mental affection. One form of monomania, namely, that in which delusions exist as to wealth, dignity, &c., is found to be very frequently connected with, and itself the precursor of, the general paralysis of the insane: most frequently a hopeless disease in which, as Dr. Bucknill has proved, every part of the nervous system, even that presiding over muscular action, participates in the diminution of vital force.

When properly attended to at an early period, however, even those unpromising cases in which the premonitory symptoms of general paralysis have manifested themselves, are, to a considerable extent, amenable to treatment. And in a few instances I

have known a perfect recovery to take place. The treatment consists in stimulating and developing to the utmost possible extent the general vigour, and more especially the nervous energy of the system, by the most nourishing food, by wine, and other dietetic stimulants, by external warmth, by friction, gentle shower-baths, exercise, &c., and by medicinal tonics and stimulants; among which, in the latter stages of general paralysis and dementia, I attach a high value to phosphorus. In a case now at Bensham, the latter has more than once seemed to avert a fatal issue, and by the powerful temporary support which it rendered to the vital powers, enabled them to regain a certain degree of vigour.

Dementia is most frequently the sad result of other forms of mental disorder, though occasionally met with in a comparatively acute form as a primary disease. It exists, to a greater or less extent, among the mass of chronic cases to be found in large asylums, and is then generally incurable. Cases, however, sometimes occur in which a fatuous appearance is assumed by melancholic patients. I remember a striking illustration of this tendency, which presented itself some years since in a woman who for several months exhibited complete stupor, seeming incapable of answering the simplest question, and being very dirty in her habits, but who, shortly before death, (which occurred from gradual exhaustion, without any assignable bodily cause,) spoke quite rationally, and mentioned the fact of her having understood and remembered every incident that had occurred to her during the disease. She assigned no motive for

this conduct beyond a wish to have nothing more to do with this world. Where there is the slightest reason to suspect such a state of mind, of course the greatest possible kindness and attention should be bestowed on the unfortunate being, in order to gain the confidence and induce an abandonment of the morbid state of feeling. Generally speaking, the medical treatment of dementia must be conducted on the same principles as that of idiocy. A knowledge of the prevailing causes of death among the insane cannot but illustrate their general bodily condition, and I therefore may be excused for here inserting an extract from the statistical paper previously alluded to.

CAUSES OF DEATH IN INSANITY.

Zymotic Diseases.

Influenza	-	-	-	-	-	16
Cholera	-	-	-	-	-	13
Fever -	-	-	-	-	-	55
Erysipelas	-	-	-	-	-	41
Variola	-	-	-	-	-	2
Scarlatina	-	-	-	-	-	1
Dysentery and Diarrhœa	-	-	-	-	-	166
Purpura Scorbutus	-	-	-	-	-	2
						<hr/> 296

SPORADIC DISEASES.

1. *Diseases of Uncertain Seat.*

Hæmatemesis	-	-	-	-	-	2
Hæmorrhage	-	-	-	-	-	2
General Dropsy	-	-	-	-	-	100
Ascites	-	-	-	-	-	8
Hydrothorax	-	-	-	-	-	31
Abscess	-	-	-	-	-	7
Lumbar do.	-	-	-	-	-	8

Scrofula	-	-	-	-	-	11
Rachitis	-	-	-	-	-	1
Marasmus	-	-	-	-	-	70
Rheumatic Gout	-	-	-	-	-	1
Cancer -	-	-	-	-	-	14
Cancer of Uterus	-	-	-	-	-	5
„ Stomach	-	-	-	-	-	8
„ Rectum	-	-	-	-	-	1
Mortification and Sloughing	-	-	-	-	-	38
Age and Debility	-	-	-	-	-	266
Gradual Decay	-	-	-	-	-	331
Fungoid Disease	-	-	-	-	-	2
Sudden Death -	-	-	-	-	-	1
Inflammation (part not specified)	-	-	-	-	-	2
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						909

2. *Diseases of Nervous System.*

(Vide antè, p. 114.)	-	-	-	-	-	2045
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3. *Diseases of Heart and Bloodvessels.*

Disease of Heart	-	-	-	-	-	67
Pericarditis	-	-	-	-	-	1
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						68

4. *Diseases of Organs of Respiration.*

Pneumonia	-	-	-	-	-	29
Asthma, &c.	-	-	-	-	-	45
Disease of Trachea	-	-	-	-	-	4
Phthisis	-	-	-	-	-	525
Disease of Thorax (nature not specified)	-	-	-	-	-	39
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						642

5. *Diseases of Organs of Digestion.*

Peritonitis	-	-	-	-	-	3
Disease of Liver	-	-	-	-	-	25
Enteritis, &c.	-	-	-	-	-	51
Disease of Abdomen (nature not specified)	-	-	-	-	-	16
Intestinal obstruction	-	-	-	-	-	9
Stricture of Œsophagus	-	-	-	-	-	1
Inflammation of Pharynx	-	-	-	-	-	2
Biliary Calculi -	-	-	-	-	-	1
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						108

6. *Diseases of Urinary Organs.*

Diabetes	-	-	-	-	-	2
Disease of Bladder	-	-	-	-	-	9
Calculus Vesicæ	-	-	-	-	-	1
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						12

7. *Diseases of Joints.*

Rheumatism	-	-	-	-	-	2
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EXTERNAL CAUSES OF DEATH, INJURIES, ACCIDENTS.

Suicide	-	-	-	-	-	29
Accidental Injury (self-inflicted)	-	-	-	-	-	2
Found dead in Bed	-	-	-	-	-	3
Burns	-	-	-	-	-	1
Accidental Suffocation from Food	-	-	-	-	-	5
Asphyxia	-	-	-	-	-	3
Intemperance	-	-	-	-	-	2
Inanition	-	-	-	-	-	12
Injuries from Lunatics	-	-	-	-	-	2
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						59

Total Causes of Death Specified	-	-	-	-	-	4141
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I shall only add that since 1844, when those statistical returns were made, there appears to me to have been an increase in the proportion of cases manifesting a tendency to exhaustion and unhealthy inflammation, a view which is supported by the general prevalence of an adynamic type in constitutional diseases.

It will be observed that it is chiefly in the acute forms and early stages of insanity that it is amenable to medical treatment. But when thus properly attended to at its commencement it yields to remedial measures in a ratio infinitely surpassing the great majority of important bodily diseases. For experience

has fully proved that even after the full development of the mental disorder, upwards of 70 per cent. of cases of acute mania and melancholia may be cured, while due attention to the premonitory symptoms (such as unnatural excitability, lowness of spirits, continued sleeplessness, &c.), which always precede an attack, would, in nine cases out of ten, check the morbid tendency, and enable the patient to continue in the enjoyment of his social and domestic relations. How deeply then is it to be deplored that so many persons should be doomed to spend their lives in helpless imbecility, solely from the false delicacy, perverted pride, or senseless prejudices of their nearest and once most valued friends.

CHAP. III.

OF THE GENERAL TREATMENT OF MENTAL
DISORDERS.

UNDER the term "general treatment" I include everything relating to the care and management of the insane, other than strictly medicinal agencies. But if it be found impracticable to lay down fixed rules of medical treatment for the various forms of insanity, how much more hopeless must it be to attempt to regulate, by any universal formula, the general conditions capable of affecting the patient's moral and mental state. To render this consideration more evident it may not be useless again to glance at some of the circumstances which constitute and occasion the infinite varieties of disordered mind met with in asylums. Let us remember then, that, as regards the degree of unsoundness, there may be every intervening shade between the utter annihilation of the intellectual faculties on the one hand, and their almost perfect possession on the other; the prevalence of a single delusion possibly constituting the only proof of the existence of the disease. Let it further be borne in mind that in the great majority of those cases where the intellect is but partially affected, its powers are morbidly, if not mischievously,

directed in consequence of the moral sense being itself weakened or perverted. To such an extent is this the case that in the opinion of many of the most eminent and experienced writers on these subjects Moral Disorder always precedes Intellectual Insanity. And throughout the different stages and phases of the latter we constantly meet with proofs of the absence or perversion of the moral sense or normal guiding and controlling principle of the mind. Nor is the knowledge of this fact limited to those having special and intimate relations with the insane; it has long been recognised by men of genius and observation. In illustration of this I may refer to a passage in one of our popular magazines, where, in reviewing some poems, an able writer and profound thinker thus expresses himself: — “ One mad woman is supposed to be like another, provided she talk nonsense enough; whereas, in fact, madness, as Shakespeare well knew, brings out individual peculiarities more strongly than any other state. It may be, in fact, defined as the state of mind when all which keeps down the individuality of man, and makes him like his neighbour, — reason, moral duty, fear of opinion, often common decency, — have vanished, and left the mere character and nature of the man, free and wild, to exhibit itself as it may choose without restraint of law.” — *Fraser's Magazine*, Dec. 1851.

The disordered mind, thus deprived of the restraining influences which naturally knit together its various faculties and parts, very generally exhibits in absurd vagaries and mischievous impulses at once the complexity of its own constitution and the pre-

vailing mental peculiarities of each individual patient. Every circumstance, therefore, previously affecting the latter will modify the particular manifestations and direction of his disorder. Age, sex, domestic and social condition, residence, occupation, habits, virtues, vices, in short, all the innumerable agencies, moral and physical, natural and acquired, which in the normal state produce diversities of character and personal peculiarities will *à fortiori* act still more energetically upon the disorganised intellect and unguarded emotions of insanity. The exceptions to a rule for regulating on any one point the management of persons of unsound mind must therefore be so numerous as materially to diminish its practical value, and an extensive discretionary power of modifying surrounding conditions, according to the peculiarities of each case, must also of necessity be accorded to those having charge of it. For the same reason I shall now merely offer some brief comments upon a few of the more important points in the general treatment of mental disorders.

Food.—It is generally admitted that in persons labouring under mental disorder the *vis vitæ* or constitutional vigour is much impaired, and hence the diet requires to be more generous than that employed by those in health. Not only is a liberal allowance of animal food requisite, but malt liquors and wine must frequently form part of the ordinary diet. In many of the more acute cases, indeed, the sustaining influence of the latter is so urgently required that they assume a medicinal importance. The proper regulation of the quantity of food taken

by each patient is a point demanding considerable attention, as some will endeavour entirely to abstain from it, and others will, if allowed, injure themselves by gratifying to the full extent a morbidly voracious appetite. In idiots, congenital imbeciles, epileptics, and some cases of chronic mania and dementia, where the animal instincts are strongly manifested, there will often be a proneness to the latter excess, and it requires constant watching and a little firmness on the part of the attendant to prevent the patient from engorging the stomach and, ultimately, the vasa system to a dangerous extent. We know that the relative frequency and severity of epileptic paroxysms are materially influenced by the degree of plethora existing in the system, and I have observed in asylums several cases of apoplexy, in which the fatal rupture of a bloodvessel in the brain had evidently been the result of an engorged and plethoric state of the circulating apparatus, consequent on the inordinate and continuous gratification of the appetite. The opposite class of cases, however, generally occasion the most anxiety, and none but those who have charge of suicidal and melancholic patients can estimate the trouble and care involved in the management of cases where there is a disposition to refuse food. The delusion is often present that every article of diet is poisoned, and if that idea can only be removed, and confidence inspired, the objection will occasionally cease. In these cases nothing has seemed to me to answer so well as for one of the superior officers of the asylum to invite the patient to partake of refreshment with him (not recognising any refusal or

excuse), and the food being made as attractive as possible, a good example set in disposing of the viands, and a lively conversation maintained, the patient will often at the moment forget his morbid fancies, and be betrayed into taking a hearty meal. When the ice is thus broken the delusion seldom seats itself so firmly again. In other cases the refusal of food is systematically adopted as a means of self-destruction, and reasoning and entreaties are alike powerless to induce an abandonment of the suicidal design. Nourishment must then, after the fruitless and persevering trial of all other and milder methods, be introduced by means of a feeding-boat or the stomach-pump, but there should be no violence or excitement in carrying out this step, and the nature and object of the proceeding should previously be explained to the patient. The food thus given is necessarily in a liquid or semi-liquid state, and should be as nutritive as possible; along with it may be administered wine or other stimulants if deemed necessary. In general after nourishment has been thus forcibly administered two or three times, the patients will yield and take their food, though perhaps under protest; but the firmness with which they attempt self-starvation is sometimes extraordinary. It should also be remembered that, from some peculiarity of feeling, insane persons will at times refuse to partake of food before others, but will eat it if they can obtain it surreptitiously. The experiment of leaving it within their reach should therefore always be tried before having recourse to forced alimentation.

The *clothing* of the insane must be carefully attended to, as, from the feebleness of the circulation, the extremities are often cold. This occurs more especially in melancholia; and in those cases it is also requisite to avoid as much as possible articles of dress which may be used for suicidal purposes, and to remove the clothes from the sleeping apartment. In many of the acute cases of mental disorder, the tendency for the patients to undress themselves and destroy their clothing is very great, and hence the strongest materials are required in the construction of suitable garments. It is too generally a subject of complaint with those having charge of private patients of unsound mind, that their relatives neglect properly to supply them with clothes, in consequence of which they are apt to lose any regard for neatness in attire, and with it a portion of that self-respect which may materially promote their recovery.

The *air* respired by the insane should be at once pure and of moderate temperature, neither oppressively hot, nor much below 60° of Fahrenheit. The most effective means of combining ventilation and warmth is one of those sanitary problems which still occupy the attention of engineers and physicians. In asylums, where the inmates also require to be protected against accidental or intentional injuries by fire, plans of warming by the circulation of hot water or air through a system of pipes was formerly preferred, but of late there is a tendency to use open fire places. This is one of the many questions connected with the management of the insane in which there may fairly be some difference of opinion, ac-

ording as the requirements of safety or cheerfulness are chiefly considered.

As the effluvia proceeding from the bodies of this class of invalids are generally strongly marked, and as some patients are liable to become dirty in their habits, *personal cleanliness* demands strict attention, both as a means of preserving bodily health, and as an important moral agency. In addition to the regular use of warm-baths for the purposes of ablution, great watchfulness must be exercised by the attendant, in order to ensure the due observance by the patient of this essential of well-being and comfort.

The advantage of active and prolonged bodily *exercise* in the treatment of insanity must be obvious, both as a source of vital invigoration, and as a powerful diversion to the morbidly sensitive mind. On this point there can be no difference of opinion. The determination of the place, and kind of exercise, however, occasionally requires some consideration. And practically, it is often difficult to select the cases in which "prolonged exercise beyond the boundaries of the asylum grounds" may be granted without danger to the patient, or inconvenience to the public. It is generally recommended for the more excitable and melancholic patients; but these constitute the very class most prone to injure themselves or others, and in proportion to the frequency and degree in which they are removed from the asylum, must the security against acts of violence be diminished. Considerable discretionary power on this point ought, therefore, to be left with those

having charge of the insane. In regulating the kind of exercise taken many circumstances must be attended to. An excitable person, recently convalescent from Acute Mania, would probably be injured by dancing, or other active, cheerful exercise that would benefit a melancholic patient. In like manner the previous habits, age, social position, &c., must be considered in selecting the particular mode of exercise; but, generally speaking, that is best which is capable of being combined with occupation or amusement, as the mind itself may then also be interested, and its attention diverted from injurious topics. This remark is equally applicable to the *occupation* of persons mentally disordered, and every effort should be made to enlist the patient's sympathies, and engage his interest in any work which he may undertake. To this end it is well to consult him on points with which he may be presumed to be acquainted, or on little questions of detail on which he may be qualified to give an opinion. Every person having even the partial command of the intellect, possesses some talent, some germ of capability, or even of superiority, if we can only discover it, and what we do best we generally take most pleasure in doing. By acting as much as possible, then, on the principle of alluring patients to select their own industrial pursuits, the benefit to them, mentally and morally, will be materially enhanced, and the labour itself will cease to assume the appearance of a task: a few cheering words of approbation may indeed occasionally convert it into a pleasure.

Amusements constitute an essential, but by no

means an easy, part of the general treatment of insanity; and the more highly educated the patients, the more difficult is it to minister for any length of time to their gratification. In athletic and outdoor games all can participate; but where more intellectual recreation is attempted, the mental difference constituted by education presents itself, and separates our patients into various classes, each taking an interest in a range of objects more or less peculiar to itself. To the utterly uneducated man of labour, an extra allowance of beer and tobacco will probably furnish the highest enjoyment desired. To persons whose mental powers have been further developed, a newspaper or novel, with a game at draughts or whist, varied occasionally by music or dancing, will sufficiently please. While to those who have received a more liberal education, the pursuit of some department of natural history, lectures and works on literary and scientific subjects, recitations, readings, literary exercises, excursions to remarkable places, &c., will best relieve the tedium of a continued residence. To all classes music, and the other fine arts, and horticulture, will generally afford pleasure. Dancing is also occasionally advantageous, particularly for females, but some care is requisite in allowing it, as excitement may otherwise result. In arranging amusements, it is wise to avoid an affectation of abandonment to pleasure. The mind when convalescent from disease, should rather be kept in an atmosphere of calm repose than in a whirl of giddy excitement; and I therefore entirely agree with the following remarks made on this subject by

Dr. Bucknill. "Between amusements and occupations, however, a due proportion ought to be preserved. Devotion to mere amusement seems to produce a dissipated state of the insane not less than of the sane mind; and it is well known that nothing is more wearisome, and less wholesome, than a life of mere pleasure seeking." It is further observed by the same able writer, that, "in some of the Scotch public asylums, the amusement of the patients by theatrical representations, concerts, picnics, &c., appears to be the prime means, if not the end, of treatment;" and that "as a general rule, in the moral management of asylums, the reverse proportion ought to obtain between the stimulating excitement of pleasure, and the invigorating mental nourishment afforded by steady mental occupation, directed to some useful end."—(*Psychological Medicine*, p. 519.)

And in proof of the occasional hollowness of the apparent vivacity exhibited at balls, &c., by melancholic patients, I may mention a case which fell under my own notice, where, on a Christmas Day, a young man attended a church in the morning, and joined in dances and other festivities in the evening, having all the time a piece of rope in his pocket, which he had secreted for the purpose of hanging himself. Indeed, I have scarcely ever heard of a successful attempt at suicide in an asylum in which the patient had not previously affected increased alacrity and cheerfulness.

Religious exercises may be very beneficial, or the contrary, in the treatment of mental disorders. As a means of strengthening the controlling powers of

the mind, they are important instruments of good; but inasmuch as many of the most intractable and dangerous delusions are connected with religion, the indiscriminate admission of the insane to its ordinances may in certain cases be productive of increased evil. Irritable and excitable patients are often soothed and quieted by attendance at divine worship, but melancholic and monomaniacal patients are sometimes influenced injuriously by the same agency. This is more particularly liable to occur in churches and public places of worship, as the presence of numerous strangers is apt to suggest new delusions, and the discourses delivered, and portions of Scripture read, may be peculiarly detrimental to the particular patients present. It seems therefore more desirable that the general body of the inmates of an asylum should worship together, strangers being occasionally present; and passages likely to be injurious being omitted from the services of the day. Much benefit would, in my opinion, also result from the preparation by a competent person, of a volume of sermons especially directed to the requirements of persons of unsound mind, and meeting by scriptural arguments the leading phantasies and errors of mental disease. In support of the position as to the occasional impolicy of presenting religious subjects to the consideration of the insane, may be quoted the opinion of an experienced chaplain in a large public asylum, who says, "After mature deliberation, your chaplain has come to the conclusion, that, however painful it may be, and however harsh it may seem, yet that there are cases, (not those of furious madmen,) and times, in

which religion should *not be* made a subject of conversation, and in which the patient should *not even be allowed to read the Bible or to attend chapel*. So strong a statement of opinion requires reasons. The reasons which appear to warrant such a conclusion, are as follows:— There are cases in which a misconception of true religion has been the predisposing cause of madness; and there are cases in which though it has not been the primary cause, yet in which it has become the ruling mania. In such cases, to encourage conversation about religion, or to lead the individual's mind to dwell upon it in any way, is to add fuel to the flame of madness.”—(*Report of the Chaplain to the Directors of the Royal Asylum near Perth, 1858.*)

To the ordinary mind it might appear that in every case of insanity, treated either in public or private asylums, a certain degree of *physical restraint* was employed. The compulsory removal from home to a residence among strangers, the forcible detention in that residence, whether by the most inoffensive and recently improved locks, or by the brawny arms of the most polite attendants, and the necessity also under compulsion of yielding to the wishes of others in all the little matters which constitute the essence of personal liberty, would generally be considered to involve something very nearly approaching to mechanical or physical restraint. But the technical use of this phrase as now employed in connection with the treatment of insanity, limits its application to those cases in which the free command of the limbs, particularly of the hands and arms, is impeded

by some mechanical appliance. And in this country by the majority of the medical men at present engaged in this department of practice, the employment of physical restraint in the treatment of mental disorders, is wholly and strongly condemned as unnecessary, harsh, cruel, and a relic of barbarism. I have not time or space to enter at any length upon the discussion of this controversial subject; but it may not be improper to observe that Pinel, the illustrious philanthropist and philosopher, who first tried on a large scale the bold experiment of substituting moral influences for physical coercion in the general treatment of insanity, the late learned and excellent Dr. Pritchard, who, perhaps, more than any other English physician, has adorned the psychological department of medicine, and the great body of French, German, and American practitioners, expressly recognise the necessity, in exceptional cases, of using mechanical restraint as a curative measure. The writings of Haslam and other experienced and able men in this country, also abound with cases in which the cure of mental disease was even by the patients subsequently referred to their temporary privation of the power of injuring themselves or others. And I confess that it is with feelings far removed from admiration or conviction, that I observe in some modern works, an affectation of compassionate superiority towards men like Pinel and Esquirol, simply because they had too much good sense to push their own excellent and humane ideas to an extremity.

In ordinary mania, I would wholly abolish mechanical restraint; but there are cases of mental disease

in which its occasional and temporary employment appears to me to be essential to the welfare of the patient, as either tending to protect his life, or promote his recovery.

Among these cases are the following:—

1. Where a serious injury (as in one of the histories previously related, fracture of the thigh bone) may exist simultaneously with paroxysms of maniacal excitement, the bodily affection requiring for its cure perfect rest, the mental disorder inducing constant agitation.

2. Where idiotic or imbecile patients have a propensity to mutilate or injure themselves. Thus I have known an epileptic imbecile to bite a large piece of flesh out of his hand, and show a disposition to repeat the act; but on restraining his arms for a few hours the tendency passed away.

3. Where suicidal patients having wounds on their body, tear off the dressings and attempt to irritate and injure the exposed structures.

4. Certain intractable and dangerous forms of what is termed moral insanity, where the reasoning powers exist, but where the whole force of a morbidly acute intellect is directed to one object, and that object very frequently self-destruction. I have before alluded to the impossibility of clearly separating moral insanity from crime; and where the only evidence of a disordered intellect is an impulse to commit acts which are in themselves criminal, I can see no reason why the development of a moral controlling power should not be attempted by recognising in the patient a certain limited degree of responsibility. These are the most troublesome and

most dangerous cases to be met with in Asylums; and where the moral disorder takes a suicidal form, and the patient is intelligent and well educated, I believe that the realisation of his object can only be prevented either by mechanical restraint, or by the constant vigilance of a series of attendants, both by day and night, at a cost utterly disproportionate to any benefit resulting from their services.

In the general management of the insane, what is termed *moral restraint* is obviously an important feature. It may be stated to have for its object the invigoration or additional development of the controlling and guiding powers of the mind, as a means to the prevention of the morbid irregularities and impulses which constitute the essence of insanity. We have seen that it is the leading peculiarity of these diseases for the patient to lose, in a greater or less degree, his self-control, and so exist in a state of moral abandonment. Were there no check to this, were every insane person permitted fully to indulge the promptings of a diseased imagination or of vicious feelings, who can describe the confusion, the dangers, and the calamities which would result from the assemblage of such unfortunates? All must therefore admit the necessity of preserving in an hospital for the insane as great a degree of order and decorum as may be compatible with kind and restorative plans of treatment. And all will further agree that the accomplishment of these ends should to the greatest possible extent be attempted by the mildest and gentlest measures, by engaging the sympathies and affections of the patients, and by adopting the

principle of love and esteem as the moving influence of all our efforts.

But though for my own part cordially adopting these views, I think it right to allude to a grave and important question connected with the moral treatment of insanity, and one which I feel confident will eventually necessitate attention, namely, that of the existence of a certain limited degree of moral responsibility in many persons of partially disordered mind. I have previously quoted from Dr. Thurnam some sentences which imply his belief that, in certain forms and degrees of insanity, a sufficient amount of moral consciousness exists to render the individuals liable to a certain extent for their actions. And there cannot, I think, be a more erroneous idea, or one more antagonistic to the humane views now prevalent respecting the treatment of the insane, than to suppose that every person who is mentally disordered on a certain topic, or at certain times, is therefore utterly irrational and void of all moral sense in all other respects and at all other seasons. It is far from my intention to endeavour to prescribe any definite rules on which to conduct the moral treatment of these difficult cases. I am content with simply indicating the fact of the moral perceptions occasionally existing even amid the turbulence and eccentricities of mental disorder.

Whilst then it is essential to cheer, sustain, and soothe one class of sufferers, it may be equally necessary to check, reprove, and, by the denial of little indulgences, convey a disapprobation of the improper or indecent language and conduct of others.

The *separation* of the insane from their relatives, and occasionally from each other, is also a remedial means of great importance. I cannot better express the reasons which have led to the general adoption of the former practice than in the language of Pinel, all of whose remarks on this subject are peculiarly valuable. "It is," says he, "generally so sweet to an invalid to be in the bosom of his family, and there to receive the cares and consolations of a tender and compassionate affection, that it is with pain I announce a sad truth, but one established by the most repeated experience, namely, the absolute necessity of confiding the insane to the hands of strangers and of isolating them from their relatives."—(*Sur l'Aliénation Mentale*, p. 6.)

In a chapter headed "Restriction extrême à mettre dans les communications des Aliénées avec les personnes du dehors," after alluding to the results of experience in England as to the necessity of extreme care in permitting the visits of friends, and stating that in France they had also felt the necessity of putting an end to the indefinite admission of strangers and curious persons into asylums for the insane, he adds, "Pourquoi ces mesures de prudence ont-elles été toujours mises en oubli autrefois dans l'hospice de Bicêtre, où rien ne limitoit les visites à rendre aux aliénés? Combien on étoit affligé de voir ces infortunés servir de spectacle et d'amusement à des personnes indiscrètes qui souvent se faisoient un jeu cruel de les aigrir et de les harceler? J'ai vu une fois un aliéné, au déclin de son accès, se porter au plus haut degré de fureur et de violence contre un

mauvais plaisant qui le provoquoit par la fenêtre de sa loge. Il retomba dans son premier état, et cette rechute a duré plus d'une année. Je puis citer encore un exemple plus déplorable de ces visites inconsidérées, &c." Again, he says, "The isolation of the insane being a general maxim of treatment, what injurious effects may not result from a single interview with persons of whom the patient has complained, or whose presence alone may recall disagreeable recollections, even at the decline of the disease, or when the convalescence is not yet thoroughly confirmed? The best arranged precautions on the part of the officers will sometimes be in vain. . . . I could multiply examples of the sad consequences produced by the premature visits of relatives or other persons who had previously had intimate relations with the insane person."—(Pinel, *op. cit.* pp. 273, 275, 277.) And when it is borne in mind that not unfrequently family differences and domestic discord are closely connected with the origin of the mental disorder, the propriety of some discrimination being exercised in again subjecting the patient to influences of that description will be sufficiently obvious. As regards the occasional separation of one patient from others, it may be required in order to prevent injury arising during a paroxysm of excitement or from a morbid impulse, and it may be effected by simply placing the patient in another apartment, or by allowing him to remain for a certain time in his bed-room or airing yard.

The task of carrying out the details both of the medical and general treatment of insanity rests, to a

great extent, with the nurses or *attendants*; and upon the care with which they are selected, and the zeal, patience, and humanity which they may possess, will materially depend the efficacy of the remedial measures employed. "These duties," says Dr. Conolly, in reference to this subject, "can only be reasonably expected from attendants of humanity and intelligence, who are treated kindly, governed justly and mercifully, and properly supported by the officers. Attendants who zealously endeavour to perform all their duties well should be treated with confidence, and allowed every reasonable indulgence." They have many privations and discomforts to endure, in addition to a serious and ever present responsibility, and much unmerited insult. Whilst then every care is taken to prevent cruelty or inattention towards the patients, and to enforce the strict performance of duty, any reasonable privilege consistent with the maintenance of discipline should be accorded to good and deserving attendants. Their position should also be raised above that of ordinary servants, not only by the amount of emolument, but by those little manifestations of respect from their superiors, which are often more highly prized than the mere gift of money.

In conclusion, it may not be wholly unprofitable briefly to review what has been done, and also to glance at what still remains unaccomplished in this country in connection with the general advancement of the knowledge specially applicable to the prevention and cure of insanity. All are, I think, agreed that the present law of lunacy, and the administrative

machinery employed under it, greatly need improvement. An efficient law efficiently administered will render cases of improper detention in asylums almost an impossibility, and so do away with many of the objections to the removal of patients to proper places of treatment in the earlier and more curable stages of mental disorder.

Moreover, in any future legislation the utmost care should be taken to approach this difficult subject in a calm conscientious spirit and one utterly removed from passion or prejudice. For it needs the utmost power of intellect and clearness of moral perception to reconcile in a law of lunacy the conflicting claims of personal and public interest, to preserve at the same time the liberty of the subject and the security of society, and to ensure the humane and kind treatment of the lunatic, without denying to the persons entrusted with his charge the ordinary protection afforded by English law to English subjects. Otherwise the legislative efforts will merely be a series of oscillations between opposite evils. It must be confessed that the system hitherto in operation has failed to inspire the public with confidence in the management of asylums or the administration of the laws relating to the insane, and this is in itself a great evil, even as regards the welfare of the latter. Neither has it cast much additional light upon the nature of insanity, nor perceptibly increased the proportion of recoveries. But it has added materially to the physical and general comfort of the insane, especially the insane poor; and it has, at the cost of upwards of a million sterling, pro-

vided a number of palatial edifices for the reception of the latter ; but which buildings however spacious are already inadequate to the accommodation of the numbers pressing for admission into them. Is it then unreasonable to conclude that the cause of humanity and the public good demand the inauguration of a new system, of one which after receiving a fair trial shall present more satisfactory results than those just enumerated? What, for instance, do the English public know of the causes which lead to mental disorders, causes the control of which is, to a very great extent, in their own hands? They have yet to learn the salutary lessons of self-denial, humility, and reformation, which the appreciation of that fact cannot but suggest. And even in the purely medical aspects of the subject there appears in some quarters an indolent and ultra-expectant mode of regarding mental diseases, which, if pursued to its legitimate consequences, must end in the utter repudiation of medical science and skill in their treatment. For in the reports of some large asylums I observe that medical treatment is intimated to be of little avail, one or two simple drugs being mentioned as the only medicinal agencies employed. If this be the correct principle, if medical science can afford no greater aid in the cure of Insanity, it is surely incumbent on the medical officers who entertain these views at once to resign their appointments as such, and henceforth leave the care of the insane to persons of ordinary education. For my own part I entertain a very different opinion. I believe that even in this

apparently unpromising department of medicine great results may be achieved; and that by a more perfect acquaintance with the laws regulating the phenomena of the healthy mind, by a more extended knowledge of the properties of the innumerable substances, natural and artificial, which are capable of acting upon the nervous structures, and through them upon the mental phenomena, and by a more careful investigation of the circumstances influencing the production of morbid changes in the nervous system, a merely disordered and structurally uninjured brain may be rendered as amenable to curative agencies as a disordered liver or kidney. Entertaining such opinions I may then perhaps be pardoned for attaching importance to the following and similar means of checking the progress of Insanity and diminishing the number of the insane in this country.

1. The further investigation of the causes of mental disorders, and the general diffusion of information respecting them.

2. Greater attention to the physical and moral education of all classes of society, and the prevalence of a more simple and natural mode of living.

3. The treatment of insanity in its earlier stages, and during the period when its approach is heralded by premonitory symptoms, such as unusual eccentricities, causeless dislikes, &c.

4. The prosecution of further investigations into the physiology and pathology of the nervous system, so as to increase our knowledge of the conditions affecting its higher functions in health and disease.

5. The institution of inquiries into the special properties and peculiarities of action, of narcotic and sedative substances, whether of vegetable origin, or called into existence by recent experimental researches in organic chemistry.

It is but too obvious that the causes of insanity are still rife amongst us, and that the same noxious agencies which produce crime, vice, intemperance, pauperism, and other great social evils, are also operating injuriously upon the mental vigour of thousands. And we well know that when any of these evils has once conquered a victim, he ever afterwards falls a comparatively easy prey to its subsequent attacks. The squalor, wretchedness, and disease which haunt the poorer districts of our large towns, the extreme ignorance of the mass of the rural population in some counties, and the besotting and vitiating habits of a certain proportion of all grades in our social system, are in truth sad counterpoises to the oft-boasted progress of this age. And if a check be not applied to the growth of the idle, the helpless, and the criminal portions of the community, they threaten at no very distant period to overwhelm and crush the industrious and wealth-producing classes. Indeed in this and many other respects, modern civilisation is even now being weighed in the balance, and woe unto mankind if it be found wanting. The curses which with inexorable rigour follow the violation of the divine laws intended for the general well-being of society, and of which Insanity is not the least, are already hovering over

the most polished and advanced nations of the earth. And as regards our own country, we can only pray that God will be pleased to impart to our rulers, the intelligence and the patriotism whereby to avert them.

THE END.

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
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