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FUNCTIONAL NERVE DISEASES

FUNCTIONAL NERVE DISEASES

BY

A. T. SCHOFIELD, M.D

HON. PHYS., FRIEDENHEIM HOSPITAL

LIFE IS NOT FORCE, IT IS COMBINING POWER. 'IT IS THE PRODUCT AND PRESENCE OF MIND'"

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WITH THREE DIAGRAMS

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PREFACE

THE subject of Functional Nerve Diseases has been here approached from a somewhat novel standpoint. Hitherto these diseases have been treated pretty much after the same method as all other diseases, and only the most casual allusions have been made to Psychic treatment in connection with them. Once we recognise that the description "functional" really means "psychic," just as "organic" means "physical," we shall agree that diseases in this former category stand in close and necessary connection with the relation of mind to disease.

It is quite certain that mind has taken a large share in the causation of many of these Functional Nerve Diseases; and it is therefore not unreasonable to expect that it should play a considerable part in their cure.

A. T. S.

19 HARLEY ST., LONDON, W.
January, 1908

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FUNCTIONAL NERVE DISEASES

CHAPTER I

INTRODUCTORY

FUNCTIONAL nerve diseases occupy a vague, ill-defined and unscientific territory. No two writers can agree upon what they mean by the phrase, or arrive at the same conclusions on the diseases to be included, while many take refuge in avoiding the subject altogether.

The word "disease" is vague enough in itself. It is defined as "a deviation from the standard of health in any of the functions or component materials of the body," but this is surely misleading, for we all experience countless deviations in function and component materials that do not constitute disease. "Disease," says H. Campbell, "is an abnormal mode of life." There is not much help here, for there are many abnormal modes of life that do not constitute disease. Clifford Allbutt, in despair, takes

refuge in a remarkable simile and says, "To define disease is to build a wall round a stick, round nothing, in fact, that needs definition."

There can be no doubt that in disease there is a deviation from the normal state, though this cannot be taken as its definition, and to measure any deviation from health, the bounds of the latter must first be known; and here we encounter one of the first practical difficulties met with by the student of functional nerve diseases. It is easy, of course, to diagnose deviations from health when you have before you a case of small-pox with a copious eruption or croupous pneumonia with a high temperature; but when a patient enters your room with a nervous, jerky manner and complains of weakness and loss of memory, how is it possible to measure the departure from health, or even diagnose the condition as abnormal without knowing the normal? It is essential in dealing with functional disease that some conception be first formed of what the patient regards as health, for in no two people is the standard alike, nor can it be fixed by the doctor; and amongst none does it vary so much as with nerve sufferers.[1]

[1] Carlyle, in a letter dated February 25, 1859, says on health:

"It is curious to remark that 'Heilig' in our old

To return to disease. The gradations between health and disease are not infinite in number, nor are they all equally well marked; and though as a fact *Natura nihil facit per saltum*, nevertheless in clinical medicine the *saltus* is often sufficiently well marked for diagnosis, which otherwise would be impossible. Disease is a perturbation that contains no elements (save an invading germ) essentially different from health, but elements presented in a new form and in disorder; hence diseases are frequently called disorders. They cannot be classified into genera and species. Certain morphological groups are found with sufficient connecting links for broad classification, but intermediate types are always cropping up. When there is any distinct proclivity to any special group of diseases we speak of a *diathesis*, which signifies any bodily condition, however induced, in virtue of which the individual is, through a long period or his whole life, prone to suffer from some special type of disease. A *diathesis* is generally hereditary, but may be acquired.

Teutonic speech is both holy and also healthy; that the words holy and healthy, as our antique fathers understood them, are one and the same.

"We, sure enough, have completely contrived to divorce holiness (as we call it) from health, and have been reaping the fruits very plentifully during these fifteen hundred years."

Temperament is another old but useful concept that sums up the combined psychical and physical peculiarities of an individual, exclusive of any definite tendency to disease. Diathesis may therefore be called the pathological temperament.

Temperaments have been classed in various ways. One of the most useful is into four—bilious, sanguine, lymphatic, and nervous. There is no need to describe these here, especially as they rest on no scientific basis, but I may briefly sum up the classical features of the one with which we have to do here—the nervous.

In this temperament the nervous and psychic element so prevails over the somatic and physical that full control over the former is difficult. The skin may be dark and earthy, or pale, or delicately tinted with colour—in fact, of any shade—and is often hot and dry. The skull may be large in proportion to the face, the features small, the eyes quick, large, and lustrous, the muscles spare, the veins large, the face characterised by energy and intensity of thought and feeling, the movements hasty, often abrupt and violent, or else languid. The hands and feet are small, the frame slender and delicate. Insomnia is common, and also addiction to some form of stimulant—tea, coffee, or alcohol. This class is specially prone to functional nervous disorders. They always seem either to be able to do more than they are

doing or to be doing more than they are able. There is a general want of balance as well as of control. The character on one side is often admirable for its powers of mind, depth of emotion, and lofty imagination; while on the other it may be disfigured by some vice or unruly passion. To this class belong the most intellectual of the race, the wittiest, the cleverest, the most attractive—the leaders of mankind. These are the poets, the men of letters, the students, the professors, and the statesmen. Their great danger is loss of self-control. They feel pain acutely; nevertheless they can at times endure long fatigue and privation.

Before leaving diseases we must glance at one more conception of it which was well stated by Sir F. Treves at Edinburgh in 1905. He says, "The prevailing idea of disease is something evil in origin, evil in intention, evil in effect. The popular view is that it is a calamity, and such is the attitude of the medical man." "Disease," he proceeds, "is *not* one of the ills the flesh is heir to, but one of the good gifts; for its motive is benevolent and protective. If it were not for 'disease' in the popular sense, the human race would soon be extinct" (!).

Such a view is, of course, not only wildly paradoxical, but, without a good deal of explanation, extremely incorrect. It is quite evident that

what Sir Frederick speaks of is not disease itself at all (whatever that may be), but its symptoms. For, as most diseases are now zymotic, it is abundantly clear that the germs are neither benevolent nor protective, but the reverse. It is the symptoms set up by their presence which are, as Sir Frederick points out, the result of good motives (implying mind) that are beneficent; and few people absolutely confuse the one with the other. Sir Frederick would be more intelligible if he had used the French word "mal-adie," which *does* imply evil rather than disease (French *des*, without, *aise*, ease), which expresses no opinion. My object in quoting this view is not only to show the purposive character of symptoms as recognised; but I may also point out that while their beneficial character is seen even in Neurasthenia, it is absent, and for a very special reason, in Hysteria. We shall see why this is so when we come to consider these diseases.

To sum up, then. Disease is the correlative of health, and both words are incapable of accurate definition. To know the presence of the former, one must be acquainted with the "norm" of the body, which is the same in no two cases; and this knowledge is especially essential in functional nerve disease.

If the definition of disease be so unsatisfactory and indefinite, I fear we shall find the words

"functional nerve" still more so. In the first place they constitute the most recent additions to our great family of benefactors (Treves), and their features are as yet unformed and hard to recognise. Nervous sufferers undoubtedly are a numerous class, and this from two causes, one of which is not fully recognised. Modern civilisation has not only destroyed for ever the leisure and quiet of simple country life, but on the one hand, by its perpetual hustle and competition, has put an ever-increasing strain on the nervous system, while on the other (and it is this that requires to be recognised) it always tends to preserve and propagate the weak stock by a care of the unfit that was formerly unknown. Functional nerve sufferers are thus the direct and indirect products of our age in increasing numbers.

This class of disease is indeed sweeping over civilised society like a plague. Dr. Goodhart even ten years ago, remarked[1] "as the world grows older it tends to grow more nervous." I do not see how it can well be otherwise. It is brain pitted against brain, and ever increasingly so. It is not liver against liver, or heart against heart, or only indirectly so. Of course, medical men, accustomed to hypertrophied hearts and similar instances of adaptation to meet increased

[1] Dr. Goodhart, *Lancet*, October 30, 1897.

strain, argue, and rightly, that the brain of man is quietly evolving to higher powers, and becoming better and better able to resist the pressure of its environment. This may be so, but still break-downs must be most frequent where the strain is greatest, and the battlefield of life is increasingly on a psychic rather than a physical plane.

Functional nerve diseases, ranging in their effects from slight physical defects to severe mental disturbances, are at any rate increasing by leaps and bounds; and there is scarcely a family in this country but has suffered in some of its members from this trouble in one way or another.

In classification, functional nerve diseases labour under the disadvantage that, no organic change being known, they must be grouped by their symptoms, and no clear definition can be given of any disease until its pathological basis is known.

All diseases are either organic or functional—that is, classed according to physical or psychic signs: for all structural changes are materialistic, or changes of physique; whereas all functional changes are vital, psychic, and connected with life. Organic changes exist when life has passed, but functional changes have then all disappeared. This distinction is profound, and

obviously bears radically on the true understanding and treatment of this entire class. The diseases I here speak of are necessarily grouped according to their psychic phenomena, and not according to physical changes. The ego, or personality, is psychic, and the mind is one, and hence in these diseases the person himself is ill in a sense often not found in other diseases, and it is in functional nerve disease where that saying "If one member suffer, all the members suffer with it," is profoundly true in a way it is not in many organic diseases.

There can, of course, be no change in functional activity, by increase, diminution, or perversion, without coincident changes in the plasmode. Hence, strictly speaking, there can be no such thing as pure functional disease as distinct from structural disease, any more than there can be any expression of mind apart from the body. Disease, *au fond*, has always a material basis, whether recognisable or not, and "functional" and "organic" are but expressions of our ignorance that will one day be superfluous.

It is important to see this, and that, inasmuch as our propositions regarding diseases are but tentative and provisional, if they are prematurely crystallised into laws and dogmas they cramp all thought and obscure the truth. This is especially true in functional nerve diseases.

In dealing with these we must be equipped with a due sense of proportion between physiological and psychological action, and above all other requirements possess an abundant supply of that rare sense miscalled "common." Doctors are so impressed with their *rôle* as physicians of the body that they are often at a loss when they have to deal with these diseases, that so combine the physical with the psychic. The study of these nerve diseases requires reasoning as well as observing powers, and it is a curious fact that while the former are but little cultivated in our modern schools, the latter are fostered to an amazing extent.

It is impossible in any case to be a physician for the body alone, and yet Professor Drummond (Durham University) is still (1906) able to make this remarkable statement: "Instruction concerning these matters (psycho-physical) forms *no part* of the curriculum of medical students nor of the training of the nurse. We examine a patient from head to foot with instruments of precision, but often forget to cast a glance at the combined psycho-physical personality. In functional nerve disease such an omission is fatal to success. Indeed, the difference between the veterinary art and medicine is only that of the *clientèle*, once the mind is left out."

All functional nerve diseases have a psychic

element that requires recognition and psychic treatment.

There are pure psychoses or insanities—neuro-psychoses, such as hysteria, and neuroses, such as neurasthenia. Insanities were formerly thought to be possessions of evil spirits, to be cast out, and only slowly were classed as diseases; and in the same way nerve diseases have been since supposed, not unfrequently by medical men, to be possessions of lying and evil spirits which friends have tried in vain to cast out, and are now being classed as diseases. The Middle Ages drove away these evil spirits by exorcisms; the most modern method is to cast out the pathogenic idea by suggestion.

Before the present recognition of functional nerve diseases as a distinct class, the various symptoms now grouped under Neurasthenia, Hysteria, &c., were treated as distinct diseases, and labelled cephalgia, rachialgia, dyspepsia, &c. Now the mental link that binds them all together is discovered, and this makes the unity.

Of course, there is always variety of type. When we consider that no two nervous systems are ever alike, it must specially be so in functional nerve diseases. If one hundred children taught in the same school by the same schoolmaster write a hundred different hands, and if no two of their finger-tips are alike in their marking, it is

evident that, whether the disease be more psychic or physical, in either case the varieties will be endless, and all that can be done is to classify loosely without rigid boundaries.

There can be no doubt of the great importance of this class of disease. In the first place, the personality itself of the individual is ever more or less profoundly affected. In the second place, the central nervous organism whereby the psychic expresses itself physically is diseased; and thirdly, inasmuch as this nervous organism presides over every system in the body, and especially over the cardiac-vascular, on which life itself depends, this and other systems become deranged, though, fortunately, not often to the extent of causing a fatal end.

It must not be imagined for a moment, because functional nerve diseases have not long been known as such, that "nerves" are, as is some times supposed, a modern invention. They have flourished under many names, in all ages, and amongst all peoples.

What we now call neurasthenia has been variously termed vapours, nervous fever, nervous debility, general neuralgia, neurospasm, nervous wasting, cerebro-cardiac neuropathy, nervous cachexia, general neurosis, and, if partial, topoalgia, rachialgia, &c.

When we come down to the present time and

attempt to make a list of what are Functional Nerve Diseases and what are not, we find ourselves in inextricable confusion. In the nomenclature of diseases by the London Royal College of Physicians I find a list of one hundred and thirty-nine nervous diseases given. When I say, however, that amongst them are included bedsores, convulsions, hyperæsthesia, anæsthesia, stammering, hiccough, &c., it is evident our list may be of less dimensions. The other extreme is perhaps reached by Dr. Clouston, who says that clinically there are four types of Functional Nerve Disease:

1. Feigned disease, malingering, &c.
2. Functional disease dependent on obvious organic origin.
3. Neurasthenia.
4. Hysteria.

With regard to even these four the ground is not clear; for the first is surely not a disease at all, but a fraud, the appropriate treatment being a cell in a prison rather than a bed in a hospital.

The second includes a large class open to question as to their right to be classed as Functional Nervous Diseases.

Nos. 3 and 4 are, of course, the two diseases that by universal consent belong to the category.

Another list includes twenty or more arranged as follows:

FUNCTIONAL NERVE DISEASES.

1. Neuroses of primary degeneration.
   - *a.* Primary neurasthenia, hypochondria.
   - *b.* Epilepsy.
   - *c.* Hysteria major.
   - *d.* Hereditary chorea.
   - *e.* General spasmodic tic.

2. Acquired neuroses.
   - *a.* From infection and poisons.
     - i. Chorea.
     - ii. Tetany.
     - iii. Rabies.
     - iv. Tremors.
     - v. Neuralgia.
   - *b.* Exhaustion and nerve shocks.
     - i. Neurasthenia.
     - ii. Hysteria.
     - iii. Exophthalmic goitre.
     - iv. Occupation neuroses.
   - *c.* Acquired degeneration neuroses.
     - i. Tic doloureux.
     - ii. Local spasmodic tics.
     - iii. Paralysis agitans.
   - *d.* Muscle, vasomotor, trophic and sleep disorders.

This list appears to me a sample of the evil of attempting to accurately tabulate this class of disease, of which in most instances the pathology is too obscure to justify any such arrangement. Who, for instance, can accurately distinguish the two hysterias, the two neurasthenias, or the pathology of general and local tics?

A list of functional nerve diseases of doubtful organic origin (mostly spinal) is as follows:

Tetanus.
Tetany.
Torticollis.
Hydrophobia.
Paralysis agitans.
Writer's cramp.
Functional spinal paralysis.
Ideal paralysis.
Chorea.
Spinal neurasthenia.
Toxic spinal paraplegia.
General paralysis of the insane.

Tetanus and hydrophobia and general paralysis of the insane must obviously be excluded, both going beyond mere disturbance of function, and as far outside the category of functional nerve disease as angina pectoris.

Tetany and paralysis agitans occupy a doubtful position and might be included; others are mere varieties of neurasthenia or hysteria.

After due consideration of this perplexing subject I have decided to include twelve functional neuroses in my list, six of which are more or less doubtful. The first six are:

Hysteria.
Neurasthenia.
Hypochondria.
Occupation neuroses.
Paralysis agitans.
Neuralgia.

And the six doubtful are:

Migraine, selected as *the* headache that can be classed as a disease and not only a symptom.

Chorea.
Torticollis—a doubtful disease.
Tetany.
Vertigo (not true Menière's disease).
Exophthalmic goitre, whose increasingly obscure pathology entitles it to be classed among Functional Nerve Diseases.

This list makes no claim whatever to scientific accuracy, and probably no one else would make the same list. But as so far I have found no two writers who agree in their lists, which include all numbers of diseases from 4 to 139, I am not peculiar in this.

CHAPTER II

PSYCHOLOGY OF THE BRAIN

IT has been well said that, as a rule, the brain only concerns the ordinary physician on its physiological and anatomical side, as in the case of anæmia, hyperæmia, hemorrhages, new growths, inflammations, and lesions of all sorts, its functional disorders being mostly handed over to the alienist; though we must be quite clear that our present subject of functional nerve disease forms no part of the domain of the specialists in lunacy. It will, indeed, soon be found that not only pre-eminently in nerve diseases, but in all other classes of disease, the study of the functions of the mind connected with them becomes more and more the province of the general physician.

I have said "functions of the mind" purposively, though I well know how very difficult it is to draw the line between mind and brain in their actions.

The intelligible connection of the two is well expressed by Dr. Browne: "The great character of current opinion appears to be that wherever there is nerve there is psychical function, actual

or potential, which may rise within the range of consciousness. Not only is there apparently inseparable connection during life between the nervous structures and mental phenomena, but the latter are clearly dependent on the former. The ordinary condition of the nervous system is like that of a moderately-charged battery that can be discharged by the completion of the circuit and recharged by the blood. The will can complete the charged circuit. Mental causes can produce physical effects and physical causes mental effects."

I would here point out, however, that though we may be absolutely certain that (as Professor Bain puts it) with all our mental processes there is an unbroken natural physical succession, it by no means necessarily follows, as Dr. Browne suggests,[1] that with every physical change in the brain there is a necessary mental change. It may be so, but this sequence has not so far been generally recognised or proved, and it is probable that vast numbers of minor vasomotor, nutritive, functional, and other changes of the brain do not affect the mind ; whereas, on the other hand, it is perfectly certain that there is no mind action, however slight, that does not produce (I do not say arise from) some physical change.

[1] Dr. W. A. F. Browne, in *Journal of Mental Science*, vol. xii. p. 321.

Herbert Spencer says: "No thought, no feeling, is ever manifested save as the result of a physical force. This principle may now almost be said to be a scientific commonplace." [1]

Having thus marked the intimate connection and interdependence of mind and brain, we must, to keep the balance of truth, equally insist on the radical distinction between the two. "The intelligence of men," says Calderwood, "as known in personal consciousness, is of a nature entirely distinct from any sensory apparatus. Mind is not a mere product of cerebral evolution." [2]

Again Herbert Spencer sounds a timely note of warning: "Here, indeed, we arrive at the barrier which needs to be perpetually pointed out alike to those who seek materialistic explanations of mental phenomena and to those who are alarmed lest such explanations may be found. The last class prove by their fears, almost as much as the first prove by their hopes, that they believe that mind may possibly be interpreted in terms of matter, whereas . . . there is not the *remotest possibility of so interpreting it.* For the concept or form of matter is but the symbol of some form of power absolutely and for ever unknown to us. Mind is also unknowable, and

[1] Herbert Spencer, "First Principles of Psychology."

[2] Professor Calderwood, "Relations of Mind and Body," p. 307.

the simplest form under which we can think of its substance is but a symbol of something that can never be rendered into thought. Nevertheless, were we compelled to choose between translating mental phenomena into physical phenomena or translating physical phenomena into mental phenomena, the latter alternative would seem the most acceptable." [1]

This again, like so many utterances, is much more correct in what it affirms than in what it denies. Truth is so much greater than ourselves that it is well for the most profound philosopher to remember the maxim, "Affirm, and deny not," and especially "Never prophesy." Already Herbert Spencer's assertion that the power of which matter is the symbol must be "absolutely and for ever unknown" is partially disproved by Lord Kelvin, who has rendered it reasonably certain that the force of which it is the symbol is electricity, and that electrons seem as clearly the meeting-point of force and matter as neurons are of mind and brain.

For our purpose of considering the function of mind, besides the obvious divisions of the brain into greater and lesser, or cerebrum and cerebellum, and into two halves, right and left,

[1] Herbert Spencer, "First Principles of Psychology," 2nd edition p. 63.

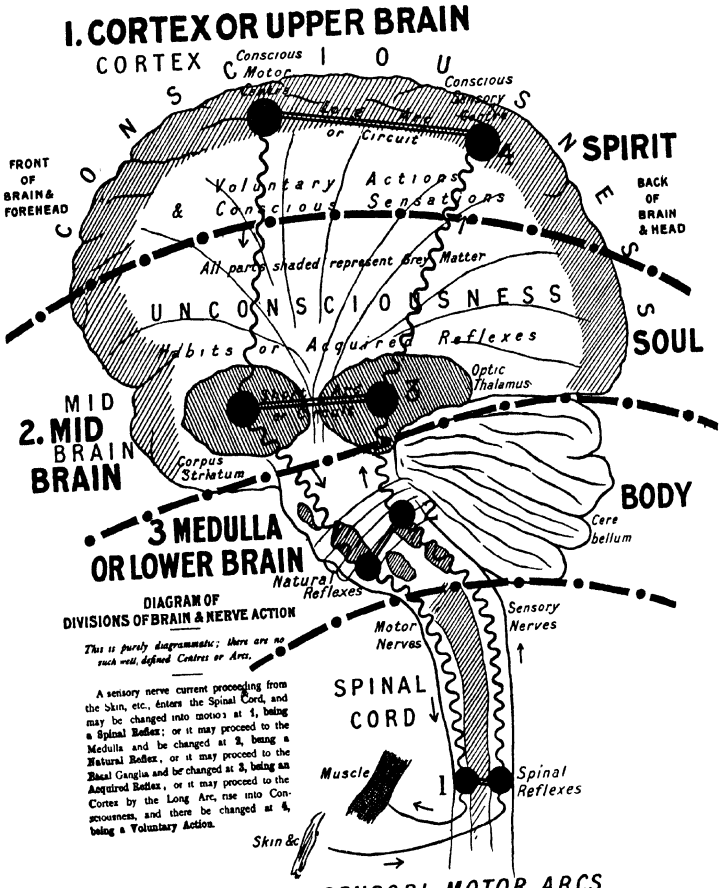


DIAGRAM OF SENSORI-MOTOR ARCS.

we may divide the cerebrum (see diagram) into three regions, consisting from above downwards of cortex or surface brain, basal ganglia or mid-brain, and medulla or lower brain, each of these containing a large proportion of the active agent in brain work known as grey matter, which consists of masses of neurons, with little neuroglia. The medulla or lower brain connects the spinal cord below with the mid-brain above, and is "the co-ordinating centre of most associated movements." [1] It is, in fact, the organising centre for carrying on all the processes connected with the passive or vegetable life of the body as contrasted with the active or animal life. All the processes carried on here are habitually far below the level of consciousness.

The basal ganglia of the mid-brain are principally three in number: the corpora quadrigemina, connected with sight; the corpora striata, undoubtedly with motion, and the optic thalami, probably with sensation. [2]

In this mid-brain we see the organisation of the functions of animal life subject to, or of an inferior order to, the highest centres and conducted without consciousness.

Lastly, we come to the cortex or surface

[1] D. Ferrier, "Functions of the Brain."

[2] Some, notably Dr. Edridge Green, have recently connected these with memory.

brain, the seat of conscious mentality and the source of all voluntary actions.

The cortex is the sphere of conscious sensation, though we are by no means conscious of all that takes place even in the cortex; for innumerable sensations may, and probably do, continually reach it of which we are wholly or partially unconscious; in many cases, of course, this is accounted for by non-attention. On the other hand, it would appear from recent researches that it is not possible to be conscious of any currents that do not reach the surface of the brain.

The broad distinction between these three great cerebral divisions as respectively the seat of the *Spirit*, or directing intelligence; the *Soul*, or the mere active animal life; and the *Body*, or the mere physical existence, has been abundantly shown by experiments which are detailed in our text-books. Voit's classic experiments on pigeons, where removal of the upper brain destroyed intelligence, that of the mid-brain active animal life, while the pigeon still existed as long as the lower brain was undisturbed, are too well known to be detailed here.

The phenomena of drunkenness are equally instructive, where, according to the law that the most highly and recently developed centre is the first to be affected, the alcoholic poison first

paralyses the intelligence and cortical activity, then the active animal life, while, inasmuch as this includes the paralysis of the arm that raises the fatal glass to the lips, the third or lower brain is left untouched, and mere existence without movement or intelligence persists. Of course, if a further dose is administered by others, or, as in some rare instances, is taken rapidly by the drunkard before the arm paralysis sets in, the dose may prove fatal and reach the lower brain, and the man become not merely "dead" drunk, but dead.

With regard to there being two hemispheres, right and left, Gall, Spurzheim, Dr. A. L. Wigan, Sir H. Holland, Hughlings Jackson, and Brown Séquard conclude we have two brains united for common action, and that we have probably two minds acting normally in perfect harmony, but which can and do act separately in many conditions, as in unilateral injury, double perception of the same word or event, which is connected with the sense of humour, &c. As regards minute anatomy, it appears that by means of Golgi's methods of silver staining brain cells the following facts, which I may briefly recapitulate, are established. Each cell has a mass of small branching fibres called dendrites and one large axial fibre called a neuraxon, which soon becomes medullated. The cell with its fibres is called

a neuron, and with regard to it, it appears that the molecular movements in the dendrites are towards the cell and in the neuraxon from it, or afferent and efferent; and it is generally the terminal of a neuraxon that is connected with a dendrite. This gives an anatomical basis for the psychic acts of feeling, voluntary motion, and association, &c. "Max Schultze observed also the passage of the fibrils (of which the supposed homogeneous axis cylinder of nerves is now proved to be composed) through the (brain) nerve cells without any interruption. That has also been securely demonstrated and proved by the new method of Golgi. So that we have this astounding transformation in that which we know of nerve mechanism: we have in every axis cylinder a bundle of separate conducting fibrils, and we have these fibrils passing uninterruptedly through the nerve cells to the branching processes, and ending in the terminations of their branches. From that discovery there follows a most momentous fact, which is of signal importance to us, and yet which seems imperfectly recognised by many who are working at the subject. Those fibrils passing continuously through the cell body can only conduct through the cell body. Our old conception, so simple, so attractive, that the nerve impulses originate in the cells—fascinating from the analogy

of the cell body and a tiny battery originating a current—all that entirely disappears. Moreover, if we find this continuity of the fibrils distinct in some cases, we feel at once that it is one of those fundamental structural arrangements which must be universal, and we must once for all give up the idea that the nerve cells are sources of nerve impulse." [1] To return: "The will determines, but the automatic apparatus executes. First, the ideal and creator centres in the cortex; then the semi-automatic action of the corpora striata. Impulse is transmitted thence through the anterior tracts of the crura cerebri, the anterior pyramidal columns, the anterior portion of the olivary bodies and anterior columns of the spinal cord." [2]

It appears that, apart from the cortex, the nerve paths in the lower parts of the brain consist of the sensori-motor arcs (see diagram), the nerve currents arriving at the hinder part of the brain by the posterior part of the cord, and leaving the anterior ganglia, notably the corpora striata, and descending down the front of the spinal cord, in the resulting motor impulse. To use now the words of Dr. Alexander Hill: "On

[1] Sir W. R. Gowers in *British Medical Journal*, November 6, 1897, p. 1359.

[2] Hack Tuke, "Influence of the Mind on the Body," ii. 145.

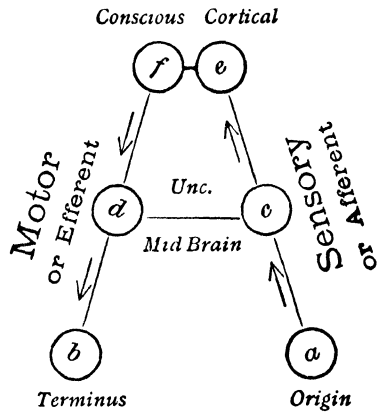
these arcs, which collectively make up the lower system, are superadded arcs, the longer of which lie in the higher grey matter (of the cortex); at the same time, therefore, that an impulse flows across the spinal cord as a simple reflex action, a certain part of this impulse is also diverted to the brain along fibres which ascend in the outer part of the spinal cord; and from the brain descending fibres carry the impulse back again to the lower arc. One thing is quite certain, namely, that the routes which are the most frequently used are the most open, and therefore the most easily traversed."[1]

All this means, speaking generally, that a nerve current arriving at the brain may take one of three courses—either directly originating unconscious action in the lower brain, or, travelling in a short arc by the mid-brain, producing unconscious action there, or, proceeding further in a long arc by the cortex, ending in conscious action. In connection with this, it may be observed that the cranial nerves have all two deep origins—the one in the basal ganglia of the mid, or unconscious brain, and the other in the cortex, or upper conscious brain.

This is graphically shown by the diagram of the letter "A," where *a* and *b* are respectively the

[1] Professor A. Hill, Cantab., Paper on "Reflex Action." *Proceedings of the Victoria Institute*, 1893.

origin of the afferent current and the terminus of the efferent, *c* and *d* the afferent and the efferent unconscious mid-brain centres, and *e* and *f* the conscious cortical centres. The mid-brain short-circuit is shown by the bar from *c* to *d*. Thus a current



may travel from *a* to *b* by *c* and *d* unconsciously, or by *e* and *f* consciously. It is clearly understood, however, that these "arcs" are purely hypothetical.

The number of combinations of cells and brain-paths and cell connections in the brain is, of course, innumerable, so that the possibilities of the human brain are practically inexhaustible.

"John Stuart Mill," Sir J. C. Browne tells us, "was distressed at one period of his life by the reflection that the time must come when all possible musical combinations of the five tones and two semitones of the octave will be exhausted

and there will be no new music in the world. As there are at least one thousand six hundred million neurons in an average brain—a brain population exceeding the population of the globe —each with a tone of its own, there need be no apprehension that we shall ever run short of new tunes in mental music. The neurons which constitute a medium for the exhibition of the psychical powers differ from each other quantitatively and qualitatively, and are capable of an infinity of rearrangements, so individuality is safe and human nature will never be called upon to repeat itself. And individuality is not confined to the neurons: it spreads to the finger-tips. Dealing with finger-prints, Dr. Garson says:

"'I have never seen the impression of any finger of two persons alike in all respects; there are always some points of difference when details are examined; nor have I ever seen two fingers of one person exactly alike among the many thousands I have examined.'"

Before leaving the physiology of the brain we must note that, as far as our present knowledge extends, neurons once *destroyed* can never be restored, and it is this that makes organic nerve disease so serious. Instead of organic and functional nerve disease, we might almost speak of incurable and curable.

So much, then, for an outline of the brain

machinery. The point that must be settled next is whether this nervous mechanism produces those psychic phenomena we call mind, as the liver secretes bile, or whether there is not a spiritual entity—the mind—which acts upon and expresses itself by means of this machinery as a musician on a piano.

Are we, in short, in relation to this question, monists and materialists, or dualists and vitalists? "The assumption," says Professor Ladd,[1] "that the mind is a real being which can be acted upon by the brain, and which can act on the body through the brain, is the *only one* compatible with *all* the facts of experience."

"Life," says Professor Beale, a dualist, "is a force or property of a peculiar kind temporarily influencing matter, but entirely different from it, and in no way correlated with any other force." The late Duke of Argyll says: "Life is the cause of organisation, and not its product."

This book is written from the dualist and vitalist standpoint; that is, in the belief that mind is not a product of matter, but distinct from it, and that life is mind in action. From all time dualists have sought to correlate psychical and physical action. For instance, some think the psychical and the physical are like two (Cartesian) clocks, abysmally apart, which, when wound up,

[1] Professor Ladd, "The Philosophy of Mind," p. 476.

nevertheless correspond tick for tick. This position is well stated by Crichton Browne. He says: "These mental actions are incorrectly spoken of as the functions of the brain, for they certainly cannot hold the same relation to that organ that movement does to the muscles or bile to the liver. Nothing *can* be derived from motion but another motion, nothing from mental process but another mental process; and thus the facts of consciousness can never be explained by molecular changes in the brain, and all that we can do is to fall back on an hypothesis of psycho-physical parallelism, which assumes concomitant variations in brain and mind. There is a physical universe, of which only a fragment is known to us; there is a psychical universe, in a corner of which we live and move and have our being. We may picture these to ourselves as circles which impinge on each other at the first moment of conscious existence, which intersect more and more as life goes on, their largest intersection (including but a small segment of each) being reached when life is at its full, which then withdraw from each other as old age sets in, and part company at death. But, whatever image we adopt, we must hold fast to the truth that mind and matter are distinct essences, irreconcilable in their nature though mysteriously accordant in their operations; that only in the elementary

processes of mind, made up of sensory and motor elements, has correspondence with physical changes in the brain been traced out."[1] On the other hand, Huxley says: "Life is a form or mode of ordinary force," and Professor W. James that "the simple and radical conception dawns upon the mind that mental action may be uniformly and absolutely a function of brain action as effect to cause."[2] "This conception," he continues, "is the 'working hypothesis' which underlies all the 'physiological psychology' of recent years."

To adopt one theory is to be proclaimed a dualist; to adopt the other, a monist, and the former position appears to the writer certainly to be preferred of the two; though neither position contains the whole of the truth, while each contains a part.

For instance, the abysmal distance between mind and matter is shown in that, while "physical phenomena are phenomena in space, psychical phenomena are phenomena in time only,"[3] for it is a fundamental thought to grasp that mind cannot have a "seat," as it has not any extension in space, having no relation with it that we know

[1] Sir J. C. Browne, *British Medical Journal*, October 9, 1897.

[2] W. James, "Psychology," p. 6.

[3] James Sully, "Human Mind," p. 7.

of. It does not cover a surface or fill a volume. It is only related to time. In this we follow, of course, the popular assumption that time and space are essentially different, neglecting certain wild speculations as to time being, after all, a spatial extension (in a fourth dimension).

Dr. Harry Campbell[1] tends to the monist theory when he says: "The sum of the chemical changes of protoplasm constitutes life"; but then, two pages further on, he also says "the atomic theory is now placed on a firm basis." This was in 1889. But much water has flowed under the bridges since then, and not only has radium upset the atomic theory, but the spiritual has reasserted itself over the material, so it is possible that these monistic views may also change. In this connection it is not a little significant that though such thinkers as Kant, Virchow, Du Bois Raymond, W. Wundt, and C. E. Baer all began life as monists, they all in later life, and with matured experience, became dualists.

That life involves mind has, of course, like all else, been vigorously disputed and equally vigorously affirmed. "Life," says Professor Bascom, "is not force: it is combining power. It is the product and presence of mind"[2] No

[1] H. Campbell, "Causation of Disease," 1889, p. 6.

[2] Professor Bascom, "Comparative Psychology," p. 58.

mechanical process can indeed ever adequately represent or account for the processes of life, and yet life is not in itself a force; it is a capacity to use force for unique ends.

The extent to which the "mind" may be employed as the first cause of purposive movements in organisms is a very difficult question to solve. There can be no doubt that the actual agents in such movements are the natural forces, but behind these the directing and starting power seems to be psychic. "From the first movement," says Dr. R. Dunn in the *Journal of Mental Science*, "when the primordial cell-germ of a human organism comes into being, the entire individual is present, fitted for human destiny. From the same moment matter, life and mind are never for an instant separated, their union constituting the essential work of our present existence." Again, "one cannot forbear assuming in the vital process of each individual organism, an idea which continually supports and renews the organism."[1] Carpenter goes further still: "The convertibility of physical forces and correlation of these with the vital, and the intricacy of that nexus between mental and bodily activity which cannot be analysed, all leads upwards towards one and the same conclusion—*the source of all power is mind.* And that philo-

[1] F. Kirchener, "Psychology," p. 141.

sophical conclusion is the apex of the pyramid which has its foundation in the primitive instincts of humanity." [1]

Besides attributing vital cell action to mind, attempts have recently been made definitely to indicate the exact location, if not of mind, which has no space-extension, at any rate of its activity. The general idea undoubtedly is that the sphere of psychic action in cells is the nucleus. "The nuclear plasm, *i.e.*, the chromatic granules, are endowed with psychic power." "The brain or soul of the cell is the chromatin, as is now widely believed among cytologists. In it inhere the psychic and hereditary powers, and if it be removed from a cell, the rest of the protoplasm behaves automatically. The cell moves mechanically, cannot reconstruct itself, and finally wears down and decomposes. Chromatin has the power of interpreting stimuli, and its reactions are intelligently directed towards the preservation of its own life." [2] Chromatin or chromoplasm is the stained part of the nucleus, which is made up also of a chromatic and a nuclear membrane.

To sum up, we are face to face to-day with two distinct schools of thought—the materialists,

[1] W. B. Carpenter, "Mental Physiology," 4th edition.

[2] Professor Nelson, in *American Journal of Psychology*, iii. 369. See also "Beiträgen von Kenntniss den Physiologie und Biologie den Protozoen," i. See also Stolnikow's "Vorgänge in den Leben zellen."

that deny a distinct mind, and the vitalists, that assert its existence.

Sir J. C. Browne [1] puts the whole case so well that I will venture to quote his words before finally leaving the subject: "An organism is only an organism because its mutually dependent parts partake of a common and inherited life, and co-ordination involves a disposing and arranging intelligence. Can we imagine the gastric juice interesting itself in the welfare of the organism in its peptic performance, or entering into an agreement with the pancreas as to the sequence of the respective secretions? Can we believe that any concourse of physical and chemical processes have ever by their interaction excogitated the human body? The architectural idea must precede the building, but the materials of which the body is built up are supposed to have somehow elected the regulating power—also by hypothesis physical and chemical in nature—which determines the balance between them and so controls growth; that is to say, the bricks and the mortar have combined to create the architect, composed of bricks and mortar, who is to pile them up in coherence, in accordance with a definite plan. And not only so, but they have elected an architect capable of carrying out, not one plan,

[1] Sir J. C. Browne in *British Medical Journal*, October 13, 1906.

but an elaborate and metabolical design corresponding with the different stages of life of the organism; for if there be nothing in living things but physical and chemical processes, then these must be capable of carrying out the archetypal idea inherent in every living thing through all its different phases, of adhering strictly to that in each of the infinite variety of living things, and of remaining constant to entirely divergent archetypal ideas in one environment. In the simplest forms of life, the protozoa, we have—as, for instance, in the Foraminifera—minute specks of undifferentiated protoplasm in all respects identical as regards physical and chemical properties and processes, lying side by side in the same pool, displaying a high degree of sensibility, hunting their prey, distinguishing living from dead animalculæ, seeking out mates for conjugation, and producing with unerring regularity shells of entirely different patterns, some plano-spiral and some helicoidal; and in the highest forms of life we have specks of undifferentiated protoplasm performing feats still more incompatible with any physical or chemical conceptions.

"That the brain is the theatre of physical and chemical processes corresponding with the sensorial and motor functions is no new fact, and that these are of an electrical type has

long been thought probable, but the fresh departure is the denial of anything beyond these. We are to be reduced [by the materialistic school] to neural process with no mental process overarching it. We are to believe that all changes and discharges in the brain, including those called inhibitory and corresponding with volition or will, are produced solely by centripetal impulses derived from physical and chemical changes, occurring in the external world, within the body or in the blood. Nothing takes place in the brain beyond the propagation of changes that have been brought to it, and cerebral and therefore psychical energy consists only in the occurrence in a colloidal electrolytic structure of great chemical complexity of changes identical with those that occur in the non-living world. Man is therefore simply a reflex arc—a fortuitous bundle of sensations, or rather of impressions, for all meaning has been abstracted from sensation, and words are but sounds, visions patches of colour. The self or ego is an illusion. What we have been accustomed to call the soul is only a succession of movements in a colloidal electrolytic structure.

" The conception of living phenomena of the neo-materialist is confined to physical and chemical processes, with two further aspects of these, the automatic machinery for their co-ordination

and the *raison d'être* of their occurrence, which is the welfare of the organism; and the definition of his purpose thus put by himself is self-destructive, for if animal life be but a fortuitous assemblage of blending and contending physical and chemical forces it is impossible to suppose that these could ever by mutual consent evolve a regulator that is to adjust and control their relations, or concern themselves about the welfare of the organism as a whole. It is an abuse of language to describe as an organism what is a mere temporary assemblage of physical and chemical processes, and co-ordination necessarily implies a power higher than the processes co-ordinated. The higher animals, it is asserted, are composed of various parts, linked together by automatic physical mechanisms of great delicacy, which once developed were retained and perfected in proportion as they efficiently regulated the various bodily activities, and co-ordinated them for the welfare of the whole organism. But the obvious questions suggest themselves. How came these delicate automatic physical mechanisms to be developed, and by whom or what was the work of retention and perfection and the correlative work of rejection carried on? If these mechanisms are at the top of the tree, what dominates them? *Quis custodiet ipsos custodes?*

"Let there be no mistake. The neo-materialists having dissipated the phantom of vitality leave us plants and animals, more or less complicated arrangements of proteid substances, responding in a very simple way to the ordinary physical forces that we see around us. They leave us the brain, a mass of glue-like substance, nine-tenths water with a little phosphorus thrown in, traversed by waves of physical forces and nothing more. They leave us man, a motor-car, self-made and self-started, with no passengers and no chauffeur, moved by a series of explosions or redistributions of energy, and rushing on to inevitable destruction.

"Lord Kelvin, the foremost living man of science, whose deep insight and unerring perspicacity have been proved in a hundred fields, has spoken out clearly on the knotty point I have been submitting to you. Addressing a body of medical students, he said, 'Do not imagine that by any hocus-pocus of electricity and viscous fluids you can make a living cell. You must never think of the living men, women, and children with whom you will have to deal in your daily work as mere laboratory chemical specimens, but as human beings.'"

The three spheres of brain action—knowing, feeling, and willing—may be just briefly touched upon here, extending as they do into the un-

conscious regions of mind of which we are about to speak. The sphere of intellect and reason, or knowing, consists of the reception, digesting, arranging, and storing knowledge of all sorts, and may be looked on mainly as centripetal in character. The second, the æsthetic sense or emotions, or feeling, consists of our central sensibilities ; while the third, or the willing, consists in expressing the activities of the soul in outward action and is therefore mainly centrifugal. There is no need to discuss these at length. We shall come across them in discussing the various diseases that affect them.

The last point which now remains for discussion is the extent of mind beyond consciousness, for to understand this is essential in discussing functional nerve diseases.

I will therefore seek, as briefly as may be, to give evidence in support of Professor James's definition of mind, which goes far beyond consciousness, where he lays down that "psychic action consists of the pursuit of definite ends with choice of means."

Speaking of the classic frog, immortalised in every physiology, which, when the thigh had been cauterised with acid and the foot of the same side had been cut off, stroked the place with the other foot *after the removal of the brain cortex*, James further says : "If purpose remains

the same where the means are different (as in such a case), there is mind." [1] With this definition the fact of unconscious mind action needs little further proof; for in this case all those higher centres that alone could possibly be associated with consciousness had been removed. Flourens' hens and Voit's pigeons and generations of rabbits and guinea-pigs have all added their dumb testimony to the fact that psychic acts can be performed when all the highest conscious psychic centres have been removed, and can do so, not as the result of having formed some artificial sensori-motor reflex by dint of frequent repetition, but by performing acts for the first time as the results of unusual nervous stimuli.

It may be said, Why fight over words? If English psychologists in the main agree to limit mind to consciousness, in order possibly to prevent the extension of the word to the faculties of lower animals, what does it matter, and what difference does it make?

Well, let us look at the question fairly. Words, after all, are not worth fighting for in

[1] Sir M. Forster in his "Physiology," part iii., pp. 980–981 (7th edition), doubts the association of any intelligence with the "choice" shown by the frog in this case. G. H. Lewes, I may point out, removed the whole brain from a frog, after which "there was no lack of spontaneous movement," and the animal remained quite lively.

themselves; it is the thought that underlies them that is of importance. If you say "mind" and mean thereby the phenomena that centre round consciousness only, and I say "mind" and mean *all those* phenomena, conscious or unconscious, that are not material, characterised generally also by purpose and the adaptation of means to ends, we mean two very different things. In both these cases we necessarily restrict our remarks to human beings, for it is the misfortune of the narrower and pure introspective psychology that it cannot prove or even admit consciousness, nor, therefore, mind, in any being with whom it cannot exchange thoughts, though both may be present. Of course, this cuts both ways, and, strictly speaking, it is equally impossible to prove unconsciousness. The secondary consciousness, shown in so many hypnotic experiments, of the deeper personality which is revealed when ordinary consciousness is in abeyance, may exist. But we still retain the term "unconscious mind" here as the best available term, seeing that we use the word "consciousness" simply in its common signification, as referring exclusively to the ordinary consciousness of a healthy man, and *not* to any possible subsidiary consciousness of which he is not conscious.

But the great evil of the limitation of "mind" to consciousness is, as pointed out elsewhere,

that its adherents, in common with materialists, Haeckelian monists, Jacksonian parallelists, *et hoc genus omne*, unite in declaring that all extra-conscious processes are purely the "functional activity of the brain"! No doubt, what Ebbinghaus calls "the vulgar prejudice of the absolute distinction between mind and matter" may bias the writer in common with others, but it is well to note that the point does not rest there.

If even we should grant, with Ebbinghaus and Spinoza, that mind and matter are but two aspects of the same thing, the names then refer merely to aspects—that is, to appearances; and if we are to believe that purpose, adaptation, and what we call signs of intelligence are the marks of the "mind's" appearance, we still reach our definition of mind.

If, on the other hand, we are, as already declared, staunch dualists, where, then, does the "conscious psychologist" stand? Between the horns of a dilemma. He must either relegate all processes below consciousness to material agencies —a concession of no value to the materialist or to any one else—or he must destroy the force of words; for no amount of distinctions he may draw between consciousness, self-consciousness, dim consciousness, &c., can alter the fact that processes as purely mental in character proceed entirely out of all consciousness as truly as

in it.[1] It is no question of choice; it is a matter of absolute necessity, felt by every writer on kindred subjects, that we should have some intelligible term to distinguish the remarkable force so active in nerve diseases; and it is not to fight about words, but on account of the necessity of an understanding of the full scope of mind that I write this.

We have, as a matter of fact, no intermediate word that is intelligible to describe anything between the conscious mental and the material or mechanical; such terms as "Nature" or "Physiology" being unintelligible.[2] We are therefore forced either to describe psychic processes as

[1] "Unconsciousness is no bar to livingness. Our conscious actions are a drop in the sea as compared with our unconscious ones. Could we know all the life that is in us by way of circulation, nutrition, breathing, waste and repair, we should learn what an infinitesimally small part consciousness plays in our present existence; yet our unconscious life is as truly life as our conscious life, and though it is unconscious to itself it emerges into an indirect and vicarious consciousness in our other and conscious self, which exists but in virtue of our unconscious self." —"Essays on Life, Art, and Science" (re-edited 1904), by Samuel Butler, author of "Erewhon," &c. (Grant Richards.)

[2] Sydenham gives the following definition of "Nature": "As often as I mention Nature I mean a certain complex of natural causes which are governed by the best counsel in performing their operations and in accomplishing their effects . . . namely, the Supreme Deity, by whose power all things are produced."

mechanical which are not accompanied by consciousness, or to extend the word "mind" as suggested. I have previously stated that the unity in diversity shown by the body as a whole as much postulates a central guiding power as the evolutions of an army prove the existence of a commander-in-chief. It is curious to see that G. H. Lewes, in his remarkable work on physiology, admits the need of the officers, but denies the necessity of a general. He says[1]: "There is unity, there is a consensus of the whole organism . . . it is due to organic subordination . . . all act together . . . as all parts of an army act together, by officers and discipline. The unity is an aggregate of forces, not a presiding force."

This makes the body a confederation or a syndicate, not a unity, and thus stops just short of the truth.

I may now, with advantage, quote Professor James's exact words (to which I have already alluded) in his description of a science erected on an artificial basis, and ignoring the essential unity that underlies all mental action. These are the words[2]: "Psychology is but a string of raw facts, a little gossip and wrangle about opinions, a little classification and generalisation

[1] G. H. Lewes, "Physiology of Common Life," ii. 421.
[2] W. James, "Principles of Psychology," i. 468.

on the mere descriptive level, a strong prejudice that we *have* states of mind, and that our brain conditions them; but not a single law in the sense in which physics shows us laws. At present psychology is in the condition of physics before Galileo and the laws of motion or chemistry before Lavoisier."

Dr. J. Macpherson, of Edinburgh, points out the reason of this chaos [1]: "The futility of psychology to account for the majority of mental reactions is largely due to the attempt to explain them by terms of consciousness." A psychology so hide-bound lands us in endless difficulties. Bastian cogently remarks [2] that "if we are, as so many philosophers tell us, to regard the sphere of mind as co-extensive with the sphere of consciousness, we shall find mind reduced to a mere imperfect disjointed series of agglomerations of feelings and conscious states of various kinds —while a multitude of existent and intermediate nerve actions would have no claim to be included under this category."

The doctrine of a mind limited to consciousness produces in man the "conscious automaton" of Hughes and others. These affirm that emotions are laid on the surface of the man as colours on a tile mosaic, and cannot affect

[1] Dr. J. Macpherson, "Mental Afflictions" (1899), p. 97.
[2] C. Bastian, "Brain as an Organ of Mind," p. 146.

the body in any way. I can only say that any view more disastrous to the successful treatment of disease could not well be conceived. Clifford also follows with the same idea, that all unconscious actions must be mechanical and automatic.

But with the best scientists the days of the "conscious automaton" are gone. The necessity, indeed, of invoking a "Nature" with a capital N shows this. There was a time in physiology, not so long since, when it was thought that a mechanical law of diffusion and osmosis accounted for the absorption of oxygen and of food. We know now that both are the result of some vital action which is one of the complex properties of the epithelial cells that line the lungs and the digestive tract. These pursue a selective and purposive end with a persistence that no mechanical theory can explain; nor is it accounted for by the fact, so insisted on by G. H. Lewes, that the vital phenomena displayed by the human machine depend upon it differing from ordinary machines in being essentially a sensory mechanism.

Consciousness after all only represents what I *see* of my mind; but surely there are many ways of detecting its presence besides sight, and one might as well limit the body to what one can see of it, ignoring those parts that are discerned by touch, as make consciousness the

only proof of mind. We can, of course, see the image of our faces in a glass, but we can just as clearly see the unconscious mind reflected in actions, and we have no more right to deny the existence of the one than the other. To say you cannot know you think or feel unless you are conscious, is to say one cannot tell a man is a watchmaker unless one actually sees him make the watch; whereas one reaches this conclusion by seeing the watch itself which he has made. In like manner, the results of unconscious thought seen in consciousness prove the existence of the unconscious mind. We must not only get rid of the idea that consciousness *is* mind, but also that it is the only proof of mind. Mind, in fact, may be conscious, subconscious, or unconscious. The second state may be brought into consciousness by effort, the last cannot.

Once this is seen, the difficulty felt from all time as to the recognition of some unconscious mental power that governs physical life disappears. The ancients ever sought to understand the unconscious mind, and in modern writings we see everywhere men and women groping in search of it.

The "unconscious mind" is, then, the best term I can find for this power which we all have to recognise in medicine, and specially

in functional nerve disease; and I use the phrase in the same way that we say "the sun sets," as convenient and descriptive, but possibly not as purely scientific as it sounds; for psychology is as yet, as we have seen, a science in its (rather elderly) infancy. Once the unity of mind is apprehended even dimly, it paves the way for the gradual displacement of consciousness as its synonym. Of course the struggle is long and severe, and every shift has been made by those who cling to the old formula to explain that the unconscious is after all the conscious, or at any rate is subconscious or subliminal consciousness or secondary consciousness; in short, is a consciousness of which we are not conscious. So gallantly will men fight for an old creed in terms that show the cause is already lost.

It needs no words of mine to prove that when psychologists are reduced to such shifts it is a sure sign the truth is pressing hard upon them, and must ere long lead to a still further revision of their phraseology, so as to admit wholly unconscious mental processes, and thus lead them up eventually, if logical, to the position of the more advanced teachers, and to recognise the grand psychic unity, and the fact that mind is mind, whether illumined by the fitful rays of consciousness or not.

The terms "conscious mind" and "unconscious mind" are in themselves misleading, and give the idea there are two minds, and thus obscure its essential unity. I only use the latter term here provisionally until "mind" means all mind, and not only, as now, a small part of it. The mind is one; but, as I have said, while one part is in constant illumination, another is never lighted by consciousness; between the two stretches a tract of uncertain extent that is sometimes in light and sometimes in darkness—the subconscious region.

Our conscious mind, as compared with the unconscious mind, has been likened to the visible spectrum of the sun's rays, as compared with the invisible part which stretches indefinitely on either side. We know now that the chief part of heat comes from the ultra-red rays that show no light, and the main part of the chemical changes in the vegetable world are the result of the ultra-violet rays at the other end of the spectrum, which are equally invisible to the eye and are only recognised by their potent effects. Indeed, as these invisible rays extend indefinitely on both sides of the visible spectrum, so we may say that the mind includes not only the visible or conscious part, and what we have termed the subconscious, that lies below or at the red end, but the supra-conscious mind,

that lies beyond at the violet end—all the regions of higher soul and spirit life, of which we are only at times vaguely conscious, but which always exist and contain our most abstract and spiritual faculties as surely as the subconscious links us to the body on the other, both supra- and sub-conscious being parts of the unconscious mind. Of course, speaking of regions and levels is merely figurative, the non-extension of mind in space being a fundamental doctrine. I would include in the supra-conscious such a faculty as conscience, which is surely a half-unconscious faculty. The supra-conscious, like the subconscious, is best apprehended when the conscious mind is not active. Visions, meditations, prayers, and even dreams have been undoubtedly occasions of the working of the spirit apart from the action of reason or conscious mind.

I have dwelt somewhat fully on this theme of the "unconscious mind" because it is perhaps one of greater practical importance to physicians than is any other point in the psychology of the brain. But to the student of nerve diseases, as we have said, this knowledge is essential, for these two reasons—first, that almost all the action of the mind upon the body, as a factor in disease or therapeutics, is exercised unconsciously; and, secondly, that most of the action of the physician's mind and personality upon his

patients is also unconscious. The limits of the powers of the conscious mind in either of these two actions are extremely narrow and well-defined, whereas unconscious mental action is indefinite and extensive. A physician, therefore, who only recognises the former, and is compelled by his creed to ignore the latter, necessarily stands at a great disadvantage; we are forced, in fact, with regard to this matter, to use the words of Bastian:

"This is no question of choice, but one of absolute necessity. The meaning of the word 'mind' must be considerably enlarged so as to include . . . as mental phenomena, the functional results of all nerve action[1] . . . whether these nerve actions are accompanied by a recognised conscious phasis or no. Let us enlarge our conception and definition of mind. Let us openly profess that which has already been tacitly implied by many. Instead of supposing that mind and consciousness are co-extensive, *let us make mind include all unconscious nerve action.* We must inevitably come to this, and the doctrine of 'unconscious cerebration' (Carpenter) has served to pave the way to it. And we are coming to it rapidly, and once we reach

[1] C. Bastian, "Brain as an Organ of Mind," p. 148. We must distinguish between nerve action and the result of nerve action, of which the passage speaks.

it all difficulty as to the mental factor in medicine will disappear."

I hope that this somewhat tedious examination of our position with regard to mind and matter and the extension of mind itself may not have so wearied the reader as to discourage him in his study of the interesting diseases we are about to describe.

CHAPTER III

GENERAL ÆTIOLOGY OF FUNCTIONAL NERVE DISEASE

DIS-EASE, according to its etymology, is not a word particularly applicable to the special affections we are here studying. Zymotic diseases of all sorts involving fever are typical dis-eases, but so little is this the case in functional nerve derangements that the patient is often quite unconscious he is ill.

The commencement of nervous ill-health is almost impossible to detect; and while in influenza, pneumonia, and all the fevers it is perfectly easy to say whether you are well or ill, in even somewhat advanced cases of nervous disease it is often so difficult that the sufferer himself is not always sure whether his troubles are real or imaginary; and it is this difficulty, perhaps, that partly accounts for the different way in which friends and doctor often regard, or used to regard, the sufferer from functional diseases from that of any other ailment. The

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simple question as to whether a man is well or ill, in the absence of any standard of health, is often impossible to answer where no obvious physical signs of disease exist. Even where symptoms of distinct "nervousness" are observed, the further question remains as to whether these may not be perfectly compatible with what the patient regards as "health," though the doctor may not; and simply express his normal condition. In nine cases out of ten it is absolutely necessary first to accept the patient's own standard of what he calls health in a way that would not be dreamt of in diagnosing any other class of disease, and then to discover in what ways he finds he differs from his own "normal."

Even then our difficulties are only just commencing, for the symptoms themselves are illusive, vague, and contradictory. Being largely subjective they may not exist at all outside the imagination, or, even if they do, in most favourable cases they are unconsciously distorted or exaggerated by the prolonged introspection with which they have been studied.

I consider that to get a real grasp and true estimate of an average functional nerve case in all its bearings requires greater judgment and tact, powers of analysis and synthesis, and applied common sense, than in the case of any

other disease whatever; to say nothing of a patience practically inexhaustible. It is well, therefore, in entering on this brief study of functional nerve diseases, to appreciate something of the inherent difficulties of the task.

Not only is the fact of the illness and its symptoms most difficult to understand, but the range of this class of cases is immense. It embraces all the psychopathies that lie between normal health and insanity, and these are well-nigh innumerable in variety, though roughly grouped for our convenience into three or four great classes.

Of course, between nervous affections and insanities there is a great gulf fixed; and it is well in practice to emphasise this as much as possible with patients, both for their comfort and cure. At the same time there are connecting links that bridge the gulf, and the insane may have functional nerve troubles, and *vice versâ*. Still, there is not so much likelihood of neurasthenics becoming insane as for the healthy to become neurasthenic. But our greatest difficulties confront us when we try to examine the causes of these diseases.

There is no doubt that cell, organ, and body do not, strictly speaking, act, but react, and react to stimuli, the ultimate source of which is mind. But how varied are these stimuli, normal and

abnormal! They may be internal or external to the cell, the organ, or the body that reacts. They may start in the periphery, in any tissue of the organism, or in the cell bodies themselves. They may apparently be of mechanical, chemical, or what we must call purely vital (*i.e.*, mental) origin. They may be physiological or pathological in character. Nearly every functional derangement may be due to physical or psychic causes, *e.g.*, pain, palpitation, vomiting, &c.

We must ever remember that the body is not only an intricate reflex mechanism, but a vital laboratory of the most complex compounds in the world, full of differing and subtle activities.

Each cell contains hidden but intense forces continuously working, which in abnormal manifestation may disturb or destroy the organic life in various ways. Considering how many chemical actions occur in each of the bodily functions of assimilation, respiration, digestion, secretion, excretion, generation, &c., all proceeding in health so harmoniously as to secure a unity of being, yet each liable to innumerable disorders, the eternal wonder is that the balance of health is maintained so continuously and constantly as it is.

In the performance of its functions every cell and every organ produces poisons that must be eliminated, and which, if not, may become some

of the hidden causes of functional nerve disease. The breath of man, his excretions, the fatigue-products of his organs, the bye-products of his digestion, are all more or less virulent poisons, and must be got rid of. Before the proteid molecule can be decomposed and built up into living tissue such poisons are formed that the organism is ever liable to autosepsis. The intestinal canal always contains numerous different poisons; and if autosepsis does arise, it is by no means certain that some definite disease such as gout or rheumatism may result, but only too common that it may cause instead some vague disturbance of the higher nerve centres.

When we find that 90 per cent. of neurotics are dyspeptic, and that in 72 per cent. dyspepsia has preceded the nerve symptoms for a long period of generally several years, we may well assert that a fertile cause of functional nerve disease are the toxins produced by indigestion.

Besides these chemical poisons, recent researches have revealed an almost innumerable army of hostile microbes—in addition to the few that cause the well-marked zymotic diseases—whose products are the obscure causes of many so-called functional troubles.

Some germs, such as those of influenza, specially attack the higher nervous centres. Indeed, the present increase of nervous diseases

is due far more to the prevalence of influenza than to increased pressure of life.

External chemical poisons also produce marked nervous effect.

Lead attacks the motor neurons, arsenic the sensory, and alcohol the higher cortical centres.

Lead, mercury, arsenic, antimony, and phosphorus are all marked nerve poisons.

These various causes I have enumerated produce functional nerve diseases; and yet the word "functional" must not exclude the existence of organic lesions, but is used because the organic changes cannot often be traced at all, or only doubtfully, under the strongest microscopes, while the functional lesion is gross and obvious.

The same microscopic changes may also produce the most diverse functional results. By the Nissl process the swelling of the nucleus and other cell changes are seen to be the same in the poisoning of tetanus and strychnine.

In functional disease the underlying change is often in the association of cells rather than their structure, for we must remember that the association of neurons is not organic but functional, and that some disassociation of neurons probably underlies all forms of functional nerve disease.

It is curious to review the various conceptions that have been formed respecting functional nerve diseases and their ætiology.

In 1765 R. Whyte, of Edinburgh, was, I believe, the first clearly to distinguish between hysteria, neurasthenia, and hypochondria. Arndt considered these due to defective development of the nervous system, Von Ziemssen to functional debility, Lowenfeld to non-development of the vascular supply of the brain, Erb to the stress of modern life, and Beard to overcivilisation. Others have ascribed nervous diseases to general hyperæsthesia, to gout, to enteroptosis; while Mitchell Clark regards them as disturbances of the cortical grey matter, and Graham Brown of the upper motor neurons (especially in chorea, tetany, &c.). In America nearly half of all cases have an ascertained hereditary predisposition.

From all these opinions it will have become quite evident that no arbitrary or final list of predisposing and exciting causes can be made of functional nerve diseases. The one I have here compiled from practical experience possesses, therefore, no great value, nor is it in any way dogmatic, though it may seem to gather together the most salient features in the general ætiology of these diseases.

The predisposing causes of functional nerve diseases are: (1) Age, young adults being most generally liable. (2) Occupations and surroundings, sedentary indoor monotonous work

being the worst. Surroundings include seasons, and it is worth remarking that while unbalanced nervous systems seem worse in spring, depression and melancholia is rife in the autumn ; moderate dry cold (such as prevails then) being said by Professor Dubois (Berne) to engender sadness. (3) Malnutrition ; this is a very great predisposing cause, and exists in over 50 per cent. of all cases. (4) Heredity ; this is a much less common cause. Epilepsy, asthma, hysteria, neurasthenia, insanity, suicide, megrim, exophthalmic goitre, alcoholism, and morphinism are all strongly hereditary. The hereditary physique is sometimes an index of nervous predisposition. In the neurotic the chin is often abnormal, being either too heavy and prominent or almost absent. I do not give sex, as I consider in functional diseases generally both sexes are almost equally liable.

To these four general predisposing causes may perhaps be added four others that predispose to special varieties of nerve disease : (1) Slight structural changes not readily demonstrated, as in paralysis agitans ; (2) defective nutrition of nerve centres, as in neurasthenia ; (3) irregular blood supply, as in flushing, blushing ; (4) defective control centres, as in hysteria.

Turning to the exciting causes of functional nerve disease, the list is rather long, and cannot

be reduced below ten, of which five are major and five minor.

The first and principal section includes poisons, fatigue, overstrain, suggestion, and sexual causes. We will briefly consider these.

1. *Poisons.* — These may be divided into chemical and vital. The chemical poisons include those formed within the body (autosepsis) and those that enter from without.

As I have pointed out, poisons of every sort are the normal product of digestion, and when these are not absorbed nerve disturbances commonly result. But in dyspepsia there is always some failure in this direction, and hence stomach ever affects brain, and owing to its delicate nervous mechanism stomach is ever affected by brain. Nowhere is what is called "the vicious circle" better illustrated than in the close connection of dyspepsia with functional nerve disease, first as cause and then as effect.

Gout may be regarded as a special form of dyspepsia, and the diagnosis of nerve diseases as suppressed gout is far too common and often incorrect. Gout is not an infrequent cause of disordered nerves, but before this ætiology is given there should be clear evidence of the gout apart from the nerve symptoms.

Constipation, by retaining poisonous products within the system, is as much neglected as a

cause as gout is over-emphasised. There can be no doubt whatever of the lowering of the nervous tone by the absorption of these auto-toxins into the blood and the circulation of this impure blood in the brain.

We see even in a bilious attack, where some unresolved digestive poisonous products are allowed to circulate in the blood, how the higher nerve centres are at once affected, and depression and debility ensue. Besides these manufactured poisons, others from without are exciting causes of functional nerve disease, and the most prominent of these is alcohol. This drug, in direct proportion to the size of the dose, poisons both the cerebral and sympathetic systems. In small doses the resulting paralysis is temporary, and rapidly passes away. In larger and continued doses a secondary irritative process goes on which produces a growth of fibrous tissue amongst the delicate nervous and glandular tissues, destroying in part the organic functions all over the body, and profoundly modifying the function of the nervous system in the brain and elsewhere. Besides alcohol there are many poisonous drugs which, taken in excess, injure the cortex in various ways. Vital poisons include all varieties of micro-organisms, which, by their products within the body, produce the various epidemic fevers, &c. Influenza may be taken as

a type of such disease occasioned by a microbe whose products profoundly affect (as a poison) the higher nerve centres and form the exciting cause of all sorts of functional nerve disease, sometimes even of mania. This first group of poisons, therefore, probably forms the most powerful exciting cause of these diseases.

2. *Fatigue.*—This may be of mind or body, or both, and readily leads to functional disease when there is a predisposition either from heredity or malnutrition. It is the result of all forms of overwork, and therefore a common cause of nerve troubles amongst the poor. Excessive exercise, such as cycling, may indeed not only produce every form of functional nerve disease, but even mental aberration. Fatigue always tends to induce depression and pessimism.

In nervous people the idea or autosuggestion of fatigue doubles the actual exhaustion; as, on the other hand, good spirits can lessen fatigue by removing such suggestions, as in a band with a regiment.

There is no doubt that heredity plays a great part in predisposing to mental fatigue or overstrain. In itself mental work, without worry, is the least fatiguing of any.

Prolonged amateur nursing, suckling, frequent child-bearing are common causes of nerve disease through fatigue.

Fatigue may be the result of the general rush in which we live, with insufficient rest. Professor James, in his "Psychology," makes some admirable remarks about the hurry of life. He notices how little time we give to quiet meditation or to the absence of thought. The Hindoos have long made a special study, art, science, and religion of meditation and abstraction. I shall speak more fully of this cause in the ætiology of neurasthenia.

3. *Overstrain.*—I have put this in a distinct class from fatigue because, although the result of overstrain may be fatigue, it is reached not so much by steady work as by sudden and improper pressure upon the nerve centres. This overstrain may be physical, as in rowing in a 'Varsity eight, or in cases of eyestrain by excessive reading. More frequently, as a cause of functional nerve disease, it is psychical in character, as in worry of all sorts (which exhausts the nerve centres so much more readily than work), in competitive examinations, and above all in the emotions. Indeed, the combination of intellectual and emotional overstrain in competitive examinations constantly leads to nerve disease. Two things, religion and love, play upon the emotions often in a most disastrous way, especially when the nerve centres are ill-balanced or not under sufficient control. Emotional overstrain is the worst form

of strain, and is an exceedingly common cause of functional nerve disease.

4. *Suggestion.*—This may be from oneself (autosuggestion), or from others. As a cause of functional nerve disease it is most frequently the former. It is the result of over-introspection, of reading or hearing of disease, or of seeing it when in a morbid state. It must, of course, be combined with a strong predisposing cause, generally hereditary. I may note in passing that though the cause is obviously purely psychic, it may often be removed, in spite of what has been said to the contrary, by material measures. I shall say more about this as a special cause when speaking of hysteria.

5. *Sexual Causes.*—The one most frequently now connected with functional disease is some form of masturbation. When we consider that 99 per cent. of boys are at some time or other addicted to this vice, and yet how few are victims of nervous disease, we see at once that as an exciting cause it is greatly overrated; and I may add that even where it is a cause it is due to its psychic rather than to its physical results, unless it has been pursued to unusual excess.[1] It may be said that all abnormalities of the sexual act, which need not be here enumerated, tend to

[1] It must be remembered that this vice is not uncommon amongst girls.

result in nerve disturbance through the mental trouble and anxiety and distress that accompanies them; but, on the whole, I consider that these as causes are overestimated. What I am convinced is underestimated, especially amongst women, as an exciting sexual cause, is enforced celibacy. I say amongst women, not because they have stronger passions, but because of the great difference of their position in this respect.

It is not, of course, always possible to trace or prove that this is the exciting cause, but in dealing with any nerve case in unmarried women, especially between thirty and forty-five, this must never be forgotten as a probable powerful factor in the case. It is, I fear, not unnecessary to remark that this subject has not always been approached by medical men with that refinement and sympathetic feeling that is necessary; and the profession has been not unjustly blamed for tending to speak of nerve affections as wholly due to this one cause in women. Such is obviously so untrue that it does not need proof here; but while strongly protesting against this coarse and unscientific view, I must insist upon the potency of this as a factor, and not in women only, but in a less degree in men.

It is obvious that, as a rule, no such strain of celibacy is placed upon them, as most men could marry, if they wished, at any time. In women,

however, pure and blameless in life, silent tragedies are for ever being enacted, especially in this country, from want of any opportunity of entering upon the marriage state. Surely there are features in Eastern life worthy of consideration in this connection. There every marriageable woman has, to say the least, a chance of marriage, and even on the Continent the arrangements are better and the facilities are greater than in England. Nowhere (save, perhaps, in the States) are so many fine women, perfectly suited to make admirable wives and mothers, doomed against their wish to perpetual celibacy as here.

The five minor exciting causes are as follows :

1. *Insomnia.*—Of course, this leads to fatigue, and yet it is best placed in a class by itself as the chief of the minor causes of nerve disease. No doubt, individuals differ widely in their need of sleep for healthy nerve action, varying naturally from four, or even three, hours in the twenty-four, up to ten or twelve. The amount needed is determined partly by heredity and partly by the nature of the life and work. In this, as in most other exciting causes, it must ever be remembered that real though the evil be, it is at least doubled by autosuggestion. If a man does not mind lying awake, half its evils go. Of course, in addition, patients, as a rule, rather under than over estimate the time they sleep.

2. *Shock.*—This is quite capable of producing a severe attack of neurasthenia or hysteria (in those prone to it) in twenty-four hours which may take months or years to recover from. A sudden death, accident, or sudden disappointment in love, or reverse of fortune may all produce long-continued disease if there be predisposition.

3. *Pain.*—This, if long-continued and wearing, may set up nervous disease really by overstrain of the nervous system. In the same way any long-continued drain on the system by ulcers or discharges may act similarly.

4. *Early stages of organic nerve disease*, such as Graves' and Raynaud's disease, disseminated sclerosis, exophthalmic goitre, or Basedow's disease. Of course, in all these cases the point is to recognise the organic disease which underlies the other.

5. *Misplacement of organs*, including general enteroptosis, nephroptosis or floating kidney, uterine flexions and displacements.

No doubt these have been greatly exaggerated by some as exciting causes, but they do exist in many cases, and are often contributory causes. I have before me a pamphlet by Dr. Suckling, of Birmingham, detailing many cases of melancholia relieved or cured by nephropexy, or replacement and fixing of a dropped kidney. The evils producing nervous and even mental trouble are in

these cases (1) mechanical, caused by traction or pressure on bloodvessels, sympathetic, and other nerves and organs, and (2) toxic, by retention of urine in the kidney and uretur, and I may add (3) psychic, by fear of consequences and other vague dreads. In the same way misplacement of other abdominal organs contributes to nervous troubles through similar causes.

The only point is that while enteroptosis is undoubtedly a cause, its importance must not be exaggerated.

Anæmia, so often classed as an exciting cause of nervousness, is not a true cause, and even when advanced does not as a rule lead to nervous symptoms.

We must remember before closing this chapter that the subjects of functional nerve disease are by no means always drawn from the same class, either mental, moral, or physical. We find sufferers amongst the greatest and the least, the noblest and the basest, the strongest and the weakest, amongst men and women. The same elements, after all, exist in great men and neuropaths: only in the former there is power to subordinate the means to the end, and to keep the ideas noble and the habits excellent. Nervousness, after all, is often an excess of self-consciousness of a normal quality.

The evil, which is of course a form of auto-

suggestion, consists in bringing into consciousness what should be left in unconsciousness. It may often be more than this, but this at least is ever present. There is generally in these introspective patients, also, a predisposition both from temperament and heredity. Dr. Rennie, amongst others, points this out strongly,[1] and asks us to observe how frequently it is a cause of hysteria, particularly in young women. He also reminds us that the offspring of persons who are alcoholic, or insane, or neurotic, frequently inherit unstable cortical centres, and furnishes us with some remarkable illustrations of defective and perverted functional nervous activities.

[1] Dr. Rennie, *British Medical Journal*, May 4, 1901.

CHAPTER IV

ÆTIOLOGY OF HYSTERIA

IN reaching now the first of the special nerve diseases of which I have to speak, I am confronted with a special difficulty. Hysteria is a word that covers symptoms so various that we may almost speak of one class of them—neuro-mimesis, or the mimicry of disease by nerve agency—as a distinct disease.

Hysteria as elaborated in France, and largely accepted by America and England, means a functional nerve disease characterised by narrowed consciousness of common (anæsthesia) and special sensation (narrowed field of vision) and by convulsive seizures. But in a large number of cases here these symptoms are not in the least well marked, and are, indeed, at times entirely absent, while another class of symptoms characterise the disease; and that is the wholly involuntary mimicry, with extraordinary accuracy, of almost every variety of disease, producing symptoms through the unconscious mind wholly impossible

of production by any voluntary effort or will-power, such as local swellings and contractions, effusions, high temperatures, &c. These phenomena are collectively called neuromimesis.

Sir James Paget[1] says: "Cases of neuromimesis are commonly included under the name 'hysteria,' but in many of them none of the distinctive symptoms of hysteria are ever observed; and from all of them it is desirable this name should be abolished."

But there is a real difficulty in this, inasmuch as in many cases the two classes of symptoms are combined, and at present we must be content to include the two groups as belonging to one disease.

It is clinically convenient to include neuromimesis with hysteria, as both are diseases of the unconscious mind, but as a matter of fact what I shall have to say on hysteria applies far more to the nervous mimicry of organic disease than to narrowed sensations and convulsive seizures.

Let us consider, then, for a moment the process by which in "hysteria" disease is caused by mental action; and to do this we must, I fear, recapitulate some well-known facts. In the first place we note that our brain not only acts, as I have shown, by the will and by ideas of which we are conscious, but is continuously vibrating with ideas, memories,

[1] Sir J. Paget, *Lancet*, 1873, ii. 512.

and trains of thought of which we are unconscious. It is so even with regard to common sensation.

A very small proportion of the afferent currents arriving at the brain produce conscious sensations of any kind. If the term "unconscious sensations" be objected to, let "unconscious irritation" be substituted, for they certainly produce the same effects on the unconscious mind which in the conscious we term sensation; and furthermore, I have shown elsewhere[1] that sensations can be produced by the unconscious mind, arrested by it, and can themselves produce psychical and physical effects through its agency.

Professor W. James, in his "Psychology," remarks: "One of the most extraordinary facts of our life is that, although we are besieged by impressions from our whole sensory surface, we notice so very small a part of them. . . . Yet the physical impressions which do not count are *there* as much as those that do."

"For all these impressions," says Barrett,[2] "whether we are conscious of them or not, leave some mark behind. They weave a perceptible or imperceptible thread into the fabric of our life; they make a greater or less indent upon our personality. We know that this is the case, for

[1] See "The Unconscious Mind" (Schofield), 2nd edition, Hodder & Stoughton.

[2] Professor Barrett (Dublin), *Humanitarian*, 1895.

impressions of which we were unconscious at the time often emerge when the attention is withdrawn from things around, as in states of illness, in dream, or in reverie." Dr. Waldstein also says: "There is hardly a moment . . . when the nerve endings in the skin are not constantly assailed by sensations of pressure, of temperature, of the flux or reflux of the blood supply."

Perhaps an illustration will help here.

If you concentrate your attention on any part of your body, you become aware of sensations in it that escaped your attention before, but were equally there present. If with a feather I lightly tickle the back of your neck at the time you are engaged in very earnest conversation, the vibration aroused in the brain sensory centre is unnoticed by you; yet if I call your attention to the part it is noticed at once. By increasing the stimulus I can make the waves of vibration set in action other centres—involuntary ones, such as cause a shaking or shuddering of the neck, or voluntary, such as turning the head round or moving away.

If you are asleep I may tickle your foot, so that you draw the leg away and you wake up. In this case you are probably conscious of moving your leg, but the stimulus that made you do it was too slight to reach consciousness. We may thus be conscious of a transferred vibration leading to

action or sensation, and yet be ignorant of the cause that set it going.

Memories, again, will involuntarily, and it may be unconsciously, arouse both feelings and actions. One may have smelt the strong scent of some flower when some critical event took place—a proposal of marriage or some sudden news: henceforth, whenever the topic is touched on, the very scent or vibrations of the nerve of smell that represent it may be exactly reproduced. A certain field may recall a certain song we used to sing as we crossed it on our way to school. The thoughts of old Anglo-Indians often set the vibrations of Eastern sights and sounds in action again in the old centres.

Observe in all these cases we are considering natural associations, not vibrations deliberately set up by the will in an unusual way. You can, as shown already, think of a green field when in a drawing-room until you set in vibration the centre of sight and see the green grass, or the centre of hearing and hear the lowing of the cattle and the hum of the insects. This is much easier if there are no distracting sounds and if you close your eyes; and still more so if there are some insects actually humming in the room. But the memories I speak of are wholly unconscious ones.

Let us now sum up our results, taking a definite case, say of a pain in the little finger. This pain

is felt in the little finger, we say, though we really know that the only seat of any sensation is in the brain. It is there, at the central termination of the ulnar nerve which leads from the little finger, that all the vibrations take place of which the mind becomes conscious, and which it calls pain; whenever these vibrations take place in the nerve centre belonging to the little finger in the brain, the mind always refers the sensation to the commencement of the nerve in the little finger, whatever may be the real origin.

In the same way, if in your house the hall-door bell rings, you say there is some one at the hall door; if the drawing-room bell, there is some one there; and yet such may not be the case. I may have pulled the door-bell wire inside the hall as I passed down the kitchen stairs, or a rat may have moved it, or I may have struck the bell itself and made it ring, or a shock of earthquake may have shaken it, or a strong gust of wind; and yet, although these causes are so various, you, in the kitchen, always say, "There is some one at the front door."

It is so in the body. (1) The little finger is pricked—there is pain in the little finger. (2) The ulnar nerve itself is pressed on somewhere in its course—there is pain in the little finger. The hand may be cut off, and still, if the nerve be irritated in the stump by pressure, the man feels

the pain in his imaginary little finger as truly and vividly as if it were still actually there. (3) Or, again, there may be a tumour in the brain pressing on the nerve centre in the brain of the ulnar nerve, and the most acute pain is felt in the little finger. All these instances are from direct irritation of the nerve in some part of its course. But, as we have seen, we may go much further. The hall-door bell wire may have got caught with the drawing-room one, so that when the latter is pulled it is the hall-door bell that rings; the vibration is thus transferred. So in the brain. (4) I may set to work and think of my little finger, and so start sensations in it which, if not actual pain, are still sensations. But if I have the idea it is injured, though it may not be, I may feel the pain acutely from an idea alone. (5) But, again, the pain may have been originally caused by an abscess in the little finger, and afterwards kept up long after the abscess was gone by the ideal centre. (6) Associations may cause pain, as seeing others with crushed little fingers; or, (7) memories, conscious or unconscious, of crushed little fingers may also start and keep up this pain.

Observe, then, the varied causes with the same effect; or, as we may say, the varied actions with the same reaction. Only, in conclusion, we may add that while in health it is generally easy to discriminate between pain in the little finger

caused by injury to the little finger and that set up in other ways, in nerve disease it is not. Nay, it is sometimes impossible not only to the sufferer, but to the doctor who attends him. It has been well said: "We think as we feel, or think we feel; and we feel as we think. If we feel a pain, we think we are ill; and if we think we are ill, we feel ill." If my ideal centre vibrates with the thought of crossing the Channel in rough weather, and pictures the nausea that would then be felt, the vibrations are transmitted to the terminal centres of the sensory nerves running from the stomach, I actually *feel* sick from communication with a sensory centre; and, possibly, if of a highly nervous organisation, may actually *be* sick from transference to a motor centre.

Real feelings and real acts can be started in entirely ideal centres. If we *think* intensely of any part of the body long enough, we *feel* sensations in that part. If we think of a good dinner our mouths water. We shiver whether we only think of cold or actually feel cold. The sensation of pain can be produced as really and vividly by thoughts or ideas alone as light in the eye by striking it. In short, every sensation of the body ordinarily produced from without can also be produced from within. These ideal vibrations, acting on motor and other centres, are quite

different from the action of a motor centre by the direct impulse of the will, the action being in the latter case voluntary and in the former involuntary. So far, I have only spoken of ideas of which we are conscious, so that, although the modes of exciting these motor and sensory centres are abnormal, *we know them to be so*, and hence are not deceived and do not deceive others into believing them to be natural.

Thus, when our teeth are on edge from discordant sounds, we do not go to the dentist; if we are sick from ideas, we do not think we are dyspeptic; if we hear noises in the ear, we do not look for them externally; if we shiver from thinking of cold, we do not put on more clothing; but this is because we are conscious that the cause is mental—in other words, of the action of the mind. It is quite otherwise where the sensation is caused by mind action of which we are wholly unconscious; the conscious part of the mind, being at the same time cognisant of the symptoms but ignorant of the cause, naturally attributes it to the disease most likely to produce it.

With regard to the excitation of feelings by the action of the mind, John Hunter says: "I am confident that I can fix my attention to any part until I have a sensation in that part." The transition is easy from the irritation of

real sensations and those actually produced by expectation in the ideal centres, only we must remember the mind produces *sensation by ideas*, not *ideas of sensation.* The difference is enormous.

"Whatever mental or bodily state can be excited through the senses from without may arise from within, from imagination proper." [1]

Braid took four men between forty and fifty years of age and told them to fix their attention on their hands for five minutes. One, a member of the Royal Academy, felt intense cold in the hand; an author, darting and pricking pains; a major felt heat; a scientific man had the arm cataleptically fixed to the table.[2]

The sensations in the hand by thought are produced probably by real vasomotor changes in the hand, set up by the mental excitation of the sensory centre in the brain.

The sensation of the teeth on edge may be excited by an acid on the teeth (normal irritation), by scraping glass (transference from auditory nerve, which lies by the side of the nerve from the teeth, in a bony canal), by seeing glass about to be scraped (transference from optic nerve by association), or by the mere thought of it being done (transference from the

[1] Hack Tuke, "Mind and Body," 2nd edition, i. 30.

[2] Braid, "Hypnotism," xx. 93.

ideal centres). In each of these cases the mouth may be filled with saliva.

So much for the general causation of physical phenomena by mental action, which, although it explains much of the possible processes by which hysteria may be caused, does not much advance its specific ætiology. The whole subject is confessedly so chaotic and obscure that I make no apology for turning aside for a moment to give a few suggestions on the ætiology of hysteria that have been made by students of the subject, before briefly summing up my own views.

Dr. G. E. Rennie says:[1] "Now, there has been much discussion as to the nature of this form of functional nerve disease. There are some who would attribute the condition to functional degradation in certain parts of the brain or spinal cord: the occurrence of an hysterical hemi-anæsthesia in hemiplegia would on this theory be due to some vasomotor spasm in the cortical areas of sensation or motion. An attack of paraplegia would be due to some impairment in nutrition of the cells of the anterior cornua. But this explanation will hardly meet all the facts, since the sudden transference of a hemi-anæsthesia from one side of the body to the other under the influence of a magnet or some

[1] Dr. G. E. Rennie, *British Medical Journal*, May 4, 1901.

special metal could hardly be explained by any such coarse pathology.

"The entirely opposite theory regards all these phenomena as essentially dependent upon psychical states; and functional disturbance or degradation of the lower centres is not recognised. Now, I think that we can get a clearer idea or conception of hysterical nerve disease by regarding it as partly mental and partly physical, the underlying physical state being allied to the hypnotic state."

Sir S. Wilks [1] regards hysteria as of the nature of an explosion. He says: "Nature having no outlet for the superfluous energies, the whole system becomes disordered." Here Nature (our well-known female deity) stands for the "unconscious mind." Dr. Ormerod [2] says vaguely it "is due to a supposition of vasomotor spasms, or defective nutrition of nervous elements." Sir R. Reynolds, Charcot, and others, say it depends on idea, or is ideogenic. These ideas being unconscious, they imply its origin is the unconscious mind.

Janet considers "the anæsthesia and amnesia in hysteria arise, not from physical failure in

[1] Sir S. Wilks, "Diseases of the Nervous System," p. 365, quoted by Dr. Herman, "Diseases of Women," p. 30.

[2] Dr. Ormerod in Clifford Allbutt's "System of Medicine."

mind or brain, but from psychic failure to grasp or attend to sensation; in short, a contraction of the field of consciousness, as the contraction in hysteria of the field of vision from the same cause. The impressions, therefore, cease to rise above a lower sphere (unconscious mind) and tend to foster at the expense of consciousness a 'secondary' subconscious mental state. The elements of such a state exist in all of us"; and may I add that this state is here called the "unconscious mind"?

Professor Biener (Vienna) considers[1] that the "sundering of consciousness" exists in rudimentary fashion in every case of hysteria. The foundation and condition precedent to hysteria is the existence of hypnoid states (or what he would call "unconscious consciousness").

Now we—I think more intelligibly—understand by this "sundering of consciousness" the distinction between the conscious and the unconscious mind; and the hypnoid state is the revelation by its effects of the powers, not of "unconscious consciousness," but of the unconscious mind; while the consciousness of the *ego* is partly in abeyance or its powers impaired.

Sir James Paget says[2]: "If you study

[1] Professor Biener (Vienna) *Neurologisches Centralblatt*, January, 1893.

[2] Sir James Paget, *Lancet*, 1873, ii. 513.

neuromimesis from its mental side, you may easily find reason for believing it [the result of] mere mental error, rather than the erroneous working of sensory and motor centres; but to regard all mimicries of organic disease as essentially mental errors is bad pathology and worse practice. In some mimicries it is hard to discern any mental influence at all, such as in distension, constipation, &c. Some are found in ignorant and slow-minded people."

This is an admirably reasoned passage to show that the conscious mind is certainly not the active agent in most neuromimetic cases; and hence Sir James, limiting mind to consciousness, can recognise no mental action at all, and falls back on the erroneous working of sensory and motor centres. But is not the agent that sets these centres working erroneously purposive and mental, and should we not call it the unconscious mind?

Eichhorst[1] says that "hysteria is properly attributed to disturbances in the cerebral cortex." Briquet,[2] in the best work published on hysteria, holds that the seat of hysteria "is the brain and not the uterus." Page shows that the brain (unconscious mind) is the cause of the railway

[1] Professor Eichhorst, "Practice of Medicine," 1901.

[2] See "Twentieth Century Practice of Medicine," x. 454.

spine, and that it is not due, as Erichsen and Erb thought, to inflammation of the spinal cord. Bernheim says[1]: "How can memory set up a disease it has never seen? The disease [hysteria] must be in the psychic centres, but unconsciously; possibly a disease of æsthesodic cells of the cerebral hemisphere" (a new name for the unconscious mind).

I may conclude these quotations with the far-reaching views of Dr. Buzzard, who has done so much in the ætiology of this disease; and I make no apology for quoting his words *in extenso*. He says:[2] "Hysteria is a term the etymology of which is misleading. It is often improperly applied to cases of simple malingering, and others which do not admit of ready explanation. Its use is best restricted to a condition of the nervous system fairly defined, but the internal pathology of which is not known; characterised by the occurrence of convulsive seizures and by departures from normal functions of various organs, leading to very numerous and often perplexing symptoms.

"These are apt to simulate those commonly arising from definite alterations of structure, but differ from the latter in the fact that they may often, even when at their worst, be removed

[1] Professor Bernheim, *Brain*, xvi. 190.

[2] Dr. Buzzard, "Quain's Dictionary of Medicine," 1883, i. 678.

instantaneously, usually under the influence of strong emotion. It would seem that there is a disturbed or congenitally defective condition of the cerebral substance, *involving in all cases the highest nervous centres*, and in various examples extending more or less also to some of *those which preside over automatic phenomena. Partial or complete suspension of inhibitory influence* would appear to be the most patent result of the condition, whatever it is, and this is recognised as well in regard to the mental as to the more evidently physical processes belonging to cerebral function.

"A laugh which cannot be checked, but continues until tears flow or the limbs become convulsed, is a typical example of such a suspension of control, and, if studied, throws light upon the nature of a considerable portion of the phenomena of hysteria. The jerking expirations of laughter arise from excitation of the respiratory centre, and when this excitation, uncontrolled by higher centres, acquires an abnormal strength, it extends to other parts of the medulla oblongata and spinal cord, and produces general convulsions. It overflows, as it were, into other nervous centres, which in health would receive none of the exciting impulse. Between the lowest (automatic) functions of the cerebro-spinal system and the highest (psychical) there

is an ever-increasing complex system of excito-motor processes, *which may be in part, or wholly, under the pathological influence*, whatever it be" (the unconscious mind?). "Hence the bizarre character of the hysterical phenomena, and the circumstance that the symptoms always include modifications of those processes which underlie the mental faculties. The suspension of the power of control possessed by the higher centres explains the irregular movements, spasms, and convulsions. Hyperæsthesia and pain are dependent, probably, in hysteria, upon such a molecular change being initiated in the sensory ganglionic centres as is ordinarily propagated from the periphery"! (This, due to the unconscious mind, I have described a few pages back.) "Hysterical paralysis, on the other hand, signifies that the power of the highest centres in liberating movements is in abeyance. In hysterical anæsthesia it is probably feeling or sensory perception and *not* the function of the sensory apparatus that is in abeyance, whilst the reflex actions which result from excitation of sensory nerves are performed in an orderly manner. A patient may work a needle with fingers which can be touched or pricked without the act being felt. Tactile impressions are conveyed to the ganglionic centre by the afferent nerves, so that the muscles are contracted. What

is wanted is the participation of those higher centres in which consciousness runs parallel to this physiological action."

In addition to these views, Möbius and Sir J. Russell Reynolds considered that hysteria was caused by ideas, or ideogenic, Charcot by hypnotic suggestion, Janet by contracted fields of consciousness.

To sum up: the pathology of hysteria rests upon a twofold basis—the functional derangement or disease of the unconscious mind (the sphere of extra-conscious psychic action) and the loss of control of the higher cortical centres. There is no doubt that "hysteria is essentially a psychosis" (Professor Dana) as distinguished from neurasthenia, which is mainly a neurosis. There is in hysteria no real chain of causation any more than one can trace hereditary qualities by pedigrees drawn in the male line. Bearing this in mind, we may consider, amongst special predisposing causes of hysteria:

1. *Race.*—The Semitic races, and especially the Jews, are very liable to hysteria, and the Latin more than the Saxon races. In Germany and France emotional as distinguished from mimetic hysteria is much more common than in England. No race is exempt from it.

2. *Sex.*—Women suffer more from hysteria than men, while in children the numbers of each

sex are equal. In Germany there is 1 man to 17 women; in France 1 man to 3 women.

3. *Age.*—We get 8 per cent. of cases under 10; 50 per cent., 10–20; 28 per cent., 20–30; 10 per cent., 30–40; 3 per cent., 40–50; and 1 per cent., 50–60. It is most common in women 15-25, in men 20–30, in children 10–15. Generally it is most common in adolescence, and next in early adult life.

4. *Heredity.*—Seventy per cent. of hysterics are hereditary, and hysteria seems to descend mostly through the mother. Charcot says that heredity is the sole predisposing cause, and that all others are exciting. There can be no doubt that the best prophylactic in hysteria is to forbid the marriage of lunatics, epileptics, and drunkards. Epidemic outbreaks of hysteria amongst groups of workpeople and others, however, show that heredity is not an essential factor.

Exciting causes include many we have considered as general causes of nerve disease—toxins and poisons of various sorts, including alcohol, lead, and mercury, profound exhaustion, and some organic nerve diseases.

Mentally, powerful emotion, especially fear, is said to be the most potent single exciting factor. Also grief, shock, love, sight of accidents and traumatism of all sorts, specially railway accidents.

Constant introspection, which is an attempt to bring the unconscious into consciousness, is a fertile source of mimetic hysteria. Sexual causes are not so common as is thought. Sex excesses are occasional causes in men and boys, especially solitary vice; but their influence in women is not great. Disorders of genital organs are present in many cases, but it is estimated that at least half of hysterical sufferers are free from any such disease; nevertheless, masturbation is a common cause of hystero-epilepsy in women.

Persistent hysteria has followed a single dream.

With regard to anæmia, chlorosis, weak health, and the onset of the catamenia in their relation to hysteria, they must be regarded rather as coincidences than causes.

There can be no doubt of the evil of a badly regulated and self-centred life, when there is predisposition to any form of nerve disease, in increasing the number of the victims to hysteria; but the whole subject of the true ætiology of this mysterious disease is as obscure as its pathology, and no dogmatism is at present possible.

With regard to religion, it may be said that the trustful, patient, altruistic spirit of true Christianity is opposed to hysteria, while terrorism, mysticism, self-introspection, and excitement foster it.

CHAPTER V

PHYSICAL SYMPTOMS OF HYSTERIA

IN now attempting a survey of this disease, including both emotional and mimetic varieties, we must again commence the chapter in the usual manner by saying that owing to an entire absence of any pathology no dogmatism is possible or desirable.

Clinically, hysteria is as distinct a disease as epilepsy, and evidently depends on some changes, which cannot yet be proved, in the cerebral cortex and other districts of the brain; for it must be remembered that the body has been repeatedly searched from head to foot for some organic cause of hysteria, but in vain.

Hysteria has already been divided in the previous chapter into emotional and mimetic. It has also been divided into major and minor.

Hysteria major includes both of my divisions, and the symptoms include neuromimesis, paralysis, narrowed consciousness, and fits.

Hysteria minor has none of these symptoms,

but general loss of control and exaltation of emotional centres, pains, and emotional crises not amounting to fits, with the passing of copious pale urine. It is common in young women and children, and in many cases is an early stage of the graver disease.

Hysterical physical symptoms generally include disorders of sensation, locomotion, circulation, digestion, excretion and secretion, respiration, special sensation, and of the nervous system.

We will consider these in their order, but before doing so may just allude to certain symptoms that have been termed stigmata, especially in France. They are three or four in number, thus :

1. Anæsthesia.
2. Concentric limits of vision.
3. Hystero-genetic zones.

Or :

1. Diseases of conscious sensation.
2. Contraction of visual field.
3. Hystero-genetic zones.
4. Convulsions.

It must be remembered that in England, at any rate, these "stigmata" are by no means so common or so well marked as at the Salpétrière, and that the disease itself is perfectly developed in their entire absence.

The fits or convulsions may be merely convulsive, or may be accompanied by large and curious movements, or there may be a cataleptic condition, in which all sensation and voluntary motion disappears, and only partial consciousness remains, while the muscles are in a peculiar condition, so that fixed positions of body and limbs can be moulded at will, the muscles being not rigid but plastic. I only allude to these varieties now, and shall have more to say about them later on.

1. *Sensory Symptoms.*—The most common is some form of anæsthesia, of which, as a rule, the patient is unconscious until his notice is called to it. Of course, this is at first the rule in all anæsthesias, but when following a well-marked organic lesion, such as some cerebral disturbance (hemorrhage, &c.), it is as a rule quickly discovered, being suspected and looked for; whereas in hysteria, not being expected, it is, as a rule, undetected by the patient and often by the doctor. This anæsthesia is most varied in character. It is seldom general, and not very often hemi-anæsthetic. It is most common in patches that have to be looked for, with well-defined borders, and commonly patches of hyperæsthesia in between. The whole (as in all hysteric symptoms) seems to speak of scattered cortical disorder rather than of a localised lesion.

These patches or plaques of anæsthesia are more common than anatomical areas of lost sensation. We get also segmental anæsthesia, where the areas are in bands one below another; moveable or transferred anæsthesias, where a patch on one side alternates with a patch on the other.

We have also so-called "glove," "stocking," "mitten," and "garter" anæsthesias, which explain themselves.

The degree, depth, and character of the anæsthesia varies greatly.

There may be loss of sensation to touch and pain, and yet faradic sensation and somatic sensation and sense of position, weight, temperature. Or any of these may be lost and the rest retained. There may be no sense of temperature or pain, and yet touch may be felt.

The only way to discover the character and extent of the anæsthesia is to cover the eyes or avert the face so that the part cannot be seen, and test for temperature, touch, weight, position, electricity, and common sensation.

A patient told to say "Yes" when she feels a prick and "No" when she does not will often say "No," showing that the anæsthesia, though present, is not complete, or possibly there may only be the idea (subconsciously) of anæsthesia. This anæsthesia, though proved to be imperfect,

persists in sleep, showing that at any rate it is not a mere product of the conscious mind and fraudulent in character. It must be remembered that in the anæsthesias, as in all other hysteric symptoms, there are ever inexplicable contradictions, that to the tyro are ever suggestions of fraud, and that can yet be conclusively proved to be produced unconsciously by the patient. In hysteria Binet shows that sometimes the anæsthesia does not extend below the level of consciousness, implying that at others it does. To some, of course, this may seem nonsense, as at first sight unconscious sensation seems a contradiction of terms, and therefore a double consciousness has been postulated to get over the difficulty. It really matters little whether you call the unconscious a second consciousness or not; on one point we are all agreed, that the two "consciousnesses" are unconscious, at any rate, with relation to each other.

G. H. Lewes points out that "unconsciousness is a sentient state—not the entire absence of consciousness we ascribe to a machine." "It is correct," says James Mill, "to draw a line between feeling and knowing that we feel." Professor James remarks, as quoted in Chapter IV., that few impressions of the countless number that are made are noticed by us; and James Sully and Wundt make similar remarks. Bearing in

mind, therefore, that there is such a thing as unconscious sensation, or at any rate feeling, we will be prepared to understand better Binet's experiments in hysterical anæsthesia.

If a pencil or pair of scissors be placed in an entirely anæsthetic (hysterical) hand behind a screen, so that the patient has no knowledge of what is being done (the hand being proved by experiment to be entirely insensible to pinching, pricking, burning, touch, and the faradic current), it is found that the hand will grasp each appropriately; in the one case prepared to write, in the other to cut—a clear proof that, though severed by hysteria from consciousness, unconscious sensation is still there, and that an unconscious mental process is going on. This is specially clear if it be the left hand, which is not accustomed to hold pencil or scissors, that is experimented upon. Here there is no ready-formed habit to help the action when the articles are recognised by sensation, and unconscious reasoning power must be postulated.

If a pen be placed in the anæsthetic hand and a word is traced with it, the hand being held, then if left alone the hand itself will frequently trace out the word five or six times. If then the patient's hand be held again, and some very familiar word, such as the patient's name, be written with it, with the addition of an extra

letter, and then the patient left, the hand in retracing the word will perceptibly hesitate at the extra letter, showing the action of the unconscious mind, and after two or three times will omit it altogether. If this same hand be pricked with one pin it will trace a single point; if with two, then two.

All this tends to show that in hysteria there is some real but erratic interference with conscious sensation.

In the same way we get hyperæsthetic patches and zones (generally in the ovarian region), limbs, &c., when we may have pain and tenderness, which may be cutaneous or subcutaneous. The common regions are the inguinal, epigastric, infra-mammary, and spinal; the head is rarer, and the limbs very rare. Pain and tenderness generally are more common in the left half of the body. We also get perverted sensation, where a hot object is felt to be quite cold, and *vice versâ*.

Another sensation frequently described by hysterics is that of cold water trickling down the spine, and is sometimes accompanied by a nervous shivering.

Certain tender spots have been called by Richer "hysterogenetic zones," and these form one of the three or four (French) stigmata. One of the most frequent seats for this special tenderness, as I have said, is the ovarian region,

where it is commonly deep seated. Pressure on such a "zone" may not only cause characteristic fits, but other special symptoms, such as pseudo-angina.

2. *Locomotor Symptoms.*—Paralysis of various sorts is common in hysteria. There may be hemiplegia or paraplegia, or general loss of power (paresis).

In the paralysis we observe that no special muscles are attacked. However prolonged, there is no fibrillar twitching, no loss of reflexes, no degeneration, though there may be some wasting from disuse.

Hysterical paraplegia is common, and may be flaccid or rigid, and is often anæsthetic as well. The limbs may be extended and limp or drawn up to the groins. There may be pain over the sacrum, and retention of urine in such cases is common.

In these cases the knee-jerk is never absent but exaggerated, and the great toe, on tickling the sole, is *flexed, not extended*, as in Babinski's sign.

In hysteria, paraplegia is brought on by emotion with special ease. Even in health nothing is more common in emotional natures than sudden loss of power in the legs. I have had to support the tottering steps of a lady in perfect health along the platform of a station on the receipt of bad news; and, in common with

many others after severe influenza, have experienced weakness in the legs almost amounting to paresis. In hysteria such feelings are followed by progressive loss of power.

Hysterical hemiplegia is most common on the left side, and face and tongue escape. In these cases also the knee-jerk is exaggerated.

Hysterical monoplegia may be flaccid or spasmodic, often with anæsthesia and but little atrophy.

In hysterical paralysis there may be only loss of movement when the eyes are closed, or there may be loss of power only over one group of muscles, or over one definite action.

Certain forms of hysterical ataxy or loss of some special movement are called "astasia-abasia." This is the loss of some particular movement in a leg, such as walking, while the patient can still hop or jump.

The paralysis in astasia-abasia is clearly emotional. The patients can move freely in bed, and can do anything but some one special movement or action.

We also get hysterical contractions and spasms of all sorts. The onset is rapid and the attack severe. It may be extensive in area, and is not relieved during sleep. It is readily produced in hysterical subjects on slight irritation.

One form is that of the muscles of mastication,

and is called "trismus." In this the teeth cannot be separated more than a quarter of an inch, and the patient is fed round the sides of the mouth. We also get torticollis, kyphosis, limb contractions, &c. These may last for years, with or without pain.

We get also a mixture of sensory and motor lesions in hysteria such as we never find in organic disease.

Hysterical tremors are not very common. They may be local or unilateral. Hysterical tremors often resemble disseminated sclerosis, but they differ in continuing when at rest and *after* any object has been grasped.

Hysterical tremors cease in sleep.

Amyasthenia in hysteria is a temporary weakness in arms or legs, with sudden onset. Hysterical chorea is slightly purposive in its movements.

Neuromimesis shows itself in hysteria specially in the joints, spine, breasts.

Hysterical club-foot and spinal curvature are common; but of all this class of case I will speak more fully later on.

3. *Circulatory Symptoms.*—In hysteria we get cardiac palpitation, dilatation of arteries, with marked and distressing palpitation in various parts of the body, rapid pulse (slow pulse is quite rare).

We get hysterical angina, differing from true by moaning, screaming, and restlessness, and often occurring at night in sleep.

We also get hysterical subcutaneous hemorrhages (ecchymoses), or, on the other hand, ischæmia, or bloodlessness on pricking, a common sign in anæsthetic areas, showing the profound disturbance in these parts, which no imagination or fraud could produce.

We also get well-authenticated hyperpyrexias reaching 112° and 118° (Allbutt, vol. viii. p. 113), which would be absolutely fatal in any other disease; and lastly, we may get a temperature of 108° in one axilla and 98° in the other. We also get "nervous" fever with temperature over 100°, and, like fever in tubercle, low or normal each morning and high at night. It may last for a day or two or for years, and is not uncommon in hysteria major.

Hysterical œdema is often seen. It may be unilateral or general, white or blue, and may last for years.

There is sometimes a marked failure of skin nutrition, so that the hair falls off and the skin is dry. Sometimes we get urticaria and other skin affections. The ecchymoses I have spoken of sometimes occur in definite places, as in the palms of the hands, when they may constitute the so-called religious stigmata.

4. *Dyspeptic Symptoms.*—Here we get a marked difference from neurasthenia, where these are constant and important. In hysteria, anorexia nervosa is not uncommon, with fasting, vomiting, and emaciation. Dysphagia is common, and gastralgia, tympanites and meteorism and noisy eructations often so severe that the patient cannot mix in society. Marked cases of reversed peristalsis are not uncommon. I may recall one from the London Hospital. Early in 1897 a woman was admitted into the hospital with fœcal vomiting. Her abdomen was covered with the scars of various laparotomies made in order to discover the cause. The whole of the abdominal contents had been carefully examined, but as the vomiting persisted, a fresh opening was made, and the colon specially overhauled. All the viscera were healthy, nevertheless the fœcal vomiting was genuine. Most careful experiments were conducted by surgeon and house-surgeon, and yielded almost incredible results. Two ounces of castor oil introduced into the rectum were vomited with fœcal matter in from ten to fifteen minutes. Half a pint of water stained with methyl blue, introduced into the rectum, as well as some solid bodies, were vomited in about the same time. The cause of this vomiting was purely and simply hysterical, and was combined with high and capricious

temperature. Both were cured by psycho-therapeutics only, and the woman was discharged perfectly well. Here we get a remarkable instance of the power of the unconscious mind over the body. There was no organic cause ; the cure was effected without the removal of any physical irritant or the operation of any physical means. The cause was mental and yet unconscious, and the cure was mental. No conscious mental will or fraud could have produced reversed peristalsis. If any doubt this let them try, and they will come to Sir James Paget's conclusion, that they at any rate have not the power. The woman had no idea the cause was mental. There is no question here of mere severance of consciousness and voluntary action as in anæsthesias and paralyses. Here is a wholly abnormal and destructive and really insane action of the power that governs the unconscious mechanism of the body, which I call the unconscious mind ; and it is these and similar cases that have led me to believe that while insanity is a disease of consciousness, hysteria is an insanity of unconsciousness. Besides the above, we have in hysteria round gastric ulcers, which are not uncommon.

It must be remarked that all the digestive symptoms in hysteria are bizarre and extraordinary, and seldom simply dyspeptic, as in

neurasthenia. At times anorexia appears to be the primary symptom and the cause of the disease.

5. *Excretory and Secretory Symptoms.*—In hysteria retention is common, and the catheter should never be used to relieve it. Incontinence is much rarer. "Floating" kidney, especially on the right side, is a common accompaniment, but is also common in neurasthenia. We also get hysterical anuria, lasting, it may be, for seven days without resulting symptoms of autosepsis. We get local sweating in patches, and also generally onesided hyperidrosis. Mastodynia is common.

6. *Respiratory Symptoms.*—Amongst symptoms in these organs we may mention hysterical cough and hysterical aphonia as being very common. Mutism (absolute aphasia) and partial aphasia are also common. Dyspnœa is also common, sometimes arising from hysterical spasm of glottis and sometimes from spasm of diaphragm.

7. *Symptoms in the Special Senses.*—We get as one of the most marked stigmata (French) contraction of the field of vision. The acuteness of vision at the yellow spot remains normal in these cases and the sight is good, and the patient remains unconscious of the limitation of his visual field. We also get amaurosis of either eye, and central scotoma, double vision, and other abnormalities.

Blepharospasm of one or both lids is common, also hysterical ptosis, and all yield to psychic treatment.

Janet wisely suggests that what is contracted is the field of consciousness generally, though capriciously; hence, mentally, we get loss of memory and words, and sensorily, local anæsthesias.

Visually we get a contracted field, and then similarly we get the auditory, olfactory, and gustatory fields narrowed and loss of hearing, smell, and taste. Taste may be perverted instead of lost, and smell may be lost in one nostril or both.

Hearing may also be perverted, and tinnitus is common.

The visual symptoms are similar in their nature and varying degree to those of anæsthesia, as the following experiments show. In the amaurotic hysteric eye, when conscious vision is lost, unconscious vision is proved by Flee's box, which, like a stereoscope, is placed before the eyes, and is so constructed that the left eye sees the right image and the right eye the left. In this case, if the right eye be blind, the patient will declare he sees the left image, which in this instrument, though believed to be seen by the left eye, is really seen by the right.

Another plan is by a pair of spectacles with green glass over right eye and red over left. Six

large letters printed in white on black ground are placed in front, A, C, and E being covered with green glass, and B, D, and F with red. Now green and red make black, and three letters only can be seen by right eye—A, C, and E ; and three only by left—B, D, and F, so that if one eye be blind only three letters can possibly be seen. Nevertheless, the hysteric patient, thinking it possible, will declare she sees the six letters with the one eye. Here, then, is apparent without real fraud, that can only be explained by the action of the unconscious mind. Binet declares that when an hysteric is looking at letters too far off to be seen even by a sound eye, the anæsthetic hand can be seen to trace those letters the eye cannot (consciously) see.

Professor Sidis confirms this, and has seen the hand write "Margie" for "Mary," thus showing conscious effort and purpose.

Binet is a careful observer, and therefore I think this phenomenon worth recording. Professor Sidis has conducted many similar experiments with the anæsthetic hand and the amaurotic eye, and claims to have established in these hysterical cases unconscious feeling, memory, purpose, and judgment.

8. *Nervous Symptoms.*—It must be remembered here that loss of control is characteristic of hysteria, and this leads in the lower centres to

excess of action, and often in the higher to paralysis of action, such as aphasia, paralysis, &c. Fits may be severe or slight. They occur in about half of all hysterical patients. In hysterical fits there is complete loss of self-control, but only partial loss of consciousness. In hysterical fits the movements are not meaningless, purposeless spasms, but purposive convulsive acts. The patient does not hurt herself in falling, nor is the tongue bitten, or urine passed involuntarily, as in epileptic seizures.

The aura is generally from the ovarian region, solar plexus, globus, or clavus.

In mild seizures there is generally globus and incontrollable convulsive laughter and tears (emotional crises).

Hysterical fits are often followed by trances or cataleptic conditions of plastic rigidity, which may last for hours or weeks. There is sometimes somnambulism and dual consciousness. It may be remarked here with regard to the psychical cause which really underlies all the physical symptoms of hysteria that, while it is readily conceded in all physical and nervous affections of the head (headache, insomnia, &c.), it is not with regard to affections of the rest of the body—paralysis, dyspepsia, and the like, where, however, it is just as real.

Catalepsy, which I have alluded to, is a variety

of hysteria characterised specially by loss of power with attacks of peculiar plastic rigidity (flexibilitas cerea), during which the limbs can be moulded into almost any attitude. The consciousness is often in abeyance.

The attacks are in paroxysms, and in the intervals there are ordinary hysterical symptoms, or in some cases these may be absent and the patient appear well. It occurs in the nervously exhausted, and an emotional crisis or shock or blow may bring it on.

In profound catalepsy all consciousness is lost and all sensation. The respiration is slow and the heart weak. Catalepsy with profound melancholy in the intervals is known as katatonia, and comes in the catalogue of mental diseases. The rigidity in catalepsy is not fixed, as in tetany and the tonic spasm of an ordinary hysterical fit.

The outlook is favourable if the condition is good between the attacks. The attack can be shortened by persistently placing the limbs in extremely fatiguing though not painful positions. Emetics such as apomorphine act as powerful alteratives, and may prevent an impending attack. Firm moral and mental treatment is, of course, of the greatest value, and once the patient recognises she is in strong, capable, and trustworthy hands, her unconscious mind is soon reached, and improvement quickly ensues.

CHAPTER VI

PSYCHICAL SYMPTOMS OF HYSTERIA

IT may be well supposed that in the last chapter the numerous symptoms of hysteria given well-nigh exhausted the subject. The psychical side of hysteria and its symptoms, however, are themselves of sufficient importance to form the subject of another chapter, and we will briefly consider them here.

In all functional nerve diseases it is of great importance to analyse and clearly distinguish the physical from the mental symptoms, though in hysteria it is becoming increasingly clear to students of the disease that the origin of both is the same—the unconscious mind, or that force which in health co-ordinates, controls, and regulates all somatic activities, and is even engaged in keeping the body in health, and hence is called by many the *vis medicatrix naturæ*. In this disease alone this power is lessened, lost, or is even active in a destructive direction; so reversing its normal functions, in fact, as to justify what I

have alluded to in the last chapter and fully set forth elsewhere, that "a person whose conscious mind is unsound is suffering from madness, while one whose unconscious mind alone has gone astray suffers from hysteria," and the distinction is good.[1] The symptoms of hysteria bear, one and all, a marked (unconscious) psychic impression. The body no doubt plays some part, and it must ever be remembered that, as even psychic symptoms can spring directly from mind or indirectly from the body, so physical symptoms may have a somatic or mental origin; for instance, a congested liver and mental trouble can both produce depression; and on the other hand, an idea or a ruptured bloodvessel can both produce hemiplegia. Dr. Mitchell Clarke's definition of hysteria is as follows: "A peculiar state of disturbance of the central nervous system, affecting primarily and most profoundly the highest cerebral centres."[2] The chief fault of this definition is that it is far too broad, and would equally include almost any form of mania and insanity.

Dr. Clifford Allbutt, in accordance with what I have advanced, says: "Hysteria would be a sort of insanity, but to classify hysterical patients with the insane would be an obvious clinical error"

[1] See "The Management of a Nerve Patient" (Schofield), p. 21. (Churchill.)

[2] Dr. M. Clarke, "Hysteria and Neurasthenia," p. 5.

(only he does not say why). Janet looks on hysteria as an action of the subconscious state, with a limitation of the conscious psychic field as in vision; but Allbutt cannot accept this because so little is known of the subconscious condition, and because vascular, vasomotor, and nutritive phenomena common in hysteria lie outside the functions of the higher cerebral centres. This is true as to consciousness, but they are all under the central control of the unconscious mind. Professor Dubois (Berne) says that hysteria is a disease of the superior (conscious) ego, which is weak, and also that psychoses are the true bases of all neuroses; but with neither of these statements can I agree, for though, as I shall show, the conscious ego is disturbed in hysteria, it is not the source of the disease, and psychoses are as often based on neuroses as *vice versâ*.

There is no doubt that in hysteria, psychically as well as physically, the field of consciousness is limited, and limited in a most erratic manner.

But there is also some distinct mental (conscious) aberration. There is no special deceit or lying, but often general instability of moral character. If there be deceit or lying, it is as an accompanying symptom and not as the foundation of the disease; in short, it is an effect and not the cause. There is often loss of control of emotions, temper, will, &c. There

is a loss of mental perspective and the relative size of facts. There is at times a change of character, hysteria tending to make men feminine and women masculine. There is at times marked double consciousness. These and other bizarre intellectual phenomena give the idea of simulation and fraud, while all the time the patient may be trying bravely to overcome the disease.

No hysterical insanity (properly so called) is known.

When we turn to the emotional side of hysteria, we reach the most disturbed part of the mental field.

It may be well to consider for a moment of what emotion really consists, and whether its origin is psychical or physical. Professor Dubois (Berne) says that all emotion is psychical and not physical, intellectual and not somatic.

Professor W. James, however, says that emotion is a resultant of motor, vasomotor, and glandular changes; Lange that emotion is a vasomotor reaction provoked directly by a stimulus. Lange and James say that if a mother weeps for her son the steps are not (1) the idea, (2) the emotion from it, and (3) the result (tears, &c.); but (1) the idea, (2) the result, and (3) the emotion, which is the vague consciousness of the vascular and physical

phenomena! They say that one mental state does not produce another—there is a physical change interposed. We don't weep *because* we are sorry, but we are sorry because we weep.

Wundt, Irons, Lehman, Dubois, and others, however, oppose these ideas.

I give the above to show that even with clear thinkers the emotional source is at least debatable, but I myself fully go with Wundt. If it be the blush that makes us ashamed, and not shame that makes us blush, why do we not feel shame with amyl nitrite, when we blush furiously; or, with regard to tears, why is there no grief when peeling onions, when we weep profusely?

Man is so made that he has mental feelings (emotions) as well as ideas; but how the one produces the other we do not know: probably by some faculty akin to apperception.

No doubt physical signs and emotion go together; but emotion is not absent because there are no signs, but the signs are always absent when there is no emotion. Signs are not the cause but the effect of emotion; *post hoc* is *propter hoc* in this case. No doubt when the psychic cause has produced physical effects these may react and intensify the emotion. Experience, however, shows on the other hand

that they often lessen it! It must be remembered that the idea causing emotion may be wholly unconscious.

In hysterical patients the connection between the idea and emotion is often not logical, and emotions are constantly set loose and exaggerated, with all their physical accompaniments, on little or no provocation.

Hysteria may, indeed, be described from one point of view as an instable condition of the emotional, vasomotor, and sympathetic reflexes.

From the above argument it is clear that emotion is here regarded as a mental phenomenon and not as the resultant of any physical causes.

Speaking generally, the psychic symptoms of hysteria have altered for the better by the evolution of the race, and are not now so pronounced or wild as in the Middle Ages.

In hysteria the symptoms, being obviously under psychic influence, clearly point to some mental disturbance; and yet they are anomalous, capricious, paroxysmal, contradictory, unnatural, and imitative in a marked degree. They are imitative, not only in closely following the symptoms of some definite disease, but in being arranged rather according to the popular ideas of that disease than according to the scientific facts: as, for example, in paralysis for special

movements, while full capacity for other movements is retained by the same muscles. All the time the conscious mind is clear and reasonable, and the only possible explanation therefore is that it is the unconscious mind that is diseased and is the cause of the symptoms. In men, as a rule, the symptoms are not so well marked, nor does the disease persist so long as in women, the check imposed by reason over emotion being stronger in the former than in the latter. In England I think that hysteria is generally decreasing, while neurasthenia is increasing. Certainly nowhere can we now find such statistics as Briquet's, who computed that one-quarter of all hospital patients (in France) were hysterical!

Neuromimesis, or the mimicry of disease, is the last psychic phenomenon I shall speak of. It is dependent upon the fact that autosuggestion is really pathognomonic of hysteria. Suggestibility is by far the most marked of the stigmata of functional neuroses, and in hysteria there appears a special response to suggestion, and also to autosuggestion (especially if this be of a bad nature). Apperception, too, is a faculty largely developed in hysteria, and being partly released from rational control, leads the mind unconsciously with great rapidity to carry out any thought, so that a suggested idea is

reproduced on the physical plane in a manner quite incredible to those who have not witnessed it. The tendency to any such sequence in the non-hysterical is at once inhibited by the higher conscious rational centres. Take, for example, the well-known instance of a piece of gummed stamp-paper placed, with the suggestion that it will form a blister, on the foreheads of two persons, one an advanced hysteric, the other a normal individual. In the former case the suggestion is greedily assimilated, and by apperception a quick, but unconscious, chain of thought acts on the physique and produces a blister with all its features. In the latter case the same suggestion, though equally understood, fails to establish this chain, being at once inhibited by the intellect. There is no doubt that a critical reasoning faculty is the greatest prophylactic against hysteria.

Neuromimesis may simulate any disease, but as a rule is most common in spinal and joint diseases, in tumours of all sorts, and in affections of the special senses of speech and of locomotion.

It must be understood that real diseases are produced frequently by the mind, but such are not included under the term "neuromimesis," which is here taken as a symptom of hysteria. What is puzzling is that in some cases there

is a real substratum with an added mimicry. For instance, ordinary symptoms of fatigue, pain, dyspepsia, &c., are often unconsciously overlaid with mimetic symptoms of an exaggerated character. It must be remembered as to fatigue that in nerve cases the strength really is generally under rather than over taxed. Hysteria may simulate its own stigmata; or, on the other hand, it may simulate neurasthenia, and have all its signs, with the absence of its own stigmata. The inexperienced mind may well be excused for saying that in such cases such a disease is to all intents and purposes neurasthenia, and not hysteria; but there may still be conclusive reasons for putting it in the latter class.

I will now give very briefly one or two instances of how suggestion works in these neuromimetic cases.

Many arise by suggestion through accident.

A lady saw a heavy dish fall on her child's hand, cutting off three of the fingers. She felt great pain in her hand, and on examination the corresponding three fingers were swollen and inflamed. In twenty-four hours incisions were made and pus evacuated.

Dr. Diaz, in the *Medical and Surgical Journal*, speaks of a lady patient whose lips and mouth were suddenly enormously swollen from

seeing a young child pass a sharp knife between its lips.

Dr. de Fleury [1] tells us of "a girl who dreams she is pursued by a man, and falls into a ditch and breaks her legs. Next morning she wakes bruised, and declares her legs are broken. It is not so, but her legs are paralysed (by this dream) for six months." De Fleury tells us of another girl who, dreaming she was outraged, was full of local bruises and ecchymoses next day. He says dreams can create physical impressions by momentary paralysis of the vasomotor mechanism. Whipple [2] tells us of a man of thirty-five with a dull pain above his ankle for twelve years, with swelling at times, and always worse in a train. This was caused by seeing a man crushed to death in a train.

A gentleman known to me, seeing a friend with stricture of the gullet, soon experienced an increasing difficulty in swallowing, which ultimately was a cause of death. No organic cause was found.

In the *Lancet* for January, 1880, we read that a gentleman (fifty-six) thought he had swallowed his false teeth. He felt them in the pharynx. There was a hard swelling behind the larynx,

[1] De Fleury, "Medicine and Mind," p. 9.
[2] Whipple, "Mental Healing."

and a surgeon was telegraphed for. The symptoms were most distressing and real, until the missing teeth were found in a drawer.

Whipple tells us of a young woman with a constant cough, from the idea she had sand in her windpipe. Once she had been nearly drowned in bathing, and swallowed some water and sand, which she had thought of ever since. In the London Hospital many cases of hysterical abdominal tumours (supposed to be aortic aneurisms) have been sent in for operation, caused solely by the observed pulsations of the abdominal aorta seen in thin people, and so acting on their unconscious minds that the abdominal muscles were actually contracted on one side to simulate a tumour, which disappeared temporarily under chloroform. A girl of ten was struck on the left shoulder by a baby with a stick. There was no mark, and the girl would have forgotten it in a few hours, but a doctor saw it and said: "That blow and pain are serious. It is traumatic neuritis. I had rather the girl had broken both arms." The pain lasted for four years and extended to the back and right arm (entirely by suggestion).

It will be observed here, and has been noticed already, that the unfortunate word "hysteria," which I intentionally use to include "neuro-

mimesis," actually covers a good deal more than the mimicry of disease. In a good many instances given here we find the mind producing not so much mimicries of disease and death as actual lesions and death itself. That is to say, the power of the mind over the body goes far beyond the mere production of mimicries, however perfect these may be in their way. In these we admit there is no real local lesion, but only the unconscious simulation of it. But when we find examples of inflamed fingers with evacuation of pus, of bruises and ecchymoses, actual death, hæmatemesis, and gangrene, we feel the word "neuromimesis" has become well-nigh as elastic as "hysteria" itself. And yet it would hardly do to put these into a separate class. They are but extreme and somewhat rare examples of the power of the mind over the body, and the generic term "hysteria" must at present cover them all.

I may insert here one or two words respecting traumatic hysteria. The symptoms in this may be purely psychical and none the less real and lasting. A woman thought she was struck by lightning (a mile away) and was paralysed, anæsthetic, and had hysterical fits.

In traumatic hysteria the following special points may be noted:

1. The patient tends to recover.

2. In these cases early treatment undoubtedly means quicker recovery.

3. As a rule some get quite well, no symptoms being left, but more only partially, some symptoms generally persisting.

4. The time of recovery varies with nature of case, surroundings, treatment, amount and result of litigation (in railway cases, &c.).

5. No improvement is seen while the case is being tried. (This does not postulate "fraud.")

6. The longer it lasts the more fixed it becomes by habit and the more difficult to cure.

7. Stigmata may disappear after years.

8. Cases with bad mental symptoms are the worst and last to recover.

9. Litigation prolongs the disease by suggestion and autosuggestion.

Before closing the chapter, perhaps it may be well briefly to summarise the leading symptoms of hysteria in one list. Hysteria (using the term broadly) is characterised by anæsthesias in all parts of the body, in regions, patches, sides, and limbs; by visual anæsthesias resulting in narrowed fields of vision; by fits or paroxysms, with or without incomplete loss of consciousness and accompanied by clonic and occasionally tonic spasms, tremors, convulsive movements, and large contortions, sometimes of extreme violence,

with or without cries, foaming at the mouth, clenching of hands, and other emotional signs; by dysæsthesias or pains in any joint in the body, often in several—in zones or patches, in the head, the back, the heart, the abdomen, the coccyx, the breast, the mucous membrane, the organs of special sense, the limbs and the organs of generation; by paresis and paralysis of every or any part of the body capable normally of voluntary motion; by contractions and wasting of limbs or parts of limbs; by tremors, continual and intermittent; by mental states—ecstatic, vague, demoniac, talkative, taciturn, &c.; by dermatoses; by Raynaud's disease; by urticaria, hyperæmias of skin and other eruptions; by hæmorrhages from organs and under the skin in all parts of the body; by stigmata; by muscular atrophies (detected in lower limbs by absence of Babinski's sign—extension of big toe on tickling sole); by pyrexias of all sorts; by paraplegia, by hemiplegia, by tetany, by incoordination of muscular movements, by swellings and tumours (perfectly simulated) of all sorts, largely abdominal, fluctuating, solid, or pulsatory according to the variety, and of all sizes; by abnormal gaits of all kinds, by mutism, by stammering, by aphonia, aphasia, amnesia, by coughs, by dyspnœa, by dyspepsias, by gastric spasms and gastralgia, by flatulence, by hæmatemesis, by anorexia, by

vomiting, ordinary and fæcal, by borborygmi, by swollen joints, by dysuria, polyuria, anuria, incontinence, or retention, by floating kidneys; also by more or less elaborate simulation of various diseases, such as hip disease, asthma, Pott's disease, &c.

Surely no other disease exists of such a protean character!

CHAPTER VII

ÆTIOLOGY OF NEURASTHENIA

NEURASTHENIA simply means nerve weakness. The term itself was unknown n England before 1886, though used earlier in America and Germany. Bouchet, in 1857, was the first who really described neurasthenia as a distinct entity. This disease, in common with other functional nerve troubles, has been somewhat in the condition of Noah's dove, at least as described by Dr. Watts, for it has long "flitted" between the "rough seas" of suspicion and the "stormy skies" of contempt, seeking in vain a resting-place as a legitimate disease. It was neither clearly physical—so the physician would have none of it, nor truly mental —so it was looked on with suspicion by the alienist, and it was long in a parlous state. Indeed, were it not for the genius of our medical colleagues in France and the United States in the investigation and recognition of hysteria and neurasthenia, neither would have its present

place in medicine, and it is doubtful if the latter would be yet recognised as a disease. Now, however, I am glad to say the claims of functional nerve disorders to full recognition as genuine and distinct diseases are widely recognised; and probably the only survival of the dark ages, now gone for ever, is in the apologetic way in which many of these patients still enter the doctor's consulting-room.

The causes of neurasthenia are innumerable; but the chief predisposing cause is a weak nervous system through heredity or want of nutrition, while the chief exciting cause is overstrain of some sort.

Many cases of neurasthenia are put down to over-education, though it is clear that development of the nervous system makes for increased control. But we must remember that in the education of the child the true chronological order should be the body first and the brain after, and neglect of this is a large factor in disease. It is found by Dr. Allbutt that neurasthenics are, after all, not more common in New York than in London, or among the busy than the idle. The disease abounds in such places as Finland and the Yorkshire collieries. It is common amongst factory hands in Yorkshire and amongst working men in the States. It is more common in the single than in the married.

Karl Petrén, of Upsala, in the *Deutsche Zeitschrift für Nervenheilkunde*, Bd. xvii., reports the results obtained in a recent investigation upon the frequency of neurasthenia in the various grades of society. Contrary to usual statements, he does not find a larger number of cases in the upper than the lower classes. Out of some 2,478 patients observed between 1895 and 1899, he met with 285 (11·5 per cent.) cases of definite neurasthenia. These he resolves into three groups: (1) artisans and peasants; (2) tradespeople and under-officials; (3) intellectuals.

Von Hössling's table of the relative frequency of neurasthenia in different occupations is as follows: Working men, ·05; clergy, 1; doctors, 2; gentlemen, 2; artists, 3; officers, 4; students, 6; professors, 7; clerks, 13; merchants and manufacturers, 20.

In further division as to sex, in Sweden males are easily first with (1) 14·8 per cent.; (2) 13·2 per cent.; (3) 13·3 per cent. As regards women the numbers are (1) 11·4 per cent.; (2) 6·6 per cent., and (3) 6·6 per cent. In Sweden it therefore now appears that neurasthenia is more prevalent amongst the working classes. Petrén thinks that as previous writers have drawn their statistics on the one hand from the higher classes, and on the other from clinics, the

results disagree, because many neurasthenics do not come under hospital treatment, while those of the former status readily consult their doctors. That the disease is not primarily dependent upon the rush of modern life seems apparent from the fact that the greater number of cases come from the provincial parts of Sweden, where life is very simple and tranquil. As regards causation, 62 cases have followed family disappointments, 24 financial difficulties, and 47 overwork. Twenty-nine cases occurred after influenza, 21 acknowledged venery or masturbation, and in 16 females it complicated pregnancy and the puerperium; 8 were directly traced to alcoholic excesses, and 2 were produced by high temperatures experienced during their avocation. A prominent factor is that of hereditary alcoholism. In the early days of the last century large quantities of spirits, &c., were almost universally consumed, and even where the alcoholic tendency is not directly apparent, its influence is still felt in the nervous equilibrium of the present generation. Several cases are reported in which cerebral arteriosclerosis was present. Hygienic conditions also contribute to the increase among the lower classes; lack of proper nourishment, insanitary dwellings, and monotony of existence are amongst some of the causes that need attention in order to prevent its further extension.

Neurasthenia often arises in men from sexual excesses, in women more commonly from the strain of sexual life in child-bearing, &c. Herman[1] points out that "the protean symptoms of Bennet, Tilt, and Graily Hewett, described by them as being of a reflex nature from minor diseases of the uterine organs, really arise from the mind. It is not that a cervical erosion hurts the nervous system, but that a weak nervous system draws attention to the cervix, or rather to the resulting leucorrhœa. Nervous women as a class resist pain badly and feel it most acutely. Still, though mental in origin, these protean (really neurasthenic) symptoms are benefited by local treatment. Diseases of the womb may aggravate neurasthenia, but seldom cause it *per se*."

In the eighteenth century neurasthenia figured as the "vapours," and was attributed almost exclusively to suppressed sexual passions.

Neurasthenic weakness is accompanied by so many physical signs that it is persistently thought to be of physical origin. A gynæcologist, as we have seen, attributed it to the sexual organs, a stomach specialist to dyspepsia, a general physician to gout, rheumatism, cholæmia, &c. Dr. Golding Bird gives oxaluria as the cause of most neurasthenic symptoms.

[1] G. Herman, "Diseases of Women," p. 11.

There is no doubt that abdominal troubles of various sorts are common accompaniments of neurasthenia, and at times an exciting cause. It is true that gastric dilatation, for instance, strongly predisposes to autosepsis, and autosepsis is a common cause of neurasthenia. It is also certain that cases of neurasthenia are much more severe where there is a uric acid diathesis. The uric acid diathesis is hard to prove. There may be a deposit of free uric acid from the urine and yet there may be no excessive formation, but there are still some who think this is the sole cause of neurasthenia. All sorts of poisons (as we have seen in General Ætiology, Chapter III.) may cause neurasthenia. Pre-eminent among them, and becoming increasingly a sufficient cause for producing severe neurasthenia, is the deadly poison of influenza, the results of which are so often appalling and may last for years. A little suspected cause from which it sometimes arises is excess in physical contests. Under certain circumstances, as in cycle races, foot races, boat races, this alone is a sufficient cause.

These various exciting causes, with many others I shall name, whether connected with poisons, malnutrition, fatigue, or the emotions, all act by producing exhaustion of the nerve centres themselves. Neurasthenia has been

arbitrarily classified into primary, hysteric, acquired, climacteric, traumatic, angiopathic, gravis, and other varieties; but such a list might be extended indefinitely and has no value. It is, however, useful and convenient to divide it into cerebral and spinal, and of the two we may say that in cerebral neurasthenia psychic symptoms are the more predominant, whereas in spinal neurasthenia it is the physical.

The cortical nerve cells appear most easily fatigued, then the spinal nerve cells, and then the nerves themselves.

There is direct evidence of fatigue in nerve cells, for under the microscope the nucleus in cells that have been very much used appears irregular and jagged and stains deeply, while the cell body is smaller and stains lightly.

Continuing our list of direct exciting causes, neurasthenia may be produced by overwork of the special sensory apparatus, as a prolonged use of the eyes or ears, &c. It may be caused by over-use of the emotions, as in love, ambition, competition, religion, fear, anger, shock, &c. Sudden shock, as in railway injuries, may cause neurasthenia as severe as from long strain from overwork or years of sick-nursing.

Neurasthenia may also, as I have said, be caused by exhaustion of motor centres, as in physical overwork, as in the sweated industries,

in excessive work in mines, factories, dock-yards, &c.

Although neurasthenia may be found in nearly every brainworker's household, it is seldom the outcome of ordinary work pure and simple. It is the care and anxiety or worry added to the hard work that most readily produce it. Clever people get it by real overwork, and stupid people by trying to compete in brain work with the clever—as, for example, clerks when suddenly advanced to places of great responsibility. It has been observed that neurasthenics are more common in colleges and hysterics in schools; the cause probably being that at the school age—puberty—the mind (unconscious) is more likely to be unbalanced and erratic, whereas in colleges, where there is more hard work, it is likely to be overstrained. Of course the neurasthenia may be so strongly hereditary that it is really due to the latent primary mental causes made active by some very slight cause, such as change of work, or disappointment, or slight illness, and not to mental causes produced by physical strain. There is in such cases a radical weakness of the mental system, with great deficiency in resisting power.

We may sum up the leading exciting causes of neurasthenia thus:

1. Poisons—from influenza, dyspepsia, enteritis,

bad teeth, alcohol, drugs, zymotic and other diseases.

2. Malnutrition—from deficient food, wasting, anorexia, &c.

3. Fatigue—from overwork, worry, insomnia, pain, sexual excesses, strain, &c.

4. Emotional strain—from shock, grief, accident, religion, &c.

5. Reflex—from enteroptosis, floating kidney, eye-strain, bad environment, suggestion, cardiac weakness, &c.

The principal and general predisposing cause is undoubtedly heredity.

CHAPTER VIII

SYMPTOMS OF NEURASTHENIA

NEURASTHENIA is essentially a disease of modern civilisation and mainly of the nineteenth and twentieth centuries; and in this lies one of its great distinctions from hysteria as well as from all structural nerve diseases, which are of great antiquity. Neurasthenia is a clinical conception and not a pathological product, and consists in a collection of symptoms, mostly subjective, of which nervous debility itself is perhaps the chief.

There is no doubt that collecting associated groups of symptoms and then forming them into a single entity or disease, such as neurasthenia, influenza, &c., saves much time and study. It must be remembered that in neurasthenia the symptoms are far more subjective and less obvious than in hysteria, and are mainly of a nervous character. Dr. Beard, who may be called the father of neurasthenia, and who wrote the first systematic treatise on it, in 1868, says that

it is the most common, the most interesting, and the most neglected nervous disease of modern times, and has long been the Central Africa of medicine. He says the best cases are never found in hospitals, and in giving the following general list of symptoms says that many of them cannot be seen in a brief consultation, but only after prolonged observation. The list includes tender scalp, especially over left eyebrow, dilated pupils, sick headache and other head pains, pressure and heaviness in head, lightness of head, congested conjunctivæ (like conjunctivitis), disorders of special senses (asthenopia, muscæ volitantes, noises in ears, subjective odours and tastes), atony of voice, loss of mental control, wandering of mind, irritability, hopelessness (often more marked than in structural nerve disease), morbid fears (topophobia—a general term, agoraphobia, claustrophobia, anthropophobia, monophobia, pathophobia, pantaphobia, mysophobia — fear of contagion), blushing, sweating, insomnia, drowsiness, tenderness of teeth and gums, dyspepsia, flatulence, loud rumblings, hand-sweating, salivation, dryness of mouth, tenderness of spine, coccygodynia, pains about body, heaviness of limbs, shooting pains, pains in feet, palpitation, local spasms and tremors, convulsive movements, cramps, neuralgias, sensations of cold, shivering, numbness,

hyperæsthesia, itching, flushings, temporary paralyses, sudden exhaustion, seminal emissions, urinary oxalates and phosphates, yawning, and rapid decay of teeth.

Dr. Savill gives as a definition of neurasthenia irritable weakness of the entire nervous system, characterised by hypersensitiveness of the central sensorium, and (in the cerebral form) also by headache, inaptitude for mental work, disturbed sleep, and irritability of temper; and (in the spinal form) by general weakness, vague pains, restlessness, nervousness, and usually accompanied in both forms by various vasomotor and sympathetic phenomena.

Charcot gives as neurasthenic stigmata pains in head, vertigo, depression, inability for mental work, insomnia, irritability, tremors, pain in back, palpitation, dyspepsia, and sexual weakness.

Personally I have observed that neurasthenics average about thirty years of age, and are pale, wasted, have headaches, disturbed sleep rather than insomnia, dyspepsia, vague fears and fears of losing reason, flushings, pains at heart, pain at base of spine, frequent pulse, lessened sexual power, restlessness, irritability, timidity, defective memory, inaptitude for mental work, vertigo, excess of urine, and neuralgias of all sorts. Of course, with such an enormous range of symptoms the danger is to lose sight of the

disease altogether, to miss the wood in looking at the trees. Thus, as we have seen in hysteria, a nervous patient is often treated for her various symptoms. The gynæcologist notices ulcerated cervix, versions, &c., and treats them as the disease. The physician analyses the condition of the stomach, and notices dilatation, uric acid, &c., and treats this, and so on; and all the time the neurasthenia is unrelieved. I shall have something to say about this common error when we come to diagnosis. The most recent sketch of hereditary neurasthenia is graphic. Dr. Carr depicts[1] the hollow back and protuberant, sagging abdomen, with a tendency to laxness of all the abdominal viscera, the mobile heart that shifts its apex several inches when its owner lies on the same side, the vasomotor instability, and the general appearance of "one born to trouble."

Neurasthenia is of many varieties. It has been classified according to ætiology, including toxæmia, malnutrition, fatigue, and emotional and reflex causes; also according to symptoms—*e.g.*, general or cerebro-spinal neurasthenia—cerebral, spinal, cardiac, gastro-intestinal, sexual.

The first or general is most common, and in it the symptoms are half psychic and half physical. In the second they are mainly psychic, and in

[1] *British Medical Journal*, July 10, 1907.

the third principally physical. Traumatic neurasthenia constitutes a distinct variety. It must be remembered that spinal and cerebral irritation are not separate diseases from neurasthenia, but simply initial stages. Neurasthenics, again, have been classified in psychical "types." There is the depressed type, who hardly speaks; the happy variety, who cheerfully describes the most alarming symptoms; the debilitated, who sits limp and weak; and the fussy, or Charcot's *homme au petits papiers*, who has all written down, and insists on reading it out to the long-suffering physician.

Some come for advice when the neurasthenia is only incipient. They have only attacks of nervousness—sudden feelings of melancholy, sinking, faintness from epigastrium or heart, vague fears, dizziness, throbbing, flushing, perspiration, and weakness. These correspond in neurasthenia with hysteria minor.

In all these varieties it is well to proceed with the examination of the patient in the same definite order. The following is suggested:

1. What is complained of.
2. History and family history.
3. Muscular system (walking, weakness, tremors, spasms, atrophy).
4. Reflexes—deep, superficial, and organic.
5. Cerebral and mental symptoms.
6. Cutaneous sensibility and pains.

7. Special senses.
8. General trophic condition and weight.
9. Electric reactions.

If there be not time for all, 4, 6, and 9 may be omitted. Traumatic neurasthenia seems often a combination of neurasthenia with hysteria. Hysteria with neurasthenic symptoms is also common. The patients often look well and are thought to be impostors. Symptoms are at their worst four to eight weeks after the accidents. Among these we notice paraplegia, monoplegia, pains in head, limbs, and spine, pins and needles, numbness and anæsthesia, cold and shivering, buzzing noises in head, dull pain in eye, asthenopia, colour flashes, and other special sense phenomena.

I must now without further delay briefly review under their various heads the principal of the protean symptoms I have enumerated.

1. *General Nutrition.*—It has been said that nervousness is really nervelessness; but this attempted epigram itself requires explanation, for nervelessness does not mean absence of nerves, but loss of nerve power. This loss of nerve power is in most cases of neurasthenia due to the impoverished physical condition, for which the associated dyspepsia is mainly responsible.

Of course, it may be said that physical weak-

ness, however great, does not weaken the mind, and is not unfrequently associated with well-preserved nervous energy. Thinness and weakness do not prove the presence of neurasthenia, but stoutness and strength certainly prove the absence of any concurrent debility.

But whether the patient be fat or thin, undue fatigue is one of the true stigmata of neurasthenia.

Of course, fatigue may be physical, mental, or emotional, and the lassitude, weakness, headache, &c., in neurasthenia must never be supposed to be entirely or even generally the result of overwork.

In most fatigue of neurasthenia there is a varying nucleus of true fatigue, surrounded with a mass of autosuggested fatigue as an accretion. Suggested fatigue is not pretended fatigue, but the fatigue of disease, with a psychic and physical substratum in the brain.

It is almost always possible by careful clinical examination to separate the real fatigue from the autosuggested.

When the fatigue is associated with malnutrition of a serious character (such as two to four stones under normal weight) it is generally only one of many other gastric, cardiac, and cerebral symptoms. If we compare health to a full stream and malnutrition to one nearly

dry, the fatigue would represent the feeble stream creeping between the rocks at the bed of the channel, while the rocks themselves would represent the underlying troubles of heart, stomach, brain, &c. When the stream is filled up the fatigue, of course, absolutely goes, for the water flows freely over the rocks; but the other troubles—the dyspepsia, &c.—may still be there, only they are so hidden by the strong health as to give no trouble till the stream runs low again, when it will be found the rocks will all re-appear.

2. *Gastric and Intestinal Symptoms.*—These are found in about 90 per cent. of all cases of neurasthenia. Neurasthenic dyspepsia may arise from—

1. Gastric atony (cases of malnutrition, &c.).
2. Deficient HCl (hypochlorhydria).
3. Excess HCl (hyperchlorhydria).

Intestinal neuroses may arise from—

1. Enteroptosis (common).
2. Mucous colitis (not very common).
3. Irregular bowels.

Atony of the stomach and bowels is the true neurasthenic state of these organs, and corresponds to the tired and weak feelings in the limbs (amyasthenia).

Gastric atony is the most frequent symptom of neurasthenia. It is a grave error to regard

neurasthenia as an effect of gastric atony through the absorption of dyspeptic toxins. The reasoning is unsound and puts effect for cause. Gastric atony is generally accompanied with deficiency of gastric juice, leading to constipation, &c. If this be treated with a course of mineral waters, there is great danger of gastric distension (which accompanies atony) passing into true dilatation.

True atony is found in drunkards, great eaters, too quick eaters, and in all overloaded stomachs. In true atony catarrh of the stomach is the leading feature and the cause is easily ascertained. In nervous atony catarrh is often absent and the eating is little and slow.

Nervous atony may extend through the whole gastro-intestinal canal, or be found in the intestines only with a normal stomach.

Nervous atony is probably due to an irritation of the nerves of stomach and bowels and to a neuro-muscular paresis. It produces eructations when fasting, swelling after food, so that the sufferer has to undo the clothes, but not vomiting except in hysteria. In nervous dyspepsia we have cases of complete suppression of gastric juice and the passing of undigested food into the bowel, and still the general condition may be good. Acid risings often show the commencement of dilatation.

Gastric neurasthenia may not be due to

general neurasthenia, but to other debilitating causes—phthisical, albuminous, cardiac, &c.

Nervous anorexia is often due to direct mental causes, and may have no physical basis. In neurasthenia of the bowels only the actions are irregular, with colic, tenesmus, and mucus; and the condition is never relieved till the neurasthenia is recognised and cured. There may be membranous colitis, but it is not common.

After a motion the bowels recover for a time, and the patient feels quite well. This is pathognomonic of nervous diarrhœa and the "nervous rectum." In true intestinal catarrh the patient feels always ill and weak and the face is drawn and characteristic, while in nervous enteritis the patient is often flourishing. We also get with neurasthenia, enteroptosis, gastroptosis, nephroptosis (floating kidney), prolapsed uterus, and bladder, &c.

It must be noted that these gastro-intestinal symptoms often occupy the patient's entire mind, and unless the physician be careful he is often liable to overlook the true cause—the underlying neurasthenia.

3. *Sexual and Kidney Symptoms.*—In a list of 360 private cases I recently analysed[1] I find that I had 20·5 per cent. cases of

[1] Schofield: "The Management of a Nerve Patient' (Churchills), p. 106.

sexual neurasthenia amongst men compared with 3 per cent. amongst women. However prominent sexual troubles may be as a cause in hysteria, it is certain that in neurasthenia they are only of importance amongst men. Here it generally takes the form of debility (real or supposed), arising from past or present masturbation. Men are exceedingly nervous in these matters, partly on account of the bad literature on the subject, and partly from fear of impotence, which is a far greater dread to them than sterility is to women. Impotence is not uncommon in neurasthenia, but is as a rule curable. The fear of impotence is, however, as ten to one compared with the fact.

Another bugbear is real or supposed seminal losses. I say "supposed" because there is often a sticky secretion from the prostate observed at the end of micturition or defæcation, which is slightly exhausting but is not semen and contains no spermatozoa.

Amongst women self-abuse must ever be borne in mind as a possible cause in neurasthenia; the fact can, however, as a rule only be established with great difficulty.

I need not say that any suggestions of sexual disease or malpractice made to discover symptoms are to be strongly deprecated as fraught with danger in this sister disease to hysteria.

In neurasthenia we get slight glycosuria, profuse polyuria, urates, phosphates, oxalates, &c., which all disappear or are greatly reduced under successful treatment. A healthy man should urinate not more than five or six times a day, but in neurasthenia the times are often doubled. There is often intermittent glycosuria which is very persistent.

One must beware in cases of neurasthenic retention of treating the cause as psychic in a routine way; for it may be due to an anæsthetic bladder (particularly if there be any hysteric element) that does not feel when it is full, and this introduces an element of danger, at any rate in men. One must also beware, once more, of treating any of these sexual or bladder troubles as the disease itself, of which they are but symptoms.

4. *Motor Symptoms.*—There is no doubt that muscular overstrain may produce neurasthenia, nevertheless there are seldom in neurasthenia any special muscular symptoms. The ergographic curves are not specially characteristic, nor the results of the dynamometer; though both, measuring as they do the nerve energy as well as the muscular contraction, are markedly diminished. Indeed, in advanced neurasthenia they may be nil. In neurasthenia tremors and rhythmical spasms are common, and these differ

from those of disseminated sclerosis in being seen when at rest. Severer motor spasms are called "tics," and will be spoken of separately. Reflexes in neurasthenia are much exaggerated. A blow anywhere from mid-thigh to mid-tibia may produce a knee-jerk. We also get in neurasthenia blepharospasm, twitching of eyelids or lid, both clonic and tonic, but no Argyll-Robertson phenomenon or other signs of organic lesions. In the spine we get all sorts of weakness (myelasthenia), slight curvatures, backache, pain with tender spots, coccygodynia, tired legs, limbache, &c.

And now, before passing on to the cerebral and psychic symptoms, I will touch on various scattered sensations, which I will group as—

5. *Local Symptoms.*—Strictly speaking, these are of but two varieties—subjective and objective, pain in places in the body, and fear of places in the environment—topoalgia and topophobia. The former may occur all over the body, rachialgias and occipital patches being especially common according to Charcot. In connection with such patches we often get Mannkopf's sign, which is an increased pulse from steady pressure on the tender part, with sometimes spasms and vomiting. This must not be confounded with the "crisogenic" point of hysteria. Of the phobias I will speak in the next section.

Then we get some sensory weaknesses. There are no definite anæsthesias in neurasthenia, thus contrasting strongly with hysteria.

Ideas of heat are sometimes vague, as shown by test-tubes of definite temperature; but we do not get the absurd contradictions of hysteria. Judgment of weight and power of co-ordination are deficient. Normally a person should detect a difference of one-twelfth between two weights, and also meet the finger-tips of two hands with eyes shut; neither can be done in advanced neurasthenia.

Neurasthenia alone can produce paresis, constriction or dilatation of larynx. Here, again, if the symptom be taken for the disease, local treatment only aggravates the neurasthenia. Neurasthenic laryngitis is generally worse at night.

Heart attacks in neurasthenia consist of pain, or pain and tachycardia (pseudo-angina), or syncope (rare). The second is common and often very distressing, though of no danger if the nutrition be fairly good. Pseudo-angina has none of the gravity of the real disease. We also get a nervous cardiac asthenia.

6. *Cerebral and Mental Symptoms.*—These include hemi-paresis, unilateral head pain, mental fatigue, and slight aberrations of all sorts, phobias, hypochondria, depression and irritation, head-

ache, insomnia, vertigo, &c. The brain alone may be neurasthenic (cerebral neurasthenia), the patient being robust, and active and athletic. Such cases are easily curable if not hereditary.

The mental condition in neurasthenia is generally due to prolonged mental emotion of some sort, and is marked by being definitely worse in the morning and better through the day. In neurasthenic mental conditions one gets rather altered (exaggerated or diminished) reactions than new and abnormal conditions. The great perversions (hysterical) of special sensation, such as hearing from the back and seeing from the elbow, are not found in neurasthenia.

In neurasthenia all the centres of control are weakened in varying degrees. There is always abnormal introspection and always something wrong. There is marked mental exhaustion and absence of will-power (aboulia). There is want of attention, loss of memory, and sometimes slight delusions.

The mental perspective is disturbed or lost. The loss of memory is often the cause of the untruthfulness. The delusions of persecution, of food, &c., may be so severe as to amount to a monomania or slight moral insanity.

Paraphasia and amnesia (especially for names) are varieties of aphasia common in neurasthenia.

There is hypochondria with heaviness, fatigue, inertia, but not any suicidal tendencies.

Other abnormal mental signs found are :

Onomatomania (obsession as to the use of certain words).

Sitromania (inordinate love of food).

Oniomania (abnormal extravagance).

Insomnia is not constant in neurasthenia, though a troublesome symptom when it does occur. One cause that makes it common is its constant association with photophobia and dread of sound.

Nervous vertigo is common, often with tinnitus, but it is not true aural vertigo. The headaches so common in neurasthenia are characterised more by pressure than pain, and feel like a tight helmet (Charcot's " casque neurasthenique ").

It must be always remembered that many neurasthenics live and move in an atmosphere of autosuggestion, and Professor Dubois' (Berne) suggestion that sensation may be created out of nothing by a mental representation, is not only true in hysterics but in neurasthenics. Numbers of nervous people, for instance, have headaches when they see hot pipes or stoves, from having learned that hot air gives off bad gases. Many are perfect fanatics about having the window open at night. In most cases it is entirely due to autosuggestion, and the windows can

be closed after they go to sleep and opened again before they wake without any inconvenience.

Neurasthenics are often depressed if a cloud passes over the sun and causes a sudden shade, because of the association of sunlight with happiness; and yet they are quite happy in natural shade, as of a tree or wall.

Let, however, tyros beware of hastily and rashly assuming autosuggestion in nervous maladies and symptoms. This is often done with most disastrous results. Everything at first should be credited to physical causes; and psychic causes, or autosuggestion, should never be assumed without definite reason.

7. *Symptoms of Fear.* — Although I have alluded to these already under different heads, they form a group large enough to be placed in a class by themselves. Obsessions and phobias of nervous origin must be distinguished from the commencement of true mental disorder. As a rule, though apparently so mental in character, they are truly neurasthenic, and do not generally lead on to mental disease. Obsessions, when not primary intellectual conditions like "fixed ideas," are only morbid fears of an aggravated sort. In 110 such cases of obsession the majority were clearly neurasthenic in origin. Phobias and obsessions are specially common after any sexual

disturbance or exhaustion, also as a result of cerebral fatigue and poisoning of all sorts.

To enumerate the various phobias and obsessions would be to catalogue almost every visible object and every possible condition. Amongst those with which I am familiar are agoraphobia (fear of open spaces), which seems some disorder in the apprehension of space dimensions; claustrophobia (fear of confined, crowded spaces), which is really a fear of being shut in. Extreme examples are a fear of locked railway carriages, of closed windows, of even feeling "choky" at the sight of a corked bottle, and of dreading tight clothing. These two are quite common, and are mingled in various ways under the general name of topophobia (dread of places). One sufferer cannot cross any very wide street, nor, on the other hand, walk along any very narrow one, where the houses are above a certain height, nor visit certain spots in the town (for no special reason). He can, however, do nearly all these things if the streets or places are crowded with people, and can cross a wide market-place if there is a line of trees or fence to walk near, or a cart to follow.

Claustrophobia is much more of a fixed obsession than agoraphobia, the latter often being only realised by the patient when he is half-way across the open space, when he is seized with

a trembling and cannot move a step, and may fall down; while the other is more dreaded before he enters.

Anthropophobia is a dread of people and a love of solitary places.

It must be remembered that phobias and obsessions are seldom quite capricious, but are often the reasoned products of apparent cause and effect, though the premiss, or point of departure, is wrong or exaggerated.

We get a fear of fire, fear of heights, fear of blushing (very common), fear of spots on the face (a perfect nightmare in one case), fear of dirt, with perpetual washing of hands, face, and body from morning to night; fear of water, with absolute refusal to wash; fear of clothes (except gloves and boots), because they get worn out and it is impossible to decide on what to buy; fear of touching handles of doors, or dresses in street, lest one might leave some dirt or infection behind; also the same fears from the opposite reason of receiving some infection; fear of looks (eyes or nose or mouth too big, &c.), fear of criminal assaults, obsession of criminal assaults committed mentally by some unknown person, fear of being watched, followed, poisoned, electrified against one's will, whispered about in every shop, suspected as bad character by every doctor, and so on; fears of disease of every

possible and impossible kind, dread of constipation, fear of dying, fear of hell, and religious obsession of all sorts, fear of having influenced any one wrongly, fear of seeing certain articles in shop windows, haunting dreads that are undefined, fear of flats, of fixed abodes, of lifts, cabs, trains, smells, morbid conscientiousness leading to all sorts of troubles, as replacing every pebble moved out of place in walking up a gravel drive, dread of all strangers, fear of family, dread of water (sea, lake, &c.).

One girl was in mortal terror because she could never see a doll without a dread it would speak; another could never look in a glass lest she should see she had no face; another patient (a man) could not dare to look at a boy's cap or muffler for fear of uncontrollable sexual impulses, and so on.

One might prolong the list for ever and narrate many curious cases, but no good purpose would be served: those I have given are what I have met with.

I have said that, as a rule, these fears and obsessions do not lead to mental disease, but we must ever remember, on the other hand, that neurasthenia, more or less prominent and prolonged, may be occasionally the prodrome of insanity, melancholia, hysteria, general neuritis, inebriety, morphinism, sexual disease, hay fever,

exophthalmic goitre, disseminated sclerosis, diabetes, Bright's disease, organic spinal diseases, and cerebral tumours.

Enough has been said to show the extraordinary, comprehensive and inexhaustible list of symptoms that have been conveniently grouped under the one word "Neurasthenia."

CHAPTER IX

DIAGNOSIS IN FUNCTIONAL NERVE DISEASES

THE diagnosis in functional nerve diseases is exceptionally difficult in two ways: first, in the diagnosis between functional and organic disease; and, secondly, in the diagnosis between functional nerve disease and mental disease.

In neuromimetic hysteria we get diseases often so closely simulated unconsciously in every particular that it seems impossible they should not be organic, and particularly in the case of tumours and paralyses. Sir A. Clark told me long ago that he knew of at least fifty cases of abdominal tumour sent in to his hospital for operation every one of which was neuromimetic and disappeared (temporarily) under chloroform.

And yet with all this likeness there is ever, to careful and prolonged examination and observation, some incongruous point that attracts attention and establishes the diagnosis. Ordinarily the patient seems far too well to be suffering from

the apparent disease, the general nutrition is often too good, and too few signs of suffering are shown. Or there may be signs of emotional hysteria manifested that point to the possible functional character of the disease. Or its history may be connected entirely with nervous causes.

It must, however, be remembered that this last is not a point to be relied on alone; for it is well known that true organic disease may originate from mental or nervous causes only. Indeed, the condition of the nerves may be an exciting or predisposing cause in nearly every species of disease. The course, too, of the disease is different from that of a real organic lesion. In short, it may be laid down as true, at any rate in my experience, that while there are many cases that cannot be pronounced off-hand functional or organic, there are few that do not reveal their true character after a fortnight's close observation. It must be remembered that neurasthenia seldom leads to organic disease.

Another difficulty is with cases on the borderland between nervous and mental disease. It must be remembered that in mental disease we very often get the same symptoms as in functional and organic disease. In both we may have hallucinations, illusions, and delusions; in both we may have depression or exaltation, and in both we may have irrational acts.

And yet here again there is much to guide the careful observer. The main general point that settles the diagnosis in nine-tenths of the doubtful cases is that in the sane there is knowledge of the irrational conditions, in the insane there is not. Light is also thrown here by the history of the case and by other symptoms of nerve trouble which greatly help in the diagnosis. Of course there may be, and one often meets with, a slight mental taint underlying well-marked functional symptoms; so that the disease may be partly mental, though mainly nervous, or *vice versâ*. One important point remains to be noted of a practical nature, and that is that wherever there is any doubt of the disease being mental, never fail to give the patient the benefit of it.

Returning to the diagnosis between functional and organic nerve diseases, the following diseases are among those that have been mistaken for hysteria—disseminated sclerosis (frequently), alcoholic paralysis, locomotor ataxy, injuries to spinal cord, hemiplegia, syringo-myelia, spinal caries, facial paralysis, chorea, exophthalmic goitre.

It must be remembered that in true disseminated sclerosis there is tremor only on intention and effort, there is "scanning" speech and nystagmus, none of which are characteristic of functional disease.

In hysteria we never get optic neuritis or atrophy, total absence of knee-jerk, true nystagmus, or continued ankle clonus, but in true spinal atrophies we do. Unilateral exaggeration of knee-jerk and tendon reflex, or total absence of reflexes, is always organic.

Organic symptoms are fixed, stable, or progressive; functional are capricious and variable.

The general rule is that in all organic spinal diseases the reflexes are lessened, in functional diseases they are increased, but of course there are exceptions.

Babinski's phenomenon is a most valuable diagnostic test, and has been in more than one case of mine the only possible ground for diagnosis. I have not yet been led astray by it. The only trouble is that frequently the sole is so insensitive that no reflex occurs. As is known, it consists in the extension of the big toe on tickling the sole in organic disease, instead of the normal flexion as in functional. This extension is said to depend on disease of the pyramidal tract.

Hysterical paraplegia most resembles disseminated sclerosis. In the former bed sores are very rare, in the latter more common.

In organic hemiplegia you cannot straighten the whole of the affected limb at the same time; in hysterical you can. In organic hemiplegia the

limb is circumducted in walking; in functional it is dragged.

In organic hemiplegia face and tongue are generally affected; not so in functional.

The following short list contains some other organic diseases, in addition to those already given, most likely to be thought hysterical:—Slight epilepsy and meningitis, early stages of brain tumours, cerebellar disease, Friedriech's ataxy, and paraplegia.

Turning from paralyses, our next point is the diagnosis between functional and other organic diseases. Lead poisoning has symptoms strongly resembling hysteria; the distinction is the blue line round the gums in the former.

Pseudo angina pectoris is diagnosed from true angina by its lessened real severity and longer duration with greater agitation, also by a less-marked fear of impending death, and by the aura being less frequent.

Functional tachycardia requires care in diagnosis from organic heart disease.

Graves' disease is like functional nerve disease, only in the former the exophthalmos and enlarged thyroid are well marked. One gets, however, true cases of exophthalmic goitre with very little thyroid enlargement. The best distinction is often the progress of the case.

Traumatic neuroses are simulated by malinger-

ing on the one hand and disseminated sclerosis on the other. It is because this spinal disease is disseminated that its symptoms are so protean as to be difficult of diagnosis.

In uric acid poisoning from kidney failure there are often functional nerve symptoms and much emotional disturbance, lasting perhaps for months, with, frequently, almost normal health between, so that often Bright's disease is mistaken for a functional disorder.

Abnormal physical physiological peculiarities and idiosyncrasies are also mistaken for hysterical disease. I have a case of a boy to whom the smallest trace of egg is poison, and it is only after careful investigation that the idea of hysteria is eliminated.

The next difficulty is the diagnosis between nervous and mental disease. The great distinction is, as I have said, a broad one. However overspread with delusion, illusion, and depression the nervous sufferer may be, he is always conscious of his condition, and you clearly see that the brain as a whole is sound.

True melancholia is, of course, an insanity, and some neurasthenic depressions come very near it.

Melancholics are invariably suicidal, even if the disease be apparently slight, and can never be trusted; whereas depressed neurasthenics

are only occasionally so, and as a rule can be trusted. Melancholics have fixed ideas of great tenacity, with the entire absence of any grounds for them; this is not seen in the same way in neurasthenia. The depression in neurasthenia may be as much without any known cause as in melancholia, and may come on periodically, or at varying intervals, and last for different periods of time. In these cases there is nearly always some hereditary tendency and some want of mental balance, though there is no real insanity.

Hypochondria has been described as hysteria in the male sex. I do not altogether go with this, as there is much hysteria in men that is not hypochondria. In hypochondria the gloom is caused by introspection of some physical condition. Not so in melancholic or neurasthenic depression.

No doubt it is most common in men, and especially in connection with the sexual organs; while hysteria is more common in women.

In hypochondria there is conscious fear of disease; in hysteria, unconscious simulation of it.

In connection with nervous and mental diseases two points should be noted. The one is, as I have already said, that some severe and incurable varieties of insanity commence as simple neuroses, especially dementia præcox, in which I have seen some remarkable simulation of functional

nerve disease. The other is that hysteria major may pass (in those predisposed) directly into insanity.

Constant vigilance is therefore needed in the diagnosis, and especially in the prognosis, of all functional nerve diseases of a serious nature, lest on the one hand they should turn out to be organic, or on the other truly mental; in either case the prognosis is entirely altered for the worse.

We must now consider the diagnosis between different varieties of functional nerve disease, and principally between neurasthenia and hysteria.

In the first place a patient may suffer both from hysteria and neurasthenia simultaneously. An inherited tendency (as Herman has pointed out) to hysteria may remain latent until some depressing influence brings on neurasthenia, or a patient already the subject of hysterical disease may become neurasthenic also; according to Binschwanger there are not only cases in which hysteria and neurasthenia are combined, but there is a mixed form something between hysteria and neurasthenia. But these are German subtleties into which we cannot enter here.

We must also set aside the idea that neurasthenia is a male hysteria, and that the latter is merely a feminine variety of the former. Such is not the case. Hysteria is essentially of psychic

origin, and is not usually directly connected with fatigue and malnutrition; whereas neurasthenia constantly is, and has not at all the same mental character as hysteria.

The cause is much more readily ascertained in neurasthenia (and may be purely physical) than it is in hysteria. Hysteria is a much older and also a more stubborn disease than neurasthenia. At the same time it may disappear suddenly, while neurasthenia never does.

The stigmata of hysteria are more markedly physical than in neurasthenia, notwithstanding that the disease has a more psychic origin.

The symptoms in hysteria, as I have already pointed out, are essentially bizarre and often contradictory; those in neurasthenia are vaguer, but more natural. The most interesting class of symptoms in hysteria is neuromimesis; in neurasthenia, the various phobias.

A well-marked case of the one cannot be mistaken for the other, and in the rest, the history of the case and its heredity, and close observation for a few days, will clear up the difficulty, save where both diseases are concurrent.

I may say a word here of some importance in the diagnosis of functional nerve diseases, and that is as to the diagnosis that should be given to the patient.

Your own private diagnosis in an over-

whelming majority of cases, however many physical ailments may be complained of, will be "functional nervous disorder." You may see yourself that it is the cause, and all the physical troubles are the effect, but you will not as a rule say so.

You will probably put it the other way about, and remember, in a vicious circle, it is an open question which is cause and which is effect. Dyspepsia causes "nerves," and "nerves" cause dyspepsia, and so each reacts on the other, and which is cause and which is effect is not always easy to say.

Remember that your diagnosis is not in these cases so much a question of skill as it is of tact.

So long as you know it, and can confide it to the doctor or the patient's friends (with caution), your duty is to present that side of it to the patient that will most conduce to cure.

If she be a patient with a horror of nerves, and a feeling of disgrace if they are mentioned (as you will often find), you will strongly emphasise the physical side, and treat *it* rather as the cause, and if any "nerves" are complained of, these as the effect. If, on the other hand, the patient rather fancies having "nerves," and is fearful of physical ailments, you can emphasise the former, and treat the latter as mere effects, which will soon disappear when the other gets right. In

neither case are you wrong; for it is certain that when either goes the other will disappear also.

To put it scientifically and broadly, it is your wisdom and practice at this stage of your relationship with your patient to go as far as possible with her views, in order that when confidence is completely established you may bring her round to yours. A violent onslaught on her prejudices at this period is nearly sure to defeat its object and fail to bring her to reason, whereas, later on, it may be quite successful.

A very good illustration of this, and one that we may consider here, is gout and neurasthenia, which somehow are constantly connected. There must be some reason why I see so many nerve patients who have been told they have "suppressed gout."

Indeed, I think we get here a very good illustration of the vicious circle. Neurasthenia, dyspepsia, uric acid, neurasthenia, form a complete circle; and which is cause and which effect would puzzle any one.

Neurasthenia doubtless weakens digestion, and bad digestion produces uric acid (which is suppressed gout), and uric acid in the blood deranges the nerves.

Of course, in this light, a diagnosis of suppressed gout is as good as that of neurasthenia; but, as we shall see when we come to treatment,

however we may confuse cause and effect in the diagnosis, we must never do so in treatment, but always, whenever possible, treat the nervous element as the fundamental cause.

I may illustrate this by two cases I have recently treated. Both were diagnosed as "suppressed gout," and not only so, were treated for it, leaving the neurasthenia alone. Diets were ordered, all sorts of food cut off, and in two years the patients no doubt were free from uric acid, but were nervous wrecks from starvation and weakness. Still, the "gout" was gone. Now, it would have mattered little whether the diagnosis was "suppressed gout" or neurasthenia, so long as the treatment was directed to the latter, but unfortunately it was not—hence the failure.

If uric acid be formed, there are two ways of removing it; the common one, which was adopted here, and is very often practised, is to eliminate uric acid from the diet. The other is so to build up the system, and especially so to strengthen the digestive organs, as to be able to take any ordinary food without producing uric acid at all.

This is by far the better way, because in it the person, and not merely the disease, is treated; and the neurasthenia, which was probably the worst evil, is cured. No doubt it requires some courage to follow a previous diagnosis of "suppressed gout" with one of "neurasthenia," and

explain that the "gout" is merely a symptom that will disappear; but, whether this is done or not, there is no doubt that treatment must be directed to the true underlying cause, which in all nervous cases is—the nerves.

The diagnosis you arrive at, as I have said, is a question of skill, the form in which you communicate it is a question of tact, and it is an open question which of the two is the more important for the welfare of the patient. Happy is the man who can combine both, and who does not, as is so common, despise the latter on account of his excellence in the former.

CHAPTER X

PSYCHOTHERAPY

PSYCHOTHERAPY has existed and been practised consciously and unconsciously through all ages. To know how to use it successfully has always demanded the highest qualities of the greatest physicians.

Psychotherapy is useful in all diseases, but it is essential in functional nerve disease; and, owing greatly to the recognition of this, in no department of medicine has there been so rapid and general an advance as in the treatment of these ailments by such physicians as practise psychotherapy. Too many, however, still bombard these cases with drugs of many sorts, in the hope that some may hit the mark. I have a record of one case where nearly one hundred distinct varieties were fired into a harmless old gentleman of seventy. In neuroses, more than in any other diseases, we don't cure sicknesses, but sick people; and we must, therefore, individualise and bring into prominence the

psychic factor to an extent not necessary in all diseases. In hysteria, especially, one might say the primary curative agent is psychic and all others are auxiliary: in neurasthenia it is not so. The reason for this I have already suggested, and it is as follows: In hysteria the chief cause is psychic, and therefore the treatment is psychic, though the symptoms are mainly physical. In neurasthenia, on the contrary, the cause is largely physical, and therefore the treatment is so, though the symptoms are principally psychic.

It must of course be remembered that pyscho-therapeutics can be used whether the disease has a psychic or physical origin, but in the former case it is essential. Binet has introduced psychotherapy in the treatment of the insane, and this is being increasingly used.

In speaking of mental therapeutics it must not for a moment be imagined that I include under this head all the quack practice that abounds under the term "mental healing." As I have said before, several forms of this are so contrary to common sense, and so mixed up with pseudo-religion, as to be most objectionable to medical men. Mental therapeutics, properly applied, cannot, however, be omitted in any treatment of nerve disease, and a knowledge of their great value is essential to every physician who would excel in the cure of these disorders. Psycho-

therapy, though universally used, more or less, is seldom spoken of or studied scientifically by the profession, and is not much in favour even amongst the very men who (often unconsciously) so largely use it.

It is, of course, as I have implied, the connection of mental therapeutics directly with faith healing, mental science healing in all its many varieties, and indirectly with liquid electricities, billionth dilutions, and quack remedies of all sorts, that has so far deterred the profession from examining its wonderful powers very closely. I feel quite sure, however, that all such reasons will fall to the ground when the fact of the unconscious mind and its power over the body is admitted clearly and definitely by scientific men; and once its powers become generally recognised they will at last, after long neglect, be made the subject of serious study.

Still, the prejudice very naturally exists, to the great loss of the profession, though I have no doubt it is gradually disappearing.

I think there are in all probability several reasons why so many of us distrust and dislike the very idea of mental therapeutics, only one of which I have touched on. May I suggest half a dozen more that occur to me at the moment? The idea is distrusted and disliked—

1. Because

> "So many please
> To think their duty is to cure disease;
> 'Forgetful' (too often) of this lesson still—
> 'Tis not the body, but the man is ill."

A man whose sole idea is to fight disease, though trained in all the science of the schools, may still be oblivious of the physician's noblest work, and may well "pass by on the other side" the subject before us.

2. Another reason is the deep mistrust with which the ordinary British mind, even when fairly educated, regards the advent of any new theories and ideas; in this differing essentially from the German and American types.

3. A third is because of its possible connection with hypnotism, which is still in very doubtful favour in the best medical circles.

4. A fourth, because (limiting the mind to consciousness) they find by experience how little can be effected in cure by conscious efforts of mind, however determined.

5. A fifth, because the Zeitgeist—the spirit of the (medical) age—is against it. Scientific diagnosis and clinical work naturally lead to scientific cures; anything else is more or less suspected.

6. And lastly, because there is no real opportunity of studying this subject, which forms no

part of the medical curriculum at college or hospital,[1] and of which no text-book exists.

It seems to me these six reasons are amply sufficient to account for the way mental therapeutics are regarded by the majority of us to-day.

If this be the case, we can understand better how such a therapeutic agent should have been so ignored, and why from so few of our leading surgeons and physicians we hear of the influence of the human mind, whose powers pretty well balance the whole Pharmacopœia. In the *British Medical Journal* we find this remarkable admission:[2] "Disease of the body is so much influenced by the mind that in each case we have to understand the patient quite as much as the malady. *This is not learnt* at hospitals." Or, in other words, one-half at least of the science of therapeutics is not "learnt at hospitals," doubtless for the reasons given above. But does any medical man, after all, really doubt these mental powers? Is he not aware of the ingredient "faith," which, if added to his prescriptions, makes them often all-powerful for good? Does he not know experimentally the value of strongly asserting that the medicine will produce such and such effects as a powerful means of securing them?

[1] It is hoped this will soon be remedied.

[2] *British Medical Journal*, Educ. Number, autumn, 1897.

Surely the reasons we have given why mental science is neglected are not sufficient cause for its being pooh-poohed and ignored as it is! It has its laws of action, its limitations, its powers for good and for evil; would it not clearly help the medical student if these were indicated to him by his lawful teachers, instead of his gleaning them uncertainly from the undoubted successes of the large army of irregulars?

We are, however, inclined to think that, after all, a silent revolution is slowly taking place in the minds of medical men, and that our present text-books on disease, content with merely prescribing endless selections and combinations of nauseous drugs, and dismissing any mental cure in a single line as unworthy of serious consideration, will in time be replaced by others containing views more worthy of the century in which we live.

For although these drugs are still administered, but few medical men now believe that they are the entire cause of the cure; for very gradually it is beginning to dawn upon us that most nervous diseases at any rate are easily and naturally treated by mental therapeutics, and that the still persistent efforts to cure them by the stomach are neither reliable nor rational.

It ill becomes, therefore, the medical man, who recognises in these cases that it is the mind that

cures, to decry any form of faith cure, however little its process may be understood by him in detail. We have seen that the powers of the conscious mind over the body are well-nigh immeasurable; and knowing, as we now do, that our old division into functional and organic disease is merely the expression of our ignorance, and that all diseases, even hysterical, involve organic disturbance somewhere, we are prepared to believe that faith and other unorthodox cures, putting into operation such a powerful agent as the unconscious mind, or, if you prefer the formula, "the force of nature," *are not necessarily limited to so-called functional diseases at all.*

There are at least four ways by which mental therapeutics can be applied to disease.

1. By the direct active power of the unconscious mind inherent in itself, and generally called the *vis medicatrix naturæ.*

2. By the unconscious mind influenced directly by surrounding personalities or other unconscious agencies acting as indirect suggestions.

3. By the unconscious mind influenced indirectly through the conscious, which has faith in persons, systems, places, &c.

4. By the unconscious mind indirectly acted on by the conscious by distinct effort—in determination to get well, to shake off illness, ignore pain, &c.

Dr. Clouston remarks with regard to this subject generally: [1] "If mind and brain so powerfully affect the conditions of disease, one naturally turns to them in looking for means of cure. And beyond all question we can often get effectual help there. Half the diseases that kill, as I have already said, do so because there is no sufficient power in the organism to resist them. The physiological commonly passes into the pathological because the nerve energy is below par. To check many diseased conditions we cannot employ better therapeutics than to stimulate the cortex and strengthen the mental energy. To this end the first thing a good doctor does is to inspire confidence in his patient. What is this but a bit of psycho-therapeutics? And it is an all-important one in many cases. So to condition the patient that his brain and mind are kept up to the very highest mark attainable, to remove irritations (mental and nervous), and to distract attention from a lowering to a cheerful view of the whole situation, may make all the difference between life and death in many a case. Hope and a calm cheerfulness are often the best general aids to healthy metabolism. We know that a joyful emotion will at once fill the cortical capillaries. It is a true cerebral stimulant. Aided by

[1] Dr. Clouston, *British Medical Journal*, January 18, 1891.

medicinal cortical tonics and stimulants, like strychnine, quinine, the mineral acids, &c., mental stimulation is an undeniable adjuvant to the local treatment of disease, and it is used largely by the most successful physicians."

Bearing this in mind, we can better understand the following from the *Lancet:*

"A malady induced by mental reflex can only be cured by mental remedy. A full recognition of the value rightly attaching to the mental treatment of physical ailments will improve the usefulness of the physician and materially assist in the recovery of his patients. In disease, functional or organic, the therapeutic value of faith and hope, *though not in our text-books,* is often enough to turn the scale in favour of recovery." [1]

As I write these lines a volume on the treatment of nervous diseases by Dr. Graham Brown, of Edinburgh, is placed in my hands, and I am much pleased to read these words, which indicate a distinct advance in one text-book as regards therapeutics: "We now come, in the consideration of the general treatment of hysteria, to that factor which is probably of the highest importance of all, and which ought to dominate the whole management of the case—namely, the use of suggestion on the part of the physician."

We have high authority for the virtue con-

[1] Editorial, *Lancet,* 1883, i. 19.

nected with "a single eye," and there can be no doubt that this[1] has been cultivated in the profession for the last thirty years to an alarming extent. The single eye, which alone illumines so many medical minds now, is scientific, mechanical, practical, observant, and accurate.

But, after all, though a single eye has the great advantage over two that it cannot squint, or be distracted by looking at two things at once, it has the enormous disadvantage of not possessing stereoscopic vision; which, in medicine, by obtaining two different views of the patient at the same time, sees him as a solid, living entity of three dimensions, instead of viewing him on the flat as a troublesome adjunct to his disease in two dimensions. The single eye can, of course, see the body at one time, and can also see the mind at another, if the gaze be turned thither; but it cannot view both at the same moment and combine them in the one picture of the living man. "Now there is such a thing as stereoscopic thinking—the viewing subjects as well as objects with our two eyes";[2] and we must look and think stereoscopically if we would ever see or

[1] By "this" it is obvious that I refer to the sight of one eye, and not, as is often meant by the expression, the single vision of two eyes as opposed to diplopia.

[2] Dr. John Brown, "Horæ Subsecivæ," 1st Series, Art. "Locke and Sydenham," p. xxiii.

know the truth. One eye on the mind and one on the body ; one eye philosophic and imaginative, and one scientific and observant; one theoretic and one practical; one seeing the invisible and one the visible, constitute the double vision that has ever characterised the leaders in every profession, and specially all really great physicians. I have elsewhere produced abundant evidence to prove this ; here, I am content to state the fact.

Let us, however, remember that medicine is not only a science, but an art. The two have been suggestively contrasted as follows :

In Medicine,

ART	SCIENCE
has a method,	has a system,
looks to function	looks to structure
rather than structure,	rather than function,
acts,	speaks,
is unconscious,	is conscious,
uses one eye.	uses the other eye.

WISDOM *in Medicine*

uses both eyes, discerns solidity as well as surface, and, viewing both sides, uses mind and body for the cure of one man.

If we come, however, to compare the two methods of cure, we must admit that mental therapeutics may not only co-exist with physical, but in neuroses are of greater importance. Drugs, moreover, are sometimes given to relieve

symptoms only, and symptoms, too, that might be beneficial. Mental therapeutics are not aimed at symptoms, but generally attack the root of the disease—or, at any rate, its mental root. Alteratives for the mind are generally more important and efficacious than alteratives for the body. There are mental analogues to iodide of potassium. Again, not only are mental therapeutics ever a great resource and adjunct in ordinary medicine, but there are some forms of disease, as I have shown, where they constitute the only remedy that is effectual. Moreover, in every form of physical treatment faith is needed by the patient if he is to follow it out well and successfully. Every idea tends to act itself out, and mental thought passes into the physical plane unless inhibited. It is thus that faith and hope and the picture of getting well act themselves out physically in the patient and produce the effects caused by the autosuggestions that faith inspires.

The cure of neuroses is rather by the personality than by prescriptions; and a constant interchange of psychic force and intelligence is going on between a nerve patient and a physician who is *en rapport* with him, of which neither is probably aware.

Many patients, after a fortnight's treatment, have said to me, in disappointment, that they had expected to be cured through their minds, and

that I treated nothing but their bodies; and I have told them that, unknown to themselves, they had been all the time under the influence of strong mental therapeutics. There is no doubt that the mental state of the neurasthenic has much to say to his cure. The progress is frequently quite irregular, and may stop at any stage capriciously, and then, under some fresh mental stimulus, such as an increase of faith, the cure proceeds rapidly.

Neurasthenics are more easily cured than hysterics, and the latter have more tendency to relapse.

All that I have said so far tends to show that the proper treatment of functional nerve disease is as much the work of trained skill as is disease of the eye, ear, or throat, and that while much can be done by any intelligent doctor in cure, there are cases which require the skill and experience of the specialist.

The treatment of functional nerve disease must always be directed to the source of the trouble, with, as a rule, neglect, more or less marked and complete, of the symptoms; but mental therapeutics have little result unless the patient believes the symptoms are of nervous origin.

This treatment is so difficult to arrange, so variable from day to day, so subtle in its methods, that it can never be successfully delegated to others, but must be personally organised and

carried out from start to finish. Moreover, each case of functional nerve disease being, as I have said, the treatment of a personality, is a separate study; thus differing essentially from the treatment of ordinary organic disease, where the personality is of much less importance. Medicines, natural remedies, and psychotherapeutics all play their part, and must all co-operate in the cure.

The rest cure and the work cure are both good in different cases.

In Hindoo life it is a practice to retire for at least half an hour a day into silence, to relax all muscles, take deep, quiet breaths, and think on eternal things. Every Hindoo child is trained in this from an early age. We in the West require also some such periods of stated rest. There should be a regular systole and diastole for the mind as well as for the heart, besides that enforced in sleep. And it may be partly because this is so much neglected that the so-called "rest cure" is in such vogue for neurasthenics.

The right psychic treatment of the neurasthenic is important. At present he is often treated either (1) too seriously, as when dyspeptic symptoms are attributed to some serious gastric trouble, or (2) too lightly, when the disease is dismissed as nothing; and both are disastrous.

It must be remembered that the main distinction between ordinary organic and functional

nerve diseases lies in the fact that the former are generally incurable and the latter curable.

"Nervous," as a rule, means curable; and this should be well brought home to the patient's consciousness.

Some, in treatment, persist in attacking the prominent symptoms to cure the disease; the true way is, as I have said, to treat the disease, and most of the symptoms will go, and then the rest can easily be removed. There is no doubt that the conjunction of an organic with a nervous disease weakens the moral action of the physician and hampers him in many ways. It is well not to be too much troubled about it, and above all to never admit to the patient the possibility of two diseases at the same time. Try to put all the symptoms under the one head. Note everything, but resolutely treat on a neurotic basis. I have seen a case cured, with Babinski's sign well marked, by persistent pyschotherapeutics, which were difficult to persevere in, in the face of it.

Another task is to repress excessive emotion, one of the worst enemies of the neurasthenic, by a healthy philosophy of life and strong moral hygiene.

Some patients require abnormal pressure. Dr. Weir Mitchell says that many have to be lugged, scolded, teased, bribed, and decoyed into health; and several such cases rise to the mind. Many

dyspeptics go on suffering for years from mistaken treatment who could be cured in a day by something more forcible—an electric shock or some great trouble or joy.

Dr. Barras (Paris), after years of treatment for gastric ulceration, was cured in a day by his daughter getting phthisis!

Access of fatigue in walking, with dizziness, pressure on head, and general debility, all vanished in one case on seeing inlaid in an entrance hall—

"Honour to courage, to weakness shame."

It has been objected that in these cases medicine-taking tends to fix the idea on the illness, and is therefore bad; but such is not the case. Giving drugs does not fix the mind on the illness, but upon the hope of a cure, which is a very different thing.

In some cases hysterical paralysis is cured without any local measures, and with great ease; in others it resists all treatment. In neurasthenia, the relapses during cure are often most trying, requiring great patience and fortitude.

At the same time, undue attention should never be drawn to the disease in an hysterical patient. Prolonged examination in great detail for clinical purposes always injures such a patient, more or less.

The application of psychotherapeutics varies immensely. On the Continent it has become more and more pure and direct in application.

Professor Déjerine, at the Salpétrière, uses "persuasion" as his chief method of cure, apart from other treatment. Professor Dubois, of Berne, is the able exponent of direct rational cure. He has almost wholly abandoned indirect suggestion, or drugs, or physical treatment, and relies on direct psychic suggestion and persuasion.

He points out that there is a great difference between the man who allows himself to be under the influence of the personality of a physician and the man who acquires confidence by the clear exposition of the reason why he should believe; but I find the former so results from the latter that it is impossible to separate the two.

He points out that no human brain can resist the weight of pure reason. An appeal to reason in a patient takes, no doubt, much longer than writing a prescription, for it must be done slowly and thoroughly to be effectual; and pure rational psychotherapy seems most successful abroad.

It is only, of course, when the doctor has implicit faith in psychic treatment that he can possibly venture on direct statements of cure to a patient,

and give direct explanations of the psychic nature of the disease.

In convulsive tics efforts of will are not so effectual in cure as would seem at first thought; but quiet, rational explanation of the cause, and neglect of the symptoms, rather than their repression, generally succeeds.

In neurasthenic phobias, &c., the great point is to get the idea well fixed in the patient's mind that he can do the particular act he could not do, *before* he tries to do it. He must not try and fail, for this makes a bad suggestion.

Suggestion is an agent of mighty power, and in this country, where rational explanations are not so patiently listened to or so implicitly believed in by patients, it forms the chief mode of using psychotherapeutics.

Of suggestion, Dr. J. W. Springthorpe writes in the *Lancet*:[1] "Few indeed are the medical practitioners who daily prescribe 'suggestion' as well as diet, hygiene, and drugs. Yet the physician who makes even the minimum effort in this direction often does more for his patient than his more highly qualified *confrère* who makes none. To some, and they naturally the most successful, this endeavour comes without conscious search, and improves with experience, but in some measure it may be acquired by all, and

[1] November 18, 1905.

no one who has become familiar with its powers will henceforward be content to remain without its constant aid."

Some regard suggestion as an influence on others, some as the infusion of special ideas, producing special actions in neurotics.

By suggestion is really meant the abrupt entrance of ideas from without into the train of conscious thought, which become part of the mental stream, with results in action.

Suggestion is not persuasion or rational explanation. The former is addressed in great part to the unconscious mind, the latter to consciousness.

Bechtren says that suggestion enters into the understanding by the back stairs (unconsciously), while logical persuasion knocks at the front door (consciously).

All men (and women) are suggestible; indeed, suggestibility is a normal quality, not an abnormal, in everyone.

Human suggestibility, as distinguished from that of mere environment, must be taken as a fundamental factor in the treatment of functional nerve disease.

Man is in some respects more marked as a suggestible animal than even as a rational or a sane one. Only about 3 per cent are absolutely non-suggestible.

Suggestibility is *not* a symptom of hysteria as so largely taught by Charcot. Men with no trace of nervous disease are swayed by suggestion every day that they live. Inferior wine poured out of a bottle with a celebrated brand on it will always seem better than it is, and even a connoisseur of tobacco will have his judgment influenced by a cigar with some well-known band round it.

A very good way of testing suggestibility is by making a patient hold the rheophores of a battery, and then starting it with loud, rapid vibrations but with no connection with the handles. The vibrations are then felt in exact proportion to the patient's suggestibility, there being no current actually transmitted.

Suggestibility is, indeed, often easiest in the sound and sane, more difficult in hysteria and neurasthenia, while it is almost impossible in the insane.

In suggestion, as I have said, it is the unconscious mind, not the conscious, that is suggestible. Consciousness, to a large extent, inhibits suggestion; hence the value of semi-consciousness, hypnotic states, and indirect suggestions.

Professor Sidis, of New York, speaks of an upper and lower consciousness, and postulates unconscious choice and will centres that only

allow those impressions and impulses that are favourable to the life of the organism to pursue their course and pass up to the cortex, while it nips the others "in the bud."

This does not appear to be correct, for bad suggestions and impulses reach the cortex as readily as good. Indeed, an impression ceases to affect the cortex, not on account of its moral value, but on account of its frequent repetition, which eventually short-circuits the acquired reflex through the mid-brain. Suggestions may thus be so frequently repeated as to lose all value, once they are known to be suggestions.

Suggestive action is not, of course, confined to unconsciousness. It may affect the mind consciously alone, or the mind and the body through the mind unconsciously.

Suggestion leads to conscious as well as unconscious action. Direct unconscious mental control exists over all nutrition, and over the action of all organs, and this is influenced largely by the condition of the conscious mind; hence the value and action of suggestion.

In suggestion the ideas are accepted uncritically, and it may be unconsciously, and carried out, in a similar way, automatically. Suggestion increases reflex, ideo-motor, and sensory excitability.

That suggestion is most effectual which forms

the *last* impression made on the patient, and which has been often recapitulated; for it is the last impression that is the deepest and recurs most in every way.

For all this, the suggestion of which I am speaking must be entirely dissociated from hypnotism, and conceived only as the implanting of an idea consciously or unconsciously.

The best conditions for normal successful direct suggestion are:

1. Perfect quiet and repose.
2. Distraction of attention to other matters.
3. Monotony of repetition.
4. Limitation of all voluntary movements.
5. Limitation of field of consciousness.
6. Inhibition of alien suggestions.
7. Immediate execution of suggested idea.

It need hardly be said that but few of these conditions are usually fulfilled, but they all are desirable.

The action of suggestion is most capricious and can never be foretold. Of two patients with nerve symptoms, one may recover with a single suggestion, while another continues to suffer all his life, and all suggestions are vain: and it is impossible to tell at sight which will act thus.

Again, suggestion may at first absolutely seem to fail, and no effect be traceable, and yet the patient may afterwards be cured suddenly by a

single suggestion; just like sudden conversion, as in embracing a new faith. Again, suggestions must vary inversely with the case to be effectual.

To one neurasthenic you may magnify the disease, while to another you may magnify your own power of cure. The manner of suggestion, too, is of importance. It is often found practically that suggestion to a third person in the presence of the patient is more effectual than when made directly to the patient.

The varieties of suggestion are as follows:

Suggestion with hypnotism.	Suggestion consciously to patient.
„ without hypnotism.	„ unconsciously to patient.
„ direct.	„ addressed to conscious mind only.
„ indirect.	„ addressed to body (unconsciously) through mind.
„ consciously to physician.	Auto-suggestion, conscious.
„ unconsciously to physician.	„ unconscious.

Amongst all these, the greatest interest attaches to the relative value of direct and indirect suggestion.

I am one who believes most in indirect suggestion in psychotherapy. Direct suggestion of all sorts most often fails—amongst the educated classes, at any rate.

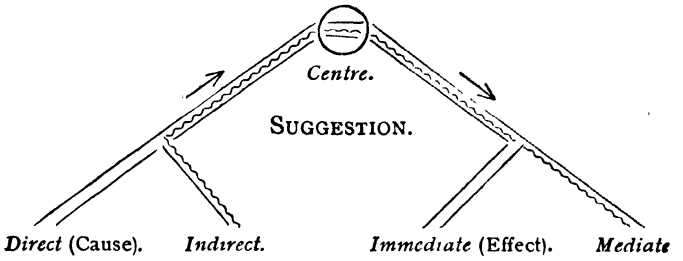
Direct psychic suggestion, moreover, requires far more from the physician, and is not nearly so easy as indirect. I consider that in the normal state a suggestion is more effectual the more indirect it is, and the less so the more directly it is made.

Professor Sidis, in his "Psychology," says that normal suggestion varies in power directly with its indirectness, and inversely to its directness.

Dubois, on the other hand, considers that for one cured by indirect psychotherapy there are ten where the cases are prolonged by it, and he is all in favour of direct suggestion. On the whole, direct suggestion is best in hysteria, less so in neurasthenia, and least of all in hypochondria.

The following is an interesting case: A girl was seized with hysterical anorexia, dyspepsia, and heart palpitation. At the time it happened to be very cold, and the parents told her this was the cause. From this hour she protected herself, and in the hot summer stayed in bed, never opened a window or touched cold water. She kept her hands under the bedclothes and had to put on gloves first (to avoid an attack) before she dare put them out to take a glass of milk. The patient was cured by exposing the autosuggestion directly—not by good suggestion, but by the truth.

The response may be mediate or immediate To direct suggestion it is more often the latter and to indirect, the former.



So far I have only considered suggestion made objectively by a suggester, which may include doctor, nurse, friend, or even the treatment or environment.

Subjective or autosuggestion is another variety altogether.

Autosuggestion is quite a different matter from suggestibility, and is frequently strongly marked in mental disease. In paranoia, as Professor French shows, there is abnormal auto-suggestion, which gives extraordinary significance to unimportant details in the conduct of others. These details, the paranoiac suggests to himself, are purposive and of sinister design. Bad auto-suggestions are much more common than good suggestions. A man who is most susceptible to the former is not necessarily susceptible to good suggestions ; and we must remember that if good

autosuggestion may cure, bad autosuggestion certainly can cause disease. Therefore, if prevention be better than cure, it is best to be without autosuggestion altogether. A man, therefore, incapable of it is probably on the whole the best off.

It is said that every sensation of all five senses is in its last analysis the product of autosuggestion.

Autosuggestion in those susceptible is ever and everywhere at work.

All objects and foods affect us; but when our autosuggestion is in the same line as the natural effect, the effect is doubled; when in the opposite line it is halved. The success of half our dietaries is the result of autosuggestion.

Autosuggestion often supplements suggestion. When we begin to make long statements to a patient as to the disease, the prognosis, the effect of treatment, &c., we may be making a grave error and inflicting injury on the patient, as his autosuggestion may increase the meaning of our words to any extent.

If the fact of autosuggestion of evil can be made plain to a patient, it often loses its force, as in pain from electricity when it is proved no current passed; and the exposure of one error of autosuggestion often leads the patient to detect many others she may suffer from. No patient is, however, cured, even if she has overcome the

results of her autosuggestion temporarily, unless they are absolutely removed. Many suggestions made by the doctor are so heterodox to the patient that they are not assimilated, until later on they become digested, and then as auto-suggestions their effect is realised.

Before closing this chapter I must say one word on hypnotism.

All hypnosis is effected by suggestion pure and simple, sometimes combined with eye-strain, more frequently not.

Patients are hypnotised by sensory impressions, including vocal and other sounds, light and bright objects, rubbing, and passes of the hands. Also by fatigue and effort, as in forced and constrained positions.

Gazing at bright objects does not, however, always induce hypnotic sleep.

At the Salpétrière a bright object is exhibited, and if suddenly withdrawn catalepsy is induced, if gradually, lethargy. In the first the eyes remain open, in the second they are closed. If the eyes are opened, then the patient passes into catalepsy.

There are several stages in hypnotism. There is (1) somnolence or sleepy condition, (2) light sleep, and (3) somnambulism.

The Salpétrière considers that only those liable to hysteria can be brought into this third stage.

At the school of Nancy (a home of hypnotism) it is considered that none of the symptoms are pathological, and that the whole are but stages of an artificial trance in which the unconscious mind can be easily reached. For in spite of Professor Ziehen there is no doubt whatever that mind is present in the actions of the hypnotic state. The Salpétrière, on the other hand, really regards the hypnotic state itself as a symptom of hysteria. Of course, if the hypnotic state be in itself pathological, to induce it is to induce an attack of hysteria; but in this country no such view is taken.

In hypnotism the functions of the conscious will are in abeyance as well as full consciousness. To explain such phenomena as the following, Janet and others resort to the theory of a double consciousness. He asks a hypnotised patient: "Do you hear me?" "No." "But to answer one must hear." "Yes." "How, then, do you manage?" "I don't know."

The phenomena of hysteria are always losses of some sort, either sensory or motor, including temporary paralyses or spasms or hysteric fits, or psychic, such as abolition of will with abnormal stimulation of memory, which of course is a gain.

There are somatic phenomena, such as flushings, slight rise of temperature. These symptoms are of course but temporary, and disappear with

the hypnotic state. Sometimes, also, the cure effected by the hypnotic hallucinations induced by suggestion lasts only a short time, and afterwards the disease returns.

The latest methods of hypnotising do not necessarily induce sleep, or even attempt it. The operator is quite content with the first stage of sleepiness, which is induced merely by being in a recumbent position in a quiet room and lying perfectly still and passive with the mind at rest. The operator then, sitting by the bed, with or without holding the patient's hand, repeats his suggestion of good in a monotonous voice over and over again, or he may make the suggestion and then sit in silence; sometimes a hand is on the forehead or over the solar plexus. The more direct these suggestions are in this semi-hypnotic state, the more effectual they seem to be. In many cases a friend also sits in a corner of the room without speaking.

I am bound to say the therapeutic results in functional nerve diseases are very disappointing. While in hypnotism we have a very remarkable power, of value in diagnosis, and especially in investigation of obscure mental states, in performing feats of memory and other wonders, in the relief of pain, the fact remains that in connection with functional nerve disease the patients are very difficult to hypnotise, difficult to cure, and

when cured are very prone to relapse. At first sight they seem typical cases for this treatment, but in practice it is most disappointing. Personally, I never hypnotise, and do not suppose I could, but when necessary I send my cases to well-known experts, and such is my experience. One can only think from Continental records that the difference of temperament accounts for the greater results there.

The treatment is not without its evils and its dangers. Some get a hypnotic habit, like opium-eating, and they must continually have recourse to it, others continue under influence afterwards, and some have their maladies increased.

At any rate, in my opinion it is not a remedy to be lightly used, nor one in which, in functional nerve diseases, one can be very sanguine as to results. At the same time one comes across many cases of obsessions where one feels bound to try it.

Even Professor Bernheim acknowledges that very few nerve cases can be hypnotised.

Brewer and French believe that the basis of hysteria is sexual, and that the subconscious cause or idea may be brought into view and successfully eradicated by hypnotism. With such a view I cannot agree. Perhaps on the whole, in nerve diseases, hypnotism is most effectual in the production of sleep and in the relief of pain.

CHAPTER XI

THE REST CURE

I ADOPT as title to this chapter, not without hesitation, the popular term for all treatment broadly based on the lines so scientifically laid down by Dr. Weir Mitchell. The term itself is a gross misnomer, as the treatment is not, and was never intended to be, one of mere "rest."

There are conditions and diseases that require rest and nothing else; but the treatment in bed of functional nerve disease cannot by any stretch of imagination be described as rest. Physiologically, the activity is extreme, and physically, the patient "at rest" is made to go through exercises said to equal walking nine miles a day. There are, of course, all degrees of rest, from the curtailing of excessive work to the absolute relaxation of every muscle and of the mind in isolation in bed. This latter, indeed, forms an essential part of the cure, and the passive relaxing of every limb and muscle in bed

while lying perfectly still is by no means attained by every patient. Still, it is aimed at, so that if it be not a rest cure there is at least rest in the cure.

There is no doubt that the general principles of this cure are common property, and everyone who has heard of Weir Mitchell thinks himself fully competent to carry out this treatment. The result is too frequently a great disaster. For the first thing a doctor does now, who in his practice comes across a case of (much disliked) functional nerve disease, is to order "a rest cure," pretty much as he would order a cab or a pill. The result too often is failure, and not only failure, but the patient remains uncured with a great prejudice established against the one means which, rightly used, can cure her; and this is a great disaster.

When I started this class of practice, soon after Dr. Playfair, every case I saw was a virgin case, and had not been tampered with in any way; and there was no difficulty whatever in getting these patients to do exactly as they were ordered. Nowadays you hardly see a case, and suggest the patient going to bed, but what you find she has had two or three futile "rest cures," and is now a profound sceptic in the matter, and absolutely refuses yet again to go through the trouble and expense involved. Can anything be worse

than to mismanage such an invaluable means of cure?

I would therefore earnestly entreat all who read these pages never to attempt a "rest cure" without personal superintendence in the using of every possible means to make it a success. And also I would ask them to discourage, what is now so common, undergoing rest cures without medical advice at all. All this tends to bring into contempt, and to lessen the value of, a therapeutic, the importance of which cannot be overestimated.

What, then, is the cause that failure is so common?

The fundamental reason is that the medical training of to-day, however thorough in many directions, is of little use practically in these cases, and takes no means whatever of impressing on the student that the patient's mind has any direct connection with the cure of his disease, nor in any way showing how to influence that mind for good. And it is these students, as doctors, who make these egregious failures.

The fact is that patients are human beings, and cures cannot be "machine made," but must be hand made; no two exactly alike, but the treatment varied to suit the particular case or individuality. The essence of success in the "rest cure" lies in its details, and the way in

which the whole environment—home, nurse, masseuse, matron, doctor—is made to suit the case, and in the strong suggestive treatment that accompanies it all through. What I mean exactly will come out in the brief outline of this treatment that I will now give, which is based upon the description given of the rest cure in a previous work of mine.[1]

The treatment can, of course (with difficulty), be carried on in the patient's own home—but success is never so assured, and the objections are serious.

It is so difficult to secure quiet and isolation, and the familiar surroundings are just so many hindrances.

Wherever possible, therefore, a "home from home" should be used. Personally, I do *not* approve (for many reasons) of physicians running their own homes. The best is to have one or two homes in which you can have your own way, and yet are not tied to, and above all, have no pecuniary interest in.

The treatment is summarised thus by Weir Mitchell: "(*a*) The patient is placed in a private house (according to his means), and is best if away from home, the room being sunshiny and freely capable of ventilation. (*b*) The nurse

[1] "The Management of a Nerve Patient" (Churchills, 1906).

should be preferably young, of agreeable manner, and a stranger to the patient. She should never converse with the patient about symptoms or treatment. She should be able to read aloud. (*c*) Isolation is most important, and the more distinctly hysterical the disease is, the more strict the isolation must be. No letters are sent or received. No visitors seen, and but three or four persons enter the room—the nurse, the physician, the masseuse, and the servant. (*d*) In ordinary cases six or eight weeks of isolation are long enough, after which a single visitor may be allowed. Letters may then be received or written in the way of reward for good conduct. This long isolation is necessary to break up radically the habits of long invalidism. (*e*) Rest, at first ill-borne and irksome, is well borne after a week. At first, feeding should be done by the nurse, and the patient overfed. All voluntary movements should be forbidden, except getting up for the bowels, &c.; the circulation and the thinking are thus kept at a low level, and one result soon observed is the improvement of the ability to sleep. (*f*) Diet: milk in small quantities is given every three hours, skimmed, if ordinary milk is not tolerated. On the fifth day of treatment a chop or steak at mid-day is given. From the sixth day onwards bread and butter and eggs are allowed; if milk is badly borne, broth

and jellies will give satisfaction. (*g*) Massage: a separate masseuse is advisable. Massage should begin on the third day with light massage lasting twenty minutes and increasing daily to deep massage lasting one hour or more. If the patient is obese, long and deep massage is good; a second rubbing of the abdomen and spine by the nurse before sleep is helpful. At the end of the first week of treatment the patient will begin to put on weight, but if this goes up too fast, massage is not thorough enough, and should be increased. Oil is not necessary to aid massage. (*h*) Electricity: the slowly interrupted faradic current should be applied to the 'motor points' all over the body, so as to contract every muscle two or three times. This should be continued for three-quarters of an hour. (*i*) Constipation is treated with aloes and strychnine pills, and for specially refractory cases hot injections of castor oil *per rectum* may be given. (*k*) Insomnia is diminished by massage before bedtime. Hypnotics should be avoided, and the wet-pack or abdominal compress first tried. (*l*) After the first week the patient is allowed to sit up fifteen minutes, the next day twenty minutes, &c. In a fortnight he is allowed to walk in the room after passive movements of the legs have been carried out; Swedish movements complete the exercise and cure."

This *régime* deserves close consideration as coming from the illustrious founder of this system of cure, and is perhaps, with some exceptions,[1] as good a one as could be devised; but I do not believe in any fixed routine, and the above has to be widely varied in different cases. You cannot set a rudder to steer a ship across the Atlantic, nor can you set with success one fixed course for all nerve patients. For instance, I may point out that a neurasthenic patient as a general rule is made worse by fighting symptoms, and yet is always willing to do so; while in hysteria the patient is better by so doing, but generally unwilling; the same rules cannot therefore apply.

Turning to my own experience in the rest cure, I find that rest in bed is indicated as the first step in *all* cases of nervous debility, exhaustion, or break-down, cerebral and spinal neurasthenia, malnutrition, hysteria, and neuromimesis, with all their varying train of symptoms. Also in *some* cases of nervous irritability, depression, hypochondria, mixed organic and nerve disease, mixed mental and nerve disease.

The rest in bed is accompanied by some or

[1] Personally, I commence solid food much sooner than the fifth day. I do not value broth or jellies in the cure at all; I begin massage sooner; I give it twice a day instead of once; I find that many cannot bear such severe electricity as to contract all the muscles, also that constipation can be cured without medicine.

all of the following: rest in bed, food, massage, electricity, mental therapeutics, nursing, occupation, isolation. I will consider these eight points very briefly.

1. *Rest in Bed.*—This should be absolute, generally from a minimum of a fortnight to a month or two—*i.e.*, the patient should only get up (if ordered) to her bath and for daily relief. The bed should not face the light, but preferably be sideways to the window, so that the patient can look out if she wishes, and yet has a good light on her book or work. The bedstead must never be less than three feet wide, and preferably three feet six inches. There is a great advantage in four feet six inches, as then the patient has practically two beds, changed at will without fatigue. Some patients cannot rest in a narrow bed if always accustomed to a wide one.

In a nursing home, however, this is nearly impossible to get, and I have had to cure some cases in private hotels solely on this account. The springs should be firm and not "sag" in the middle, as so many of the cheap chain springs do. These are not surgical cases, and there is no objection to box springs, which are most comfortable. But here again you generally have to take the bed the home provides. The mattress should be firm, elastic, and comfortable, and this should not be taken for granted, but

ascertained (in a nursing home nothing should be taken for granted at first). The sheets, pillows, blankets, &c., should all be what the patient likes. I have had cases who had no rest until they had their own pillows and fine cambric sheets from home. Some, again, like very light down covering, others heavy blankets only. In all these cases, at first, at any rate, harmless tastes should be indulged, and nothing should be accounted trivial. It is sometimes difficult for a patient in a state of tension to rest in bed. These must be taught. Get her to lie down, as Dr. Campbell advises, to relax the entire muscular system, to take slow, deep breaths, and to allow the mind to remain as far as possible a blank. Test the state of the muscles by lifting a limb ; and not till it drops in a perfectly limp, passive way has the required relaxation been reached. See that all the muscles of the face are relaxed. As long as the brows are knit, there is no mental repose. Let the patient practise this until she can lie habitually in bed in this relaxed condition. A little table, bright with the patient's household gods, should stand near. The room should look as little like a nursing home as possible. Flowers about, a little untidiness, and an absence of that aggravating squareness and aggressive cleanliness of the ordinary surgical home are helpful. The

room should be capable of being stamped with the individuality of the patient, so as to have a "homey" feeling. It should be bright, airy, and yet quiet; and the quiet should not be merely as regards noises outside, but inside the house. I have known many cases marred for want of attention to this latter point. There should be no sounds or news of operations, &c., conveyed to it, nor any smell of chloroform or disinfectants. I myself like carpet on the floor; at any rate, in part. I do not think kamptulicon is ideal for a bedroom, and we do not want antiseptics here.

The artificial light should be good and bright, and near the bed for reading. A shaded candle or electric light should be available in the night if wanted. The nurse should not sleep in the room, save in special cases.

The rules of the home must not be so rigid that the breakfast is necessarily at eight, or, indeed, at any fixed hour. The patient must not be waked for the grate to be cleaned, &c. In short, the rules and the home must fit the patient, and not the patient fit the rules. If the case is soon to get up and go out for a time, the room should not be up too many flights of stairs.

2. *Food.*—This is required, whether the case be Weir Mitchell or no. There are four sorts of cases as regards food: those that require ordinary

diet only; those that require excess of ordinary diet; those that require less than ordinary diet, and those that require special dietaries. I will take these in order.

Those who require Ordinary Diet.—These are in a great minority. It is seldom you get a functional nerve case where the nutrition is not wrong in some way, and nearly always it is indigestion; in a few cases there is an excess of unhealthy tissue, but the condition is seldom normal. In this, as in all other cases, the food should always be well cooked, served hot and punctually, with sufficient variety. The breakfast should be appetising, with nice bread, toast, good butter, cream, marmalade, &c. The lunch should be the principal meat-meal, with abundance of good meat and fish, vegetables and bread, and good milk, or suet or other puddings, and some good fruit.

The afternoon tea should be well made, with nice bread and butter and cake and cream.

The dinner should have soup or fish, lighter meat, or fowl, or game, and vegetables and nice puddings.

Tea, coffee, or cocoa for breakfast, water or light wine for lunch and dinner, and in some cases coffee after dinner.

A well-mixed dietary should not be departed from without special reasons.

Then there are *those who require excess of food.* These are three parts at least of your cases, and it is with these you require the greatest skill. The best plan is always to give nothing whatever at first but a good half-pint of milk, hot or cold, and diluted if wished, every two hours; with no food besides, except a dry biscuit, if hungry. This may not agree with all, but it will with most, including many who declare they cannot take milk. If it does not agree, add limewater or use Horlick's malted milk, or peptonise wholly or in part at first; but never rest until you have got two or three quarts of ordinary milk taken daily. This is your foundation-stone.

The next thing to add, I find, is a concentrated meat-juice, digested by acid in the cold from beefsteak, at the rate of 2 lb. daily to make one pint of the fluid. This may be divided into four portions and treated as follows: a quarter of a pint in a coloured glass, flavoured with salt or celery-salt, with a tablespoonful of extract of malt, and then whatever medicine is being given (generally some form of strychnine and iron), may be added to it. The whole is called by me "carnomaltine," and by my patients "corpse-reviver." We now have a basis to which foods, properly so called, can be added.

This is best done at the rate of a meal a day, after twenty-four to seventy-two hours of the

liquid dietary—that is, breakfast first, and afternoon tea; breakfast, lunch, and afternoon tea the next day; breakfast, lunch, afternoon tea and dinner the next day; and finally, breakfast, lunch, afternoon tea, dinner, and supper.

This last meal should be taken at ten or half-past, just before going to sleep, and should consist of a pint basin of bread and milk, or Quaker oats, or Force food, or Grape nuts, or Benger's food, or suchlike preparations.

The quantity at each meal should be small at first, but slightly increased each day—steadily and systematically and yet with discretion. If there be any difficulty as to food the spectre of "consumption" may be evoked, that makes such a ready prey of the emaciated.

If a bilious attack or anything of the sort intervenes, the diet should at once be lessened, or a meal omitted, or in extreme cases the patient should return to milk only, and start again. It is the perseverance that succeeds, combined with wise forbearance when necessary; in short, from first to last, it is "management."

The idea is that the patient should gain in weight, after the first day or two, not less than half a pound a day, or 3½ lb. a week, or a stone per month. It is not advisable to try to go faster than this, though, if the patient does so with ease, no harm is done; neither should the

patient go slower; but if she does, and does not mind giving double the time to the cure, the results are quite satisfactory. On an average a patient requires to put on from one to three stone.

If not bilious, one, two, or three eggs a day can also be given, beaten up in the milk.

Small game, jellies, clear soup, and such foods should not be given. They add no weight.

We must now consider *those who require less than ordinary diet.*

I cannot do better than recall a case, for they are not very common; and personally, I never look on a stout person with functional nerve-disease so hopefully as on a thin one. We must remember these patients want thinning and strengthening, with (for the sake of the nerves) entire rest in bed.

Of course, the Salisbury diet (if the kidneys are quite sound) accomplishes this, and I have used it in some cases. But the diet of minced beef and hot water is so unnatural, and to many so repulsive after a time, however well cooked, that one does not resort to it save in case of need.

In the case I allude to, I gave two quarts, not of skim milk, which still retains a lot of cream, but "separated," which has all the casein intact and no cream whatever. I gave a diet of meat, some vegetables, one slice of hard thin toast, tea, stewed fruit, with saxin for sugar all

through, the patient to lose half a pound a day as a maximum (not minimum, as in other cases) until the proper weight was reached. I took in this way nearly three stone off a young girl of twenty, keeping her strong and well all the time. In many cases the result can be attained simply by a reduction of ordinary diet, and as this is generally successful in light cases, I have included these under ordinary dietaries.

Lastly, there are *those who require special dietaries.* These include some of the rheumatic and the gouty, the diabetic, the dysenteric, nephritic, and other cases.

In the first two you may often, with advantage, humour the case for a time by eliminating beef and sugar, but you can never regard them as cured until an ordinary diet can be assimilated. A person permanently on a special diet is not in health, strictly speaking. I do not think I need here describe the special dietaries required in each case, as these form rather a part of general medicine, which I do not wish to touch in this monograph.

I merely call attention to fact here that the cure of functional nerve diseases, when mixed with organic disease, may require special dietaries —in their earlier stages, at any rate; and these ought therefore to be given.

But as a rule in all possible cases the ordinary

diet of a healthy individual should be given, the only difference being in the quantity. I am quite aware that an easy path to a so-called cure is found in eliminating from the diet what causes dyspepsia or "uric acid." But I term the cure "so-called," because I do not think it is really a cure when a weakness, such as dyspepsia or "uric acid" formation undoubtedly is, is *pandered* to instead of being removed.

To my mind a better way is to strengthen the nervous and digestive systems so as to overcome these disabilities, and force the digestive organs to do what they could not do, and thus make them assimilate ordinary food instead of cutting it off.

I am the enemy and not the friend of fads in the way of diet, and I consider great evil has been wrought, and nervous dyspepsia made permanent in many cases, by the easy plan of writing out special dietaries.

As a rule we have nothing to do in functional nerve disease with febrile attacks; should these occur, of course liquid food only must at once be given.

We may now leave the food and pass on to the next feature of the treatment.

3. *Massage.*—This is necessary in all cases, but not always for the same reason. It is primarily given to digest the food. The tradi-

tion on which it is based is that two hours' massage a day is equivalent to walking nine miles, and a person should walk about a mile a day for every stone he weighs. I have never known on what calculation this is based; but, anyhow, two hours a day is the full amount ever given.[1] Massage varies very much in quality, besides being of two distinct varieties—Swedish and English. There is no doubt in my mind (nor, I think, in any one else's) that the Swedes are the more thoroughly taught, the more workmanlike, and the more efficient; but the English are often quieter, more amenable, and able to exercise greater mental influence as well. I find, practically, that some much prefer the Swedish and others the English form, and both do well. Having ever before me the great influence of the mind over the body all through this cure, I am of opinion that, providing both are done thoroughly well, that system will answer best where the personality of the masseuse is most agreeable to the patient. I fear this sounds, like much else, rather unorthodox, but it is founded on long and wide experience. When there are special symptoms, such as weak muscles, wasting, heart and liver trouble, &c., the massage must be specialised, and suitable movements and

[1] I know, however, one enthusiast who gives his patients six quarts of milk and four hours' massage a day!

exercises added to it. Perhaps the most useful of these are the "Widerstandung Gymnastik," or the resisted exercises, of which there are a great variety—with either the patient resisting the masseuse or *vice versâ*—and which range in importance from the bending against resistance of a single finger-joint to the flexion of the thigh or the whole body.

The effect of the massage, general or specialised, will, of course, be carefully watched by you ; and speaking in general terms, if the bowels become regular, all the food is digested, and the patient gains strength and likes the masseuse, you have every reason to be satisfied.

4. *Electricity.*—Here I want to give those who wish to manage a nerve patient in the most effective manner a most important hint, and it is this: I have said enough already to show how much I think a wise physician can do to assist a nerve patient to use her unconscious mind, and thus overcome her weaknesses when sufficient physical rest and strength have been given.

Indeed, the physician's presence, words, counsel, and encouragement are (as I shall show fully later on) large factors in determining the cure. Now, it is awkward to come daily and sit by a patient and simply talk, with nothing whatever to do. Your medical inquiries and instructions do not take long. What you want is opportunity for

quiet talk with your patient, both to get at her mind and to make her understand yours. Here electricity comes in as a perfect boon. It is well, therefore, *never* to let a nurse or masseuse give it or speak about it, and to keep it absolutely in your own hands. The electricity that is most generally used is a slowly interrupted faradic current of as much strength as the patient can bear without pain, given all over the body, which for this purpose is divided into six parts—four limbs, stomach, and back. The two well wetted (salt and hot water) rheophores can be used, or the wet pad laid over the solar plexus, or on the lumbar spine, and one rheophore used. It is well to have the nurse out of the room but within call. You have now your opportunity. You are giving the patient treatment which she can understand and appreciate ; but at the same time you can help her mind immensely to aid her body. More than that, you can in many cases so alter her outlook on life that she will not relapse when she leaves you ; you can also help her to help herself. But I by no means think that the importance of electricity consists only in its mental value (which is placed by Möbius at four-fifths and by Eulenburg at one-fifth of its total effect) or the opportunity it gives for wise counsel. It has been shown to have a marked effect on muscular tone, on the circulation, and on the nervous system, all of a beneficial

nature. Rightly used, I consider it, in the triple way I have stated, one of the most useful agents we have. But all depends upon the physician taking his proper place as the healer and the inspirer, and recognising that the chief factor in the cure is not the rest or the food, the massage or the electricity, but in many cases himself.

5. *Mental Therapeutics.*—I have already spoken so fully of these in all their varieties in the chapter on psychotherapeutics that it only remains for me here to give a few brief hints applicable to this treatment in bed. I have indicated what a good opportunity electricity affords to a wise physician for good suggestion, but it must not be imagined that he is the only agent. The home, the nurse, the treatment itself, the masseuse, if worth anything, all combine in suggesting cure and relief.

One may say at once that in this cure the rest, isolation, and feeding are all secondary in insuring success to the mental attitude of the patient; and that it is the ignorance of this central fact that is the chief cause of failure. The rest treatment is one long suggestion throughout on its mental side, and persuasion and hygienic ideas are the chief curative agents. It must, of course, be remembered that only food, rest, and electricity can create vital force. Encouragement and mental ideas *per se* no more increase strength

than anger or alcohol. Fresh muscular or mental power is not given by these; they only enable all that is there to be more readily expended. It must clearly be understood that the fresh power from good news, good will, alcohol, or even anger, is never dynamogeny, or the accession of fresh force, but dynamophany, or the expression of latent force. Daily conversations with the patient are all-powerful if rightly directed. One must, of course, touch the patient's mind, and this sometimes takes days to effect; until then, however, you are only beating the air. There must also not be too much zeal, the patient must not be overtreated; and the directness of the suggestions must ever be guided by the receptivity of the patient; in fact, one must feel one's way. While much is noticed, much must be neglected, such as attention to slight symptoms, though even in these with some it pays best to treat them with great respect. The mental side of the physical treatment must not be forgotten; and no surprise need be felt at remarkable results following the most inadequate physical means, provided they seem effectual *to the patient's mind.* For instance, faradisation of the urethra is thus one of the best cures for incontinence, however unscientific. Of course, at times pure direct mental treatment can be used with success, as in the case of well-marked local pain, which can often

be cured for the time by the doctor placing his hand firmly on the spot, and assuring the patient it is getting better until it goes.

I must not, however, pursue this fascinating subject further here, having treated it so fully elsewhere,[1] only repeating that no rest cure that does not definitely and intelligently include real psychic treatment is likely to be successful in cases presenting any difficulty.

It is perhaps as well here (though one would hope it unnecessary) to point out in the strongest way the absolute necessity, while using such powers, of maintaining, naturally and without effort, the loftiest moral standpoint, with a single eye to the patient's recovery, and an absolute determination to let no factor enter into your intercourse with her but what is distinctly of therapeutic value. This by no means limits your conversation to medical subjects, which are often of no therapeutic value at all.

Physicians have ever maintained a lofty code of ethics in these matters, but it has been made easier in ordinary cases by an aloofness from personal interest in the patient and a heavy pro-

[1] "Unconscious Therapeutics, or the Personality of the Physician" (Churchills), 2nd edition.—"The Force of Mind, or the Mental Factor in Medicine" (Churchills), 3rd edition.—"The Unconscious Mind" (Hodder & Stoughton), 2nd edition.

fessional air. All this defensive armour must be laid aside if you yourself are to help the patient; hence, all the more earnest and constant watchfulness and care are needed that the freedom of the intercourse, on which its power and success depend, should never degenerate into familiarity or licence. Here, I think, comes in the force of Professor Nothnagel's dictum, "Only a good man can be a good doctor."

6. *The Nursing.*—If this factor in the case goes wrong, the patient will very likely not be cured.

You are surprised in some cases to find you make no progress physically or psychically, and then you discover that the nurse has been secretly undermining your influence. Do not think this impossible, because it is not at all uncommon. This is one reason for having the nurse out of the room when you chat to the patient. You have an opportunity then of hearing the patient's real opinion about the house, nurses, &c., which is always good to hear, but need not be heeded. But you will soon find out if the nurse is really loyal. Of course, when she is not, I do not for a moment think it is necessarily from any bad motive. She very likely does not understand your methods or aims, and therefore regales the patient with stories of the much wiser methods adopted by other doctors. It may be all well

meant, but it is none the less pernicious, and hinders the patient getting well. Always be sure the nurse is absolutely loyal, not for your sake, which matters little, but for the patient's.

In most cases it is a great advantage to have a special nurse—that is, one who has no other case to look after. This gives her at once an interest and an importance that make her twice as attentive to the welfare of the patient, besides having much more time to read, play games, &c.

Now as regards the qualifications of a nerve nurse.

I consider the nurse who can nurse a nerve case *efficiently* has reached the very highest place in the profession. There is not the least doubt that the nurse who has the power of meeting the vagaries of a diseased mind or exhausted nerves successfully has reached the summit of consummate tact and intellectual power. A good surgical nurse represents the highest form of mechanical skill, but the training that will turn out a surgical nurse to perfection will not make a good nerve nurse unless it be carefully supplemented afterwards. A nerve nurse has a very great deal to do with the recovery of her patient. She is nearer to giving medical aid than other nurses, because the medical aid a doctor gives is by no means confined to his prescriptions: it means tact and skill, and the mental touch by

which he can reach the patient's ailments. In all this the nurse can do a good deal; in fact, she can really do more in one way than the doctor, because, however skilled a doctor may be, he is only with the patient for short periods of time, whereas the nurse is there continuously.

The nerve nurse, of course, loses a great part of her usefulness if she theorises, if she tries to run ideas of her own on the patient. In all cases, of course, a nurse should always be unselfish and true, but in nerve cases it is everything. I do not say that a nurse can ever neglect to give her patient medicine and food at the right times, but the nursing proper that a nerve nurse gives to her patient is really in her unvarying patience and kindness, brightness, and cheerfulness. I might use a familiar expression in connection with this subject, and say "A nerve nurse is born, not made," but I prefer to say that she is born *as well as* made. I think a person undertaking the career of a nerve nurse should first make sure that she has the qualities of sympathy and tact. Then she must go through a course of hospital training, and after that she should try to study nerve diseases so as to understand their gravity and reality. Thus she may hope to develop into that most wonderful of all women—a nerve nurse.

What a nurse *is* is of far more importance in

nerve cases than in any other. Tact is mental touch. Just as the touch on a patient's hand will often quiet and soothe him, so mental touch on a patient's mind may do inestimable good. You may spend a week in a patient's room and yet feel you have never touched her; there is an unseen barrier between you and her, but, once you can get in touch with her, from that moment the barrier disappears and your power begins. There must be this tact or mental touch.

The most essential quality in nerve nursing is patience, but, as a matter of fact, a nerve nurse who understands what she is doing cannot be impatient; she loses her capacity by impatience.

In the first place, when she grasps the reality of the patient's suffering, and that the suffering, though it may be mental rather than physical, as in a broken bone or diseased joint, is still more painful than these—more hard to bear—she ceases to be impatient, she knows that the difficulty of the case is due to the patient's disease. To know is to pardon, and is to have patience. We are impatient with the things we do not understand.

Nerve nurses worthy of the name do not get impatient for two reasons:

1. They understand the reality and gravity of their patient's sufferings.

2. They know what discipline of character

they are undergoing and the value it is to themselves.

Another qualification of a nerve nurse is that she should understand the immense value of her unconscious influence, and how what she does acts upon the patient.

It does not matter much what a nurse *is* to a patient delirious in pneumonia or with any similar complaint, but in functional nerve disease it is of the first importance.

Then a nurse should be of a sanguine temperament. There are nurses who seem to be made in a minor key; these should not attempt nerve nursing.

One fault of the amateur nerve nurse is that she often tries to soothe her patient with platitudes. Nothing can be more irritating, especially to highly educated people, and nerve patients almost invariably belong to this class. Better to say one thing that comes from the heart than a thousand from the mouth alone. She should also never talk about other patients to the one she is nursing.

A nerve nurse, unless she has been rightly trained, often thinks that she must go against her patient in everything she says. Go *with* the patient at first, and not against her, and gradually lead her to see that this is right and that is wrong. Sympathise with her, let her feel that

you understand her. Say to her "Yes, it is very trying, very hard to bear"; so it *is* to *her*, but add to this: "Don't you think if we did so-and-so it would make it better?" Carry her with you in your wise counsels, not contradicting her, but drawing her mind along with yours into the pathway of health.

Another important factor is the skill with which the nurse is able to keep her patient occupied.

Here are one or two hints to nurses of practical value:

1. Have a good working watch, keep it right, live by it, and let your patient do so.

2. Don't make a suggestion to your patient without consideration. Discuss it, and try to carry it out if agreed upon. Nothing is more trying than many and various discussions about plans. Spend time and trouble privately in thinking before you open your mouth.

3. Do not discuss trivialities which can be done in silence.

4. Be quite definite. Try to be a mental support, not a broken reed.

5. Always keep your dignity and your patient's. Imagine it where it is not.

6. Never discuss unnecessarily morbid or distressing subjects, nor, in trying to make your patient forget her troubles, add your own to them.

7. Too little talking is better than too much.

8. Know when to leave speech to nature when out of doors. Walking and talking combined is often too trying for a convalescent.

It may be, of course, that the caprice of the patient obliges you to change a nurse who is perfect in herself. Still, there are times when this must be done for the patient's good, but there are others when it must *not* be done, for the same reason. It is for you to decide, without fear or favour. Never, never let your consideration for the matron, the nurse, the masseuse, and the friends, and least of all for yourself, obscure for one moment your single object of curing the patient. Always and in every way consider her first, which does not by any means involve always giving in to her.

7. *Occupation.*—This is a matter the importance of which varies much with the individual case. Some occupy themselves; with others it does not much matter whether they are occupied or not.

But in all cases of excessive introspection, of depression, of excitement, constant occupation for the mind must be found. Books, papers, pictures are, of course, available. Then there are all the varied occupations possible in bed, every one of which I have used at different times—knitting, embroidery, lace work, string work,

wool work (waistcoats, slippers, &c.), netting—fine and coarse, for fishing-nets—pillow lace, artificial flower making, paper hat making, dressing dolls, making scrap-books, albums, raised Braille-type books for the blind, sketching, making fancy articles for bazaars, making mats and rugs of wool, patchwork quilts, developing photos, &c. Also all sorts of games can be played with the nurses. As I have said, some patients give no trouble, while with others you have to exert the utmost ingenuity to keep them busy. It is best to have a teacher in these cases who will give definite lessons at a stated time, and insist on so much practice each day. With these cases everything must be done by rule, and the time-table must not only include all food, &c., but all occupations. Success in finding an occupation in which the patient takes a real interest is of the greatest value in the cure ; and no trouble is too great to succeed in this respect. Other employment is in stated exercises for five or ten minutes night and morning with a Terry's (steel-spring) or Whitley's (rubber) exerciser, or one of Sandow's, such as his "Symmetrion."

8. *Isolation.*—This is the last detail connected with the rest cure, and must not be carried out, any more than any other, on hard and fast lines. In all cases of hysteria proper, of

exhaustion and true nervous debility, it is absolutely necessary for from a fortnight to a month. In many others it may be advisable. When complete it involves an entire severance from the outside world, letters, callers, messages being all forbidden. In lighter cases of other varieties of nervous disease, it need not always be complete if objected to. If not objected to, it is nearly always best to seclude the patient.

The only instances where friends are helpful early in the cure at stated times are when all attempts at employment fail, or the depression is very profound, and when a discreet visitor can be relied on to amuse and distract, and not talk about ailments. But, as a rule, the nursing staff is able to cope with these difficulties without outside help. It happens, sometimes, they are not, and this just shows the folly of cast-iron rules.

Your golden rule is, of course, to conserve all nerve force, and not let it be spent, even physically, on relations and friends. In many cases the patient at once begins to improve when isolation is enforced, and never will otherwise.

In others it is impossible. The patient would not come at all if separated wholly from mother or husband. Many doctors refuse cases on

these terms, but I have cured many when the mother has come every day, or the husband. The latter is *most* undesirable, but does not always make cure impossible, as is often supposed.

Sometimes if the relative may come the first day or two, he can be cut off after; but wherever possible the best plan is a clear cut from the first. Letters also must neither be written nor received.

In regulating all these cases, where any objection is made, the best plan is, as before, to say: "Well, anyhow, you'll keep quite quiet for a fortnight till we see how you get on, and then we can arrange for you to see a friend, if you have turned the corner."

When in your judgment friends may be seen, the golden rule is, the patient is to see only those *she* wishes to see, not those who wish to see her. At first one visitor in the week, then oftener, and then longer at a time—all depends on the case.

Make the patient understand and feel that every regulation is made expressly for her, and is not a part of a preconceived routine. Of course, you sometimes have patients who *must* write some business letters or see some one on business. If it must be, it must; therefore allow it, but give them distinctly to understand

that they must be prepared to stay in a little longer to make up.

It is not good policy ever to allow more than one visitor at a time. It is very wearing for the patient. The afternoon is, of course, the time for these visits.

These scattered hints are elementary, but may not be wholly useless, as in these cases it is the small details successfully arranged that lead to great results.

Dercum advises that the patient be weighed only once in three weeks, others weigh every other day ; in my practice I find once a week on same day and hour best, the patient only being told the result when advisable.

Special troubles in this cure are insomnia, dyspepsia, and constipation. The first must be combated by massage, suitable food at night, such as hot malted milk, by compresses (wet) round abdomen, and, if necessary, by judicious use of drugs. The second, by massage, electricity, mental suggestion, drugs, but never by dieting if possible. The difficulty must be overcome when practicable. As to the last, there can be no doubt it is a great matter to procure regular action of the bowels, and if the patient regards it as such, and is willing to take the pains required, you may assure her that you will establish a regular action without medicine that shall last the

rest of her life. So far, we may suppose, she never has an action without a pill, and then only irregularly. If she be quite willing, you must get the nurse on her mettle too, and then you give your instructions. A definite hour is to be selected for the action—such an hour as not only suits the present conditions, but that will fit in with home life afterwards, say 8.45. The bowels are henceforth to be opened at that hour, and at no other. Whatever the inclination to go before, it is to be resisted. Five minutes before the appointed time the patient is to be solemnly got out of bed, robed in dressing-gown, and taken to the closet, whatever her feelings.

At first, to insure success, a simple pill of cascara or some vegetable laxative is to be given the night before, to make it easy, but the hour is *not* to pass without the bowels being opened. If there seems no likelihood of this naturally, a glycerine suppository is to be given; or better, some glycerine injected (ʒss). If this fails an enema is to be given, and the desired result obtained. Then, not before, the patient can return to her room. Of course, at first there is often a fight, but it must at all costs be made and victory secured. With all due solemnity, and a strict regard to the exactness of the hour, the process is repeated each morning.

There are extreme cases where to insure

success it may be necessary for a while for the doctor to time his visits at this hour, and so to throw the influence of his presence into the scale.

After a week or so the aperient may probably be left off, and vigorous massage be sufficient.

After some weeks a natural desire will be felt at the exact time, and from this time only steady perseverance is required to form the fixed habit for life.

I could adduce numberless cases at all ages, from early childhood to a lady seventy-four years of age, whose rectum was so inactive that a trained nurse was kept in the house solely to evacuate it artificially, and who yet established a perfect habit in six weeks.

Of course, no day must be missed, and the hour never varied.

I think on the whole I have earned more gratitude from patients by forming this habit in bad cases of simple constipation than in any other way.

CHAPTER XII

GENERAL TREATMENT

IT must be remembered that the rest cure is ostensibly a physical cure; and that though, as I have shown, to be successful, mental therapeutics must be combined with it, nevertheless the central idea that governs every variety of Weir Mitchell treatment is to remove any possible basis of a physical nature that there may be for the nervous disease. If, however, when all this has been done and the patient is brought into a perfectly healthy bodily state, it turns out that the nervous condition is still only partly relieved, it is obvious that some further treatment of a different nature must be employed to complete the cure. The reason for such a state of things is either that the nervous exhaustion or disease is so deep-seated and obstinate, or the methods of suggestion have been so feeble and inadequate, that the mental cure has not proceeded hand in hand with the physical. Whatever the cause, how-

ever, something more must be done. I propose, therefore, first of all to consider generally the further therapeutics that may be necessary to complete the cure that the physical treatment has begun, and also to look at other forms of cure applicable to cases of functional nerve disease for whom "the rest cure" is not adapted.

I will next consider the treatment of dyspepsia, which forms such a prominent symptom in nervous diseases, and finally examine the real merits of water and electricity in their application to these cases.

It will be noticed, no doubt, that while I have spoken of the ætiology and symptoms of hysteria and neurasthenia separately, so far I have made no distinction in considering their treatment. It will be well just here to say a word or two as to this.

There is no doubt that "the rest cure" is the first treatment needed in all functional nerve cases connected with malnutrition; not, as I have shown, only with a view of building up the organism into a healthy physical state, but because it affords unrivalled psychical opportunities to the wise physician to alter the mental outlook and correct the bad suggestions that have largely contributed to the disease. Of course, "the rest cure" is so modified in

different cases as to be hardly recognisable as the same treatment. In simple neurasthenia, however extreme, for instance, perfect rest in bed and isolation is the rule, whereas with a restless hypochondriac or hysteric, friends and outdoor exercise may be needed each day. There must be no hard-and-fast rule whatever ; every detail must be intelligently varied and adapted to each individual case.

The most impossible and hopeless cases are the intelligent and opinionated class, who have long been in contact with doctors, and who have hitherto succeeded in converting every form of treatment into a failure (to their secret satisfaction), and thus vindicating their own opinion that their case is hopeless. Still forced by their friends to try once more, they come to you, and you will fail too, unless you can succeed in touching some hidden chord unreached by others, which places their minds on your side, for in these cases pre-eminently the cure is psychical. It will be observed that in all the treatment I suggest I limit the psychical to suggestion, direct and indirect, from physician, nurse, treatment, environment, &c., without any use of hypnotism or special influence of any sort, reserving such for use by a specialist in those extreme cases where all his powers have failed.

Speaking generally, the neuromimetic symp-

toms in hysteria disappear quickest when the treatment neglects them entirely and ostentatiously, while at the same time unconsciously the patient is encouraged to move the paralysed limb or to see with the blind eye. No rule, however, holds good for all; for a minority recover best with elaborate treatment for the affected part, as in simulated organic disease.

I have cured hysterical abdominal tumours effectively and permanently that have persisted for years by giving an anæsthetic, when the tumour temporarily disappears; when a rigid plaster of Paris bandage is firmly adjusted while the patient is unconscious, which physically prevents the re-formation of the tumour. This is kept on for a month or two, by which time the unconscious mind ceases to attempt its reproduction. I have purposely given no records of cases and cures here, as they abound *ad nauseam* in other books, and after all are of little value and often misleading; for while the case and cure can be described, the personality of the patient cannot; and it is the variety in this respect that makes the same treatment successful in one case and a complete failure in another, where the disease is the same but the personality differs. It is best, therefore, in a manual like this, to be content with laying down general principles of cure.

I will now proceed to consider the further treatment of such cases as "the rest cure" has not wholly relieved.

It is sometimes found, after all that can be done in a home, that the depression or some other symptom will not yield to the treatment. I have had many of these cases, and after building them up physically have still found these symptoms persist. Some more active plan must then be tried. I have combined a partial rest cure in some of these cases with every conceivable variety of occupation. It must be remembered the healthy individual requires some mental stimulus and emotional excitement, and that failure to stay entirely in bed may, after all, be a healthy sign. Brisk gymnastics every morning at a gymnasium; cycling each day; sight-seeing two or three times a week; hobbies of all sorts—wood-carving at a studio; metal working and enamelled jewellery making; leather work; embossing and colouring; bookbinding; stone-carving; fencing; golf and hockey; visiting places and writing essays on things seen; boating and motoring (which is of special value in irritable nerves and insomnia. Several cases of severe neurasthenia and persistent insomnia amongst artists, barristers, &c., have been cured by constant use of a motor-car). One of the best

cures, in certain cases, is washing. I have sent delicate lady-patients to a laundry kept by ladies; and there they have had to work hard, unnoticed and apparently uncared for, until the depression has passed away. It is astonishing what a discipline this is, and, if thoroughly carried out, the good it does.

Gardening in some cases is almost an equal relief, and can be well taught in London. Domestic economy is also well taught nowadays, and is a great relief to some overwrought brains. Drawing, painting, botany, geology, and zoology are all good subjects. Other patients I have employed in parcel forwarding, secretarial work, typewriting, shorthand, and in other ways too numerous to mention. Never be without a resource, and always retain the patient's confidence, so that she may take up what you recommend with hope and vigour.

In other cases, again, extraneous aid is needed. That persistent neuralgia of the head calls for static electricity, and you have not got one of those largest machines. She must therefore go where there is one, or for the high-frequency current; but all under your guidance and, if possible, presence, which greatly aids the cure. Or it may be a question of electric light or heat for rheumatism, &c., and here again you must

guide and preside. Never, if possible, depute your authority to others. So far, all I have said is supplementary to the fundamental rest cure, which is the basis of the treatment.

I now turn to the minority of cases in which, for various reasons, no form of rest cure is useful or available. No doubt much that I have outlined does not convey the idea of rest, but it is all connected with a large part of the twenty-four hours being spent in bed.

Some (I confess mostly men, in my experience) have a lazy sort of neurasthenia, combined with fair nutrition, that speaks loudly of liver and calls for no bed, but an active, regulated life, away from home, with treatment. These must be sent where there is a good masseur and a clever nerve expert (not a doctor), to a cottage or farmhouse, where there is plenty of work to do. From morning till night each hour must be given up to definite work—in garden, farm, stables, poultry yard, orchard, greenhouse, bees, house, workshop, &c.—and the patient often worked till he is ready to drop. All this must be combined with vigorous liver, &c., massage and electricity. This, in the hands of some cheerful, wise, and energetic person, capable of carrying out all your orders, works wonders. You cannot call the treatment by any name, I am thankful to say, but there is a distinct class who

require it and whom it cures. Some, of course, want the mind worked a little as well, but it is mostly reached through the body. Crotchety people, morbid consciences, religious melancholics, sexual hypochondriacs, are all helped in this way, and some can be helped in no other manner. What they want is this combination of management with some physical treatment and steady hard work.

Of course, this is not incompatible with travel. In some, especially when the improvement has begun, travel is clearly indicated. The evil about it is that it has been so greatly abused. Patients in the last stage of malnutrition and nerve exhaustion are sent to travel over Europe, with the worst results. What they want first is two months in bed at rest, *then* the travel would do real good.

A great deal, too, depends on where they go and with whom they go.

It cannot be too clearly understood that Alpine climates over eight thousand feet rarely suit any nerve case, while some may absolutely lose their reason, from the too great excitement of the air.

The places best suited for these nerve cases are from two thousand to five thousand feet in height, all woods and forests, moorlands, and with many, not all, the sea coast.

This travel can be undertaken alone or with a skilled nurse-companion, according to the severity of the case. Sometimes a small party helps greatly to restore a healthy tone to the mind. Of course, the tastes and idiosyncrasies of the individual should be studied, and sport provided if it is wished. That plan suits best where the patient is happiest.

A voyage in some cases is better still, only be careful here of melancholia. I shall never forget taking a patient down to the *Dunottar Castle* at the docks for a voyage to the Cape and back, and introducing him to the then doctor of the ship. He told me he would look after him with pleasure, but that the patient would be sure to jump overboard before he reached the Cape; he had had three who had done so. As a matter of fact this one did not. If, therefore, there be marked depression or melancholy, it is best to keep to dry land with a skilled companion. In many other cases, however, a voyage is the thing.

One patient, with very overwrought nerves, I sent for twelve months in sailing ships only, and this effected a cure; the patient, curiously enough, employing himself with making a beautiful collection of insects found at sea and caught on deck (not in the cabin). There are many favourite voyages, such as the Cape, the

Mediterranean, the West Indies, and, for a long voyage, New Zealand.

India and Cashmere are admirable but expensive remedies for some morbid conditions of nerves, but in many cases India does not suit at all. Turning back for a moment to bad cases of depression, fixed ideas, minor delusions, and what are known as borderland cases, but still on the right side of the border, the system known as "back to the land" is, to my knowledge, powerful for good. These patients live pretty much in common on a large farm, under skilled superintendence; the life is bright and cheerful and wonderfully free. The only point insisted on is that all shall work to the utmost of their capacities on the farm, in the fields or byres, amongst cattle or crops, the women making butter, &c., but each and all hard at work in the open air all day long at natural toil, eating their bread, literally, in the sweat of their brow. It is extraordinary what a healthy effect actual contact with the soil in the fields has in these cases. For slighter cases, of course, there are (for ladies) agricultural and gardening colleges, notably Lady Warwick's at Studley Castle.

I have seen the greatest good result in mild nerve cases from associated pleasure trips, where a large party travel or cruise together on the Continent or in the Mediterranean. Some

superior and exclusive individuals object to these, and it is useless to press them; but those who like them derive far more benefit from them than from solitary tours with one companion.

There are cases, of course, of delusions, melancholias, &c., that cross the line and become the care of alienists. There is no need of great hurry in handing these over unless suicidal. Wait, at any rate, until you are convinced not only that the symptoms are, or have become, clearly mental, but that there is no reasonable hope for a restoration to health under your care.

Some with strong altruistic or religious tendencies, not melancholics, are cured by being immersed in Christian work among the poor. Many of my patients have thus benefited. Anything and everything that weans from introspection and morbidity is an agent for good.

Individual characteristics must be studied. Some neurotics are anti-social and only improve when no other invalids are near. As to exercise, in cerebral neurasthenia it does good and is liked, in spinal neurasthenia it fatigues. The latter, therefore, requires much longer physical rest than the former. In neurotics generally, exercise should, if possible, combine mental rest; for instance, mere walking often allows time for ceaseless worry or brain work, whereas golf or tennis or cycling does not.

Neurasthenias differ immensely in their curability, though on the whole easier than hysteria. Constitutional neurasthenia not due to special causes is difficult to cure and may proceed to true mental disease. Sthenic neurasthenias, where the physique is over-nourished, are not easy to cure. Even when combined with depression, such cases are best relieved by exercise, saline aperients, low diet and no stimulants. Dr. Whittle has described a congestive neurasthenia with head pressure and insomnia cured by twelve leeches over the mastoid process. On the other hand it must be remembered that the asthenia in neurasthenia is often exaggerated and is of psychic origin. Phobias and other mental symptoms disappear sooner than faults of character, and much time is often expended in trying to cure these latter, which, after all, may not be pathological but natural. Avoid as far as possible local sexual treatment in men or women.

In the common case of ovarian pain there is generally no disease of the ovary or any sexual organ.

In such cases local treatment fails and may be injurious. In neurasthenic pain local treatment may do no particular harm; but in hysteria it is the worst possible treatment, fixing the patient's attention on the symptom and thus aggravating it. The only exception to the rule

is in such cases as when the evil has been already done by injudicious local treatment; in such cases another variety of treatment may relieve by suggestion.

In spasms and hysterical fits it is well to explain to the patient that the onset depends often on an idea, and on fear and expectation, and that they are best lessened by cultivating a stoical attitude and indifference. The same applies to fear of death, contagion, and other phobias.

I now come to consider the special symptom of dyspepsia. As a rule a patient believes that all her nervous symptoms will disappear when the stomach is cured; but it is not the dyspepsia that produces the neurasthenia, but the neurasthenia that weakens the stomach, as well as all other organs, and produces the dyspepsia. Once neurasthenia is regarded as the result of gastric trouble, the treatment becomes purely medicinal, and the nervous trouble persists in spite of all antiseptics and stomachics.

Moreover, antiseptic medicines never relieve gastric catarrh of neurasthenic origin. In these gastric affections the local remedies of any real value are HCl and washing out the stomach. Atony and dilatation of stomach is often relieved by dry diet and no liquid at meals; while gastric neurasthenia is always aggravated by mineral waters. Dyspepsia seldom calls for the stomach

pump and analysis of the gastric contents; a little common sense and a removal of the real cause (generally psychic) will do far more.

"Nervous" bowels with constipation is due rather to spasm than to muscular atony; hence in these cases belladonna, bromides, and mild hydropathy does better than exciting treatment by massage, purges, and cold douches, which often aggravate the spasm. In such cases relief is often obtained by slow injection of warm water, after each stool, from a douche four feet above the patient, the buttocks being raised. To the water may be added camomile or valerian, also salol and sodæ bicarb. This often cures the spasm.

Hysterical vomiting is often caused by passing the stomach tube. It is often very persistent, but otherwise is not serious, being constantly associated with generally good nutrition.

In fits, pressure at the supra-orbital notch or against roof of orbit is often more effective in arresting an attack than pressure on the ovaries.

When they occur, leave them alone unless extremely prolonged and cataleptic, in which case a strong faradic current or subcutaneous injection of hyoscyamus is effectual. Hysterical contractions and paralyses are also best neglected; or the contracted limb can be extended and set in plaster of Paris splint.

Turning now to cures by water, we must consider hydros, spas and baths.

Hydros have much to recommend them as after-cures in these cases, and are most successful in the cardiac and gastro-intestinal neurasthenias. Situated generally in a well chosen and bracing situation, well built and appointed, with cheerful surroundings and visitors, they are superior to hotels as a rule in their social influence, and if under skilled medical supervision and most careful control, the sea-baths and air-baths and general *régime* are in the highest degree helpful and stimulating. The modern hydro is, I think, better adapted for convalescence than for any very active treatment.

Not so the baths and spas at home and abroad. Here very active treatment is the vogue and an after-cure during convalescence often required. Strathpeffer, Harrogate, Woodhall Spa, Nauheim, Aix and others will occur at once to the mind as places where a pretty vigorous treatment is carried out.

For nerves pure and simple, I recommend Salso-Maggiore and Strathpeffer and the mud-baths at both. For nerves and heart, Bad Nauheim. For nerves and rheumatism, Woodhall Spa or Marienbad. I do not for a moment say that I am prepared to prove that these particular spas stand out in any proud pre-eminence

above all others, but they are the first that occur to me.

In all nervous cases the patient must on no account stay with her own people, and a wise nurse or companion is a *sine quâ non*, who can to some extent take your place, and is under your orders. A severe course at one of these spas should be followed up by an after-cure, if iron is needed, at some such place as Schwalbach, or if there be no special indication, in Norway, the Black Forest, Tyrol or Engadine, according to the taste and the season.

Coming to some details of hydropathic treatment, I may say broadly that all hydropathy is safe until one begins to use cold water, and here care is required.

All cold treatment should be short and vigorous, and a good reaction should be obtained. Before hydropathic treatment is decided on, it is essential to understand the exact amount of nerve depression or exaltation of the patient.

Unless there be some pleasurable feeling and a marked reaction, the cold douche can only do harm. This douche is best when the patient has had a brisk walk or has been in bed, or from some cause is warmer than usual. It should never be applied when the patient is cold, and particularly if the patient is suffering from anæmia.

Nothing cures "nervous" bowels like the

dripping sheet, the wet pack, and the still or running sitz-bath. The dripping sheet should be well rubbed all over the patient, and should be warm and soothing.

The wet pack should never be prolonged if the patient is cold or uncomfortable. There should be a wet cloth on the head and a hot bottle to the feet if needed. The patient should perspire freely. The pack is an admirable cure for unstable nerves and insomnia, especially in children and young people. In some cases of over-excitability and extreme irritability, and even in slight delirium or mania, it acts like a charm.

It must ever be remembered that in mild and commencing nerve cases hydropathy can often cure more quickly than a Weir Mitchell course. I should like specially to mention the great value of the stomach compress in cases of dyspepsia, distension and dilatation of the stomach, as well as for insomnia. This compress is a coarse linen bandage twelve or fifteen inches wide, long enough to go two and a half times round the body, and covered with thin waterproof for nearly half its length. The uncovered half is soaked in warm water (or cold), and the wet bandage wound round and covered with the dry, and kept on in day for half an hour, or if put on at night, till the morning. The waterproof keeps it warm and comfortable. Mineral

water cures should be avoided in cases of nervous dyspepsia and dilatation, as the amount of water taken only aggravates the evil. Sea-bathing is generally too exciting for neurasthenics, save as an after-cure.

Electricity can be applied in various forms. Those generally used include high frequency, sinusoidal and polyphase, static, galvanic, faradic, and the electric light. The galvanic and faradic can be used in water (baths, &c.) with great efficacy.

We are ignorant of the exact method of action of any form of electricity; but clinically we find which form is best adapted for any particular disease.

High frequency is perhaps the most uncertain and capricious in its effects. Properly applied it seldom does harm, but it is general in its application, and cannot be localised. In a large number of cases no benefit whatever is derived. In others the most startling and unlooked-for results follow, that cannot be wholly due to its psychic value. It is indeed curious that such an impressive remedy should not have more psychic value. Some time ago I succeeded in curing a case of diabetes, brought on by severe nerve shock, that for years had resisted the most careful and elaborate treatment. The sugar, which persisted in large quantities, completely disappeared after

a short course of high frequency. Other such cases have been recorded in Vienna and elsewhere.

In functional nerve disease I confess it is disappointing.

Of sinusoidal, polyphase and triphase electricity I have no personal knowledge. Dr. Herschell [1] is one of its chief exponents and recommends it strongly in neurasthenia, especially in cases of low arterial tension, as its effect is always to raise the blood pressure. It seems to be of value in treating nervous gastric atony and also in obstinate constipation. The polyphase current has a special power over unstriped muscle. Static electricity, described in "Quain's Dictionary of Medicine" in 1883 as practically obsolete in therapeutics, has been revived, and found of great value in nervous head affections and other neurasthenic symptoms and neuralgias. The new machine (Wimshurst's) is an influence rather than a friction machine, and consists of two or more glass or vulcanite plates with sectors of tinfoil or brass revolving in opposite directions, and the electricity is collected from them by points and condensed on brass cylinders or in Leyden jars. This current is small in volume, but has a high electro-motive force. Static

[1] Dr. Herschell, "Polyphase Currents in Electricity," 1903.

electricity is more felt than high frequency and is more effective. Generally it diminishes arterial tension and slows the pulse. It relieves dyspnœa and increases respiratory metabolism; but specially it lessens nervous irritability and soothes neuralgias, headaches, migraine, and the pains of neuritis. It also induces diaphoresis. Sometimes the treatment is delightfully pleasant and hardly felt, and at others unpleasant, or, with the spark, even painful. The spark is effective as a deep-acting counter-irritant for stiffened and fixed joints, whether resulting from injury, rheumatism, or rheumatic arthritis. X-ray treatment can also be given by static machines, and has the advantage that burning is almost unknown. This is due to the small volume of the current and the consequent necessity of using "hard" tubes. It therefore requires a long exposure to produce its effects.

Galvanic electricity is most useful, especially in wasting and painful affections. The usual current is 5 milliamperes from a battery of 15 to 20 Leclanché cells fitted with a galvanometer and reversible. As the required current is about ·005 amperes, and the resistance of the body varies from 1 to 5,000 ohms, the force of the current must be of 5 to 25 volts. A Leclanché cell generally gives 1½ voltage. In reversing it is always best to cut off the current to avoid shock.

In spinal neurasthenia the constant current is of great efficacy. It must be remembered that the ascending current dilates the vessels and hence is good for an anæmic brain, while the descending current contracts the vessels and hence relieves the engorged brain.

Cramp of the stomach is often cured with the anode on epigastrium and the kathode on the spine, whence the pains radiate. Electric massage of the stomach also relieves. In gastric atony the positive anode should be on the spine and the negative kathode over the stomach. The current thus applied is of great value.

The sympathetic system can be reached by a large positive electrode on the stomach and a small kathode over the superior cervical spinal ganglion. The current should not be continued for above two minutes, nor exceed 3 or 4 milliamperes.

For general directions for the use of both galvanic and faradic electricity special manuals should be consulted; all that can be done here is just to point out a few special features of value in nerve disease.

On the whole the faradic current is most applicable in functional nerve disease. It certainly gives the greatest psychic results, and this for several reasons.

The noise and the pain impress the patient

far more than the silent galvanic current, and the resulting muscular contractions are evidence of its power. But it is by no means wholly psychic in effect, though, as I have said, its exact mode of action cannot be explained. It is probable that, applied either with two rheophores some inches apart or with a wetted pad on spine or epigastrium and one rheophore locally, it stimulates the central nervous system according to the part that is faradised. It has, of course, obvious local effect in muscle action and some effect on the vasomotor nerves and local temperature. It also restores sensation to anæsthetic areas, especially if used with a metal brush. Its force cannot, of course, be measured as in galvanism, and one must be guided by the patient's feelings, which should never be put on the strain. The primary current acts more on the skin and the waves all travel in one direction; the secondary penetrates more deeply, gives less pain, and the waves alternate in direction. This current is the best for general use in functional nerve disease.

Direct electricity of any sort to the head or heart is not without danger, and vertigo, syncope, and other unpleasant results, may follow.

With those who persistently still refuse to treat the body in any way through the mind, electricity

of all forms is in little repute; but by those who, more enlightened, have no scruple in using this all-powerful psychic force for the cure of the patient, electricity is found to be a remedy of great value, having, as I have said, distinct physical effects as well as psychic.

With regard to drugs, there can be no doubt they are of minor importance in these diseases. Quinine, nux vomica, iron, and hypophosphates are beneficial, but without proper rest, sleep, food, and mental therapeutics they will not cure the neurasthenic patient. If they do, the neurasthenic condition is probably slight and of recent origin, and most likely would have recovered without drugs at all.

Generally speaking, strychnine in some form is a most useful drug, far more so than quinine. Easton's syrup is of never-failing value as a general tonic, and the glycero-phosphates and various preparations of coca and kola are of value. Of the former I must mention the Esencia di Coca as of much value as a substitute for coca wine, which often leads to inebriety in nerve cases. All the old nerve remedies—valerian, sumbul, asafœtida, zinc, &c.—are still useful in selected cases; while for special symptoms the usual remedies must not be neglected because the disease happens to be nervous. Digitalis, salicylates, phenacetin, opium are of great value,

even in functional nerve diseases: for psychotherapy is not all. Ergot, arsenic, and cannabis indica are all good in neurasthenia, and particularly in nervous headaches. Caffein with phenacetin is almost a specific in neuralgia. For insomnia, besides veronal, trional, paraldehyde, and all the family of hypnotics, 15 grains of bromide of soda or strontium in a bitter infusion, and taken after each meal will often restore sleep after a few days.

Salol, benzo-naphthol, carbolic acid are of great value in septic and flatulent conditions of stomach and bowels.

Ergot and opium relieve in nervous polyuria. For constipation all the usual remedies are available until the trouble is cured. Calomel and hyoscyamus seems to suit nearly all cases, and never causes griping. But no one is satisfied to continue these if the patient is under prolonged treatment. The time should always be used to effect a complete cure of constipation, which can nearly always be done providing you have the full faith and co-operation of the patient.

CHAPTER XIII

NERVES IN CHILDHOOD

THERE can be no doubt that a large number of neurasthenics and hysterics are the direct result of the neglect and ignorance that nervous children so often suffer from. As child-life is better understood and treated we shall find that many will be rescued from lives of nervous misery by the proverbial "stitch in time." I will therefore devote a short chapter to a consideration of this subject.

The earliest condition that can directly predispose to functional nerve disease in children is the health of the reproductive cells themselves —ovum and spermatozoon. There can be no doubt, in the first place, that both germ and sperm cells vary immensely in quality in the same individual, and that some may contain all the unbalanced nerve condition of some ancestor and others none. Hence the great differences one sees in families; so that the production of offspring with certain definite qualities is by no

means ensured by the congress of any two individuals, but is actually determined by the final union of one particular sperm cell with some particular germ cells. The other point is that the greatest and most common hereditary cause of mental and nervous disturbance is by poisoning and deterioration of the germ through the action of alcohol. From one half to three quarters of all idiots and epileptics spring from drunken parentage, while Professor Demme has shown that in 10 large drinking families with 57 children, only 2 were normal; while in 10 temperate families with 61 children, 50 were normal.

The next important point is the state of both the parents at the time of conception, and the next is the condition of the mother during gestation. There is no doubt that here we reach great predisposing causes of disease that are little thought of. It is the duty of every physician, though one, no doubt, not easy to discharge, to bring home to the minds of his patients the important connection between the health and condition of the parents and that of their children. It is difficult to prove physiologically how the two are connected, but clinically the fact is established. Congress during intoxication or periods of shock or intense mental excitement is fraught with danger to the offspring. In the

same way no woman should become pregnant who is herself at the time neurasthenic, or suffering from disease or malnutrition ; and every possible care should be taken during gestation that spirit, soul, and body be all in health, and kept free from shock. These are, of course, counsels of perfection, but they should be aimed at much more than they are at present.

One fears that the profession has, perhaps, hardly realised the value of prophylactics in these diseases, and how much may be averted by good and wise counsels on these points if given in time. Many a life is wrecked and doomed to needless lifelong suffering through parental carelessness as to their own health and condition at the time of conception and during pregnancy.

The next danger is teething, which often causes a profound disturbance of the nervous system. Convulsions from teething may lead to nerve and mental diseases. Another early danger is rickets, which often leads to an absolute deficiency of intellect, as well as to nervous disease.

During the period of the second dentition, from seven to twelve, there is more nerve disturbance than is generally suspected. Neuromimesis is common at this period, and other hysterical symptoms, also chorea. A look-out, however, must be kept at this age for malingering, which

is common. All nervous troubles at this time should at once be treated by relief from study and an open-air country life.

Puberty is, however, the special time of great danger, and the problem of the whole future life as regards health is often settled in adolescence.

All hereditary pathological nervous tendencies seem to come out in adolescence. At this time, therefore, the child should be closely watched for any well-known ancestral idiosyncrasies; and everything should be done to combat any suspected or manifest nervous instability or weakness. Special note should be taken of the powers of the inhibitory centres, and these should be strongly fostered, developed, and exercised at this period. Self-restraint and self-control are not only valuable moral qualities, but invaluable prophylactics against nervous troubles.

It may be well here to give one or two figures as to the development of a normal child for comparison with nervous children. A normal child grows two to three inches a year, and increases in weight from two to two and a half pounds per inch of height. Standard tables of heights and weights should be referred to, and any child falling half a stone below that standard should be seen to medically, also any exceeding their standard by more than two inches *without* increase of weight.

Turning to minor details, a normal child is said to smile on the forty-fifth day, to utter vowels on the sixtieth, to show reasoning powers by the one-hundredth. It imitates at five months, shows anger by the seventieth day, recognition at four months, sympathy at six months, jealousy at fifteen months, at which time it also speaks. Postponement of speech after two years is abnormal, and should be noted; also all speech defects and stammering.

The brain at birth weighs thirteen and a half ounces, and reaches nearly its full weight at eight. The adult's brain weighs forty-nine ounces; at twenty-five it reaches perfection in functional activity.

Neurotic children in Germany are almost universally educated in families rather than in large schools.

All emotional elements in such children should be kept strongly in check; and this is most easily done by segregating these cases in small unemotional circles.

Out of six hundred middle-class school children 30 per cent. were found to have neurasthenic symptoms. The ages of these were interesting.

In the first, or infant class, one child was neurasthenic as compared to three in the third, four in the fourth, six in the sixth, seven in the seventh, and nine in the eighth. Indeed, the

proportion rapidly increased, as might be expected, as the ages neared puberty, and the ratio almost exactly corresponded with the number of the class. Children suspected of hysterical tendencies, and generally neurotic children, should have special and constant care. Their lives should be systematic, quiet, and unemotional. They should be watched for sexual errors of various sorts. All sources of excitement, including music, should be strictly limited, while their social and observant instincts should be fostered and cultivated.

Under seven the great care should be the development of the body on healthy lines by home and country life. After seven the mind should be watched, all precocity discouraged, and all abnormalities checked. At the school age there should be thorough co-ordination of mind and body, and ceaseless muscular activity and love of games. The food should be simple, light, and abundant, mainly farinaceous, with milk and fruit. The child should be fat, have plenty of sleep ; love of nature and animals should be encouraged. In adolescence the physical and mental hygiene should be the most prominent object in the parents' minds.

No direct religious dogmas should be taught before seven, but deep reverence for good, and for nature and God. Painful punishments are

not advisable for nervous children. The daily *régime* should be simple and invigorating. Cold sponging while standing in hot water, regular meals, and regular hours for bed, and open air all day long are important.

We now come to consider the symptoms of nervous disease in children.

Physically, one notices any peculiarity in the shape of the head as possibly significant of nervous troubles, especially an abnormally large or small head; peculiarities about the ears, in size, shape, and setting; the boat-shaped, or "keeled," forehead, where a vertical ridge is seen in the middle line (owing to a retarded union of the frontal bones); cleft palate, and hare-lip, &c.

Look out both for backwardness and precocity, for excess of emotion or the want of it, for in-co-ordination or involuntary movements—in short, for all deviations from the normal. Nervous children are frequently untruthful, quarrelsome, untidy, dirty, sentimental, religious. They may steal, have night terrors, sleep-walk, stammer, be incontinent, sensitive, morbid, suffer from vertigo and defective sight or hearing. They are subject to sudden rises of temperature, and delirium even with temperature under 100°. They soon lose self-control, there is nervous instability, inordinate laughter or unnatural seriousness, mental lethargy,

dulness, hebetude. There may be love of solitariness, sexual perversion or inversion, blushing, restlessness, waywardness, abnormal cleverness, asymmetry of head or body, melancholy. It must be remembered with regard to these children that moral action is always connected with the power of the inhibitory centres in the cortex of the brain. There is a definite connection between stopping a rise of temperature (unconscious action) and a cough (conscious) and resisting the temptation to sin. Hence, in nervous children the moral power is weakened with the other powers that depend, like it, on inhibition.

Dr. Clouston points out that the most common and important mental change in nervous adolescents is depression. In reality this is mental pain, and is the analogue of neuralgia. It may be periodic.

Nervous children are often very faddy, irritable, often show inverted tastes coupled with poor appetites, hate games, and love solitary lives.

Still more marked signs are the avoidance of bright light, of noise, transient fits of giddiness, vomiting apart from food, change of disposition and temper, horizontal wrinkles on forehead, bad headaches, sleep-walking, sharp cries, taciturnity, squinting, and frowning. All these may be

significant of organic, and not only of functional nerve diseases.

Headaches especially are very common in nervous children, and are constantly produced by school life. They may be neuralgic and unilateral, hyperæmic or congestive, anæmic or toxic.

Megrim, or sick-headache, is perhaps the most ordinary form of nervous headache and is common from seven to twelve, at puberty, and in early adult life. There is at the time great tension and unstable equilibrium of the nerve forces, and the cerebral paroxysm is a storm that restores the balance. The headache (often intense) is accompanied by giddiness, nausea, vomiting, transient loss of vision, spots before the eyes, bright or dark, zigzag or "fortification" visual outlines, unilateral numbness and tingling, impairment of speech, and confusion of thought.

When once the diagnosis of incipient nerve disease is established on the evidence of several of these symptoms, prompt measures must be taken for cure.

With care, and if taken in time, a neurotic child may develop into a strong normal adult. The first duty is the full healthy development of the body, and for this end neurotic children must not be brought up in London or large cities.

With neurotic children, the treatment after the body is cared for is psychological rather than medical.

There must be no corporal punishment. Sentimentality must be suppressed. Illnesses and depressing subjects must not be discussed before these children. The onset of the catamenia should be explained. Religion should be taught, free from introspection and sentimentality. All sexual abnormalities must be carefully guarded against. The tone of the school is more important with these children than the teaching, and a good school is often better than some sorts of home influence. There must, of course, be no severe competitive examinations.

Remember that with healthy children worry does not injure, but overwork does, whereas with adults work does not injure, but worry does. A neurotic child, however, is injured by both.

It has been found that tactile sensibility, as shown by the legs of a compass on the skin, is lessened one half by severe study in a neurotic child.

Neurotic children must not be spoiled, and yet there must be no iron rules. Make them think and will, and not change their purpose. Combat caprice, anger, jealousy, and other passions. Make them endure pain.

Pain can be greatly alleviated in these children by teaching them to repress the feeling of it.

Neglect their strong likes and dislikes within reason. Accustom them to noises and light if either is disliked.

Correct their hypersensitiveness to the opinion of others.

Such children should not be much with neurotic mothers. They should (if girls) be placed under the control of a skilled and calm governess who will not press them. The life should be quiet and orderly, regulated by common sense, with plenty of sun and air and games. No evening parties or theatres. All subjective topics or studies should be discouraged and all that is objective encouraged. Animal pets and gardening are good amusements. Neurotic children, I may repeat, should not be kept together. No quarrelling, bickering, or friction should be allowed and the child should never be the centre of attention.

Early skilled medical advice is essential once the diagnosis of nervous disease is established.

The will of neurotic children should not be broken, but directed aright.

The sleep should not be less than nine and a half hours for boy or girl.

As a means of hygienic education for a neurotic brain, Sloyd, or the accurate making of simple

articles of wood, is invaluable. The medical treatment of neuroses in children is the same as in adults, with that additional cheerfulness and variety that their age demands. No special instructions need therefore be given in addition to these hints for home life and management, which if carried out will often prevent the necessity of actual medical treatment.

CHAPTER XIV

OTHER FUNCTIONAL NERVE DISEASES

UNDER the head of Functional Nerve Diseases, for reasons more or less arbitrary, out of some 140 nervous diseases given in the General Nomenclature of Diseases, I select, as stated in Chapter I., twelve, of which so far I have but spoken of two. Hysteria and neurasthenia are of such importance that I have devoted some twelve chapters to them, whereas the other ten I propose to summarise in one.

The remaining four of the more direct functional nerve troubles are craft palsies, or occupation neuroses, hypochondria, paralysis agitans, and neuralgia, which, though hardly a disease in itself, is often the only indication of nerve disturbance in the system, and is sometimes of such gravity as to justify a monograph. Of course the word "functional" must not be pressed on its positive side as always meaning a disturbance of function. Rather must it be interpreted on its negative side, as signifying an absence of any

ascertained organic basis. The remaining six are—

Migraine,
Chorea,
Tics, in which is included torticollis,
Tetany,
Vertigo, and
Goitre (exophthalmic).

True Menière's disease is no doubt of organic origin, and I would therefore exclude it. Pure vertigo, like neuralgia, may, of course, be classed as a nerve symptom, yet it is often the sole symptom, and is of such importance as to justify its being treated by itself.

Of course, some of the above will doubtless be shown ere long to be of definite organic origin, such as migraine and chorea; and then they must be removed from the list of functional nerve diseases. That is why I call this list arbitrary; because it cannot be proved either that it includes all functional nerve diseases or that all that it does include are functional. On matters so obscure it is well to confess ignorance; at any rate this selection is no more arbitrary than other lists given on distinguished authority, and alluded to in the first chapter.

Dr. Beevor, for instance, includes epilepsy, which is here excluded, as from the character and constancy of its symptoms the true disease is

probably of organic origin. Moreover, it is simulated in functional nerve disease by hysterical epilepsy. Traumatic epilepsy or epileptiform disease is still more obviously organic.

On the other hand, one large system of medicine includes sea-sickness as a functional nerve disease (Loomis and Thomas). To me it seems that it is no more worthy of being classed as such than mountain-sickness, or vertigo caused by rapid rotation.

With this short *apologia* I will consider with great brevity the diseases I have included.

There is hardly a trade which involves the rapid and continued use in the same manner of one part of the body but is liable to occupation neuroses.

Men and women are both liable, but the latter seem to recover from the disease more readily than men.

Occupational neuroses are not caused by work, but *overwork*, of the local part affected. Though classed as functional, there is a supposed seat in the grey matter of the cortex at the functional centre, and here shrunken nuclei and cells have been found.

After forty, craft palsy is more readily induced, and may be partly due to degenerative changes and not to overwork alone.

Many craft palsies are due to the conscious mind interfering with the unconscious mental action in acquired reflexes. Most rapid writers would "stammer" in their writing if they tried consciously to form each letter.

In craft palsies careful examination almost always reveals other defects of movement besides the one complained of; therefore in all craft palsies one should examine for degenerative and congenital defects, for ordinary disease, for different movements on either side, tremors, wasting, loss of grasp (by dynamometer), tenderness of nerve trunk (compare both sides while the patient rests both arms on the doctor's shoulders). If there be tenderness there is neuritis. Look out also for tender bones, rheumatism or gout in joints, and tenosynovitis. During the examination the patient should be bare to the waist, so that all reflex muscle action may be noted. Then carefully examine the affected part and test its reaction (which is lessened by fatigue) to faradic electricity.

It must not be forgotten in this connection that fatigue neuroses must be looked out for as a not uncommon complication in hysteria.

Writer's cramp is the most common of all occupation neuroses, though hammer palsy, button-maker's palsy (rotatory movements of fingers—Birmingham), piano-player's cramp, typewriter's

cramp, bricklayer's cramp (who can do anything but use the trowel), violin cramp, tailor's cramp (not of the legs, but inability to use the needle), dairyman's cramp (who cannot milk the cows), and heplastic palsy (which is the inability to use a light hammer for penknives), are all well-known varieties. It must be remembered that certain acts where touch is not the agent can never become wholly automatic, such as threading a needle and hammering. Palsies from these are partly due to cerebral fatigue.

The essence of the disease is the increasing inability to do some complicated artificial act (such as writing) that had become easily and subconsciously performed by being long ago converted from a purely voluntary act into an acquired reflex. Owing to the failure of performing it, the patient has again to begin with it as a voluntary action, and in this experiences the greatest difficulty. In writer's cramp this especial acquired reflex is the one on which the patient's living depends, and thus the disease becomes one of great importance.

Perseverance in endeavouring to overcome this disease by firmly grasping the pen and forcing the hand only aggravates the palsy. Temporary relief is obtained by using a pencil, with which pressure can be made and on which the hand can rest as on a walking-stick, instead of a pen;

by adopting novel methods of holding the pen; by moving the whole arm in writing, instead of the fingers only; by using pens with enormous holders to be grasped in the fist; but all these devices soon cease to help, the handwriting becomes illegible, and eventually fails. And yet the same hand can shave or sew and do other delicate operations with perfect ease. Still, similar movements to writing often cannot be performed, such as winding up a watch, &c.

In idiopathic cases no wasting or tremor of the limb is found, and no true paralysis of any muscle, only of the special function as a whole; it is the special co-ordination alone that has failed.

Writer's palsy may be mistaken for paralysis agitans, disseminated sclerosis, or lead palsy, or *vice versâ*.

Alcohol generally aggravates it. Rest was long thought to be the only cure, and to this may be added galvanic or static (not faradic) electricity. The restoration to health by this means is very slow, and sometimes there is no improvement.

A much more hopeful method, and based, moreover, on sound psychology, which I have found of great value in allied diseases, is advocated by Dr. T. S. Wilson.[1] He points out that the formation

[1] See *British Medical Journal*, July 20, 1907.

of good habits is the surest way of overcoming bad ones; and this is peculiarly applicable in habit neuroses and spasmodic wry-neck and other tics, also in paralysis agitans. In writer's cramp even and regular rhythmical movements, the reverse of those that caused the trouble, must be persevered in. It is suggested that extension of wrist and arm while squeezing a large rubber ball be alternated by opening out all the fingers placed within an elastic ring while flexing wrist and arm.

In wry-neck slow and regular movements of head and neck by the nurse, with assistance from patient fully stretching the muscles, must be regularly given.

In spasmodic tics regular rhythmic exercise with a Sandow's exerciser may completely cure; while in paralysis agitans the same exercises do good. They should at first be continued nearly all day, till there is a marked improvement, and then at stated intervals.

In severe cases of writer's cramp the education of the left hand to the work is often a practical remedy.

Writer's cramp may be taken as a sample of all other occupation neuroses, which differ in locality only, not in kind. There is, however, a professional neuritis that has been confounded with these professional neuroses. In the latter the

cause is no doubt in the cortical centres engaged, whereas in the former it is in the nerves and muscles themselves. The cause is special fatigue of the nerve, not by occupation primarily, but by accident, as in overstrain, or from alcohol, anæmia, malnutrition, diabetes, &c. It is, of course, connected with occupation, and Parola, who has investigated it,[1] includes most of the trades and occupations that are liable to craft palsies, which increases the difficulty of diagnosis.

There is pain in the nerve, tingling, itching, and burning, together with paresis. In early stages the disease mostly resembles syringomyelia, and in some cases progressive muscular atrophy.

On the whole the prognosis is better in professional neuritis than in the professional neuroses.

Hypochondria is a psycho-neurosis consisting essentially of an excess of subjective sensations. It is not melancholia; for though in both there may be extreme depression, in the former it rarely leads to suicide, whereas in melancholia this is a common result. Moreover, the latter disease does not depend, as the former, on ideas of disease and subjective sensations, but rather on ideas not connected with physical but with psychic states, as in religious melancholia. The term is, of course, derived from an old idea of its connection with

[1] Parola, *Il Morgagni*, October, 1906.

the condition of the liver. It is no doubt a sign of an unbalanced mind.

The most common variety of hypochondria is the sexual, and this is found most in men, and especially in the early decline of life. Any sudden change of environment in mid-life, such as retiring from business, is liable to bring it on.

In a hypochondriac every symptom, good as well as bad, is distorted to contribute to the disease idea. The patient keeps long lists of his symptoms and is a depressed faddist, and often wiser in his own eyes than all his doctors. He never trusts a physician too far, and constantly wanders from one to another. He often resigns an appointment or retires from business to have better leisure to study his symptoms, and in this occupation, however distressing, he finds a gloomy satisfaction. In some cases the health all the time is perfect, in others there is some foundation of fact to the imaginary superstructure. The disorder is very chronic, and the prognosis depends on the amount of hereditary tendency and on the real causes being external rather than internal, and on the suddenness of the onset.

Success in treatment depends on the extent to which the sound ideas of the doctor can be substituted for the unsound conceptions of the patient. The treatment is mainly moral in character, though this may well be wrapped up in vigorous remedial

measures calculated to improve and invigorate the general health, and, in short, is much of the same character that is required in hysteria and neurasthenia.

Paralysis agitans, or shaking palsy, is also called Parkinson's disease. There is constant shaking with stiffness, and shaking palsy or paralysis is a most descriptive name. It is twice as common in men as in women.

It is due to heredity, emotion, wasting diseases, senile changes, and injury. It is principally a disease of advanced life. In many cases no cause for its onset can be found.

No constant change in the nerve centres has been found to account for it.

Three stages have been noted in the disease, which always begins insidiously. In the first stage, which lasts from two to five years, there are occasional tremors in the hand or foot, gradually increasing in severity and spreading to the other side. It is rare for both arms to be involved and the legs free. More commonly one arm and leg on the same side are affected; then both hands, and lastly both legs. The expression on the face becomes fixed and the body stiff and moves as a whole: the fingers in moving seem to be making pills, the thumb moving on the index finger, and when at rest is in the position

of penholding. There is also vertigo, more or less marked.

The second stage may last from ten to twenty years. In it the head is bent forward and the back rounded. The arms are bent and kept from the sides, with the hands in front. The eyes turn, but not the head, which also does not generally shake. The steps are short and tripping, and the movements slow; the limbs are in a constant tremor, which also shakes the body. The patient, leaning forward, sometimes seems as if running, the steps are so short, and have to be so quick to maintain the balance.

In the third stage we get helplessness and restlessness, atrophy, and fixed swollen joints, with constant tremors.

There is also weakness and weariness of the muscles from the first; the patient is irritable, and the speech sometimes affected. The utterance becomes slow and difficult, and the tongue may tremble.

The movements generally cease in sleep. By force of will proper steps can be taken and the tremor can be stopped, but not for long.

The progress of the disease is slow and erratic. It is mostly incurable, but sometimes is arrested in early stages.

The best treatment is the maintenance of the general health at the highest pitch and the use of

the galvanic current. In this disease moral treatment is of little or no avail. Lately rhythmic movements have been tried with great success, as described a few pages back for writer's cramp.

Neuralgias are often confounded with neuritis. In the present state of our knowledge one would say that, though both involve pain in a nerve, the cause in the former is functional, in the latter organic.

Many so-called neuralgias, specially if intercostal, are really neuritis. Neuralgias are generally unilateral.

Neuralgias are frequently hereditary. Neuralgic families are also prone to insanity, epilepsy, and paralysis.

Trigeminal neuralgia is common with epileptiform paroxysms.

Neuralgia is due to all causes producing overfatigue, to exposure to cold (one-third of all cases), also to nerve irritation and toxins.

Neuralgias are reflex, traumatic, herpetic, occupation neuroses, hysteric, diabetic, gouty, rheumatic, anæmic, malarial, syphilitic, and senile, as in tabes. They are also periodic and sometimes of purely psychic origin. Influenza, local growths, irritation from teeth, ears, &c., are also causes. In neuralgia the pain is not due to inflammation.

Pathologically the pain path is clear from skin

to posterior horn of the spinal cord, and an injection of saline solution here destroys the sensation of the skin area at the level supplied by it. The pain may be due to peripheral causes by stimulation. The pain is intense if the nerve be healthy, and slight if diseased or disorganised, as in paralysis.

On the other hand, the pain may be caused centrally by other nerves, and reflected or referred to the peripheral area.

If the pain does not rise into consciousness it is, of course, not felt; and if the consciousness be already fully engaged, it often ceases temporarily to be felt. This indicates the method of psychic treatment.

Trigeminal neuralgia is generally known as tic doloreux.

The pain is of all descriptions, and may be stabbing, darting, boring, burning, &c. It is often violently spasmodic, causing cries of pain. In long attacks the acute pain eventually subsides into uneasiness, as the cortical afferent centre gets exhausted, until, after an interval, the paroxysm breaks out afresh.

Neuralgia has been divided generally into superficial and visceral.

The former needs no description, and includes all surface pains, from occipital neuralgia to coccycodynia.

The visceral include cardiac, uterine, ovarian, gastric, nephritic, urethral, &c. The prognosis generally is favourable, but it becomes less curable with advancing age. The treatment in the first place is to remove all malnutrition and to see that the weight and all the functions are normal, and that the body generally is in good health. If neuralgia be, as has been said, "the prayer of the body for healthy blood," it is likely to disappear when this prayer is answered. General remedies are many, and include drugs such as gelsemium sempervirens for trigeminal neuralgia (especially if connected with the teeth); croton chlorate (5 to 20 grains), salicylates, antipyrin, antifebrin (with caution), phenacetin, citrate of caffein, and a compound of phenacetin with citrate of caffein known as antikamnia. Toxins and bacteria are washed out by stomach lavage and bowel lavage, by weak saline solutions of 1 per cent. injected slowly, warm, into the rectum (S. Brown). Locally, veratrum in ointment or aconitine ointment rubbed in the part till numb (if skin is sound), belladonna liniment, chloroform liniment, turpentine liniment, very hot fomentations, all do good. Respecting this latter it may be said that, rightly used, heat can control almost any pain. The right use is by having two flannels wrung constantly out of *boiling* water, and replacing each other on the part affected every

minute for a quarter of an hour or so. It requires two people to do it properly, besides the patient.

A good application to follow it and prevent the recurrence of the pain is an ointment made as follows:

Menthol, ʒi
Chloral, ʒss
Morph. hydr., gr. iii
Tr. aconiti, ♏40
Lano-vaselin, ad. ʒss.

In hypodermics, begin with not more than one-sixth grain morphia, and add a little atropine to avoid nausea.

Another form of counter-irritation is by freezing with ice or ethyl chloride.

Massage also often relieves.

For permanent cure the cause must be sought out, and if possible removed, as the tendency of neuralgia is always to recur.

Migraine, megrim, hemicrania, or sick-headache, is sufficiently marked off from ordinary headaches to constitute a distinct disease. Amongst ordinary headaches we include toxæmic, neuralgic, congestive, gastric, bilious, anæmic, exhaustive, and neurasthenic. Migraine is characterised by being periodic, unilateral, with sickness, with affection of sight and nerve symptoms. In bilious headaches we get sickness, but the headache is frontal

and not unilateral. The chief cause is the hereditary tendency to malnutrition and neurasthenia; overwork, anxiety, grief, sexual excesses, bad air and food, sedentary occupation are also causes. It is rare in outdoor workers. The stages of the disease consist of the premonitory symptoms and the attack. The first consist chiefly of ocular disturbances, such as bright serrated and zigzag lines and imperfect vision, with coldness of the extremities, lasting some minutes. This may be all, or it may be succeeded by the headache. In some cases the ocular symptoms are absent, in others they are replaced by mental depression and malaise.

The headache begins gradually, the head gets hot and the feet cold.

The pain, of a boring character, generally is on the opposite side from which the ocular disturbance began. As the pain increases the eyes get better, and nausea and vomiting set in. The head throbs, though the face is pale, there is mental lethargy, and the patient lies as if dead, till sleep sets in and the attack passes off. It may not return for days, weeks, or months. It generally lasts from twelve to twenty-four hours. The skin is hyperæsthetic, and in this disease heat seems to intensify the pain. The temporal arteries are dilated, and compression of the carotid often relieves the head.

There is no known pathology.

The treatment is between the attacks in the premonitory stage and during the headache. In the first place the cause should, if possible, be removed, the bowels kept open, and nerve tonics, especially strychnine, administered. Arsenic and quinine are also useful; 1 per cent. solution of nitroglycerine with ♏v Tr. gelsemium t.d.s. between the attacks is often of great value. The diet should also be carefully regulated.

During the premonitory stage the patient should lie in a darkened room, with the head low, and some diffusive stimulant administered (alcohol or sal volatile); bromide of ammonium, cold to the temples, and a hot bottle to the feet are also good.

During the attack the room should be dark and quite quiet, evaporating lotion applied to the head and mustard and water to the feet, and effervescent antipyrin or bromide of soda given Guarana powder, gr. xv every half-hour, relieves, and when the nausea has passed away nourishing soup should be given; opium is *not* generally advisable.

Chorea, or St. Vitus' dance, is a cortical disease generally classed as functional, but often believed to be due to rheumatic toxins. It occurs in about a quarter of neurotic or hysterical families. It is rare under five years, most common from five

to twenty years, with a maximum at twelve. It is absent in middle life, and senile chorea is very like paralysis agitans. Three girls are affected to one boy. Chorea is common in the pregnancy of young mothers up to twenty-five or thirty, and most common in third month of first pregnancy; rare after second pregnancy. The cause, however, is so generally toxic, and it is so often associated with rheumatism, that it will probably soon be taken out of the category of functional nerve diseases and definitely ascribed to toxins associated with the diplococcus of rheumatism. Fright is an exciting cause, also a previous attack, for it tends to recur after a few months or years. Generally it comes on a week after the exciting cause. Imitation is a cause in schools and families, and it may become an epidemic. Injury and worms are rarer causes.

Acute rheumatism is associated with one-third of all cases. Heart disease is constantly associated with it. The pathology does not support the idea that it is due to numerous emboli in the cortex, as has been suggested.

The symptoms are irregular purposeless spasms of the muscles, with want of co-ordination in voluntary movements and some physical and mental weakness. This latter is most marked in those attacks that come on about puberty.

The twitchings begin in the hands and face.

They are irregular in time, force, and character. In the jaw the teeth may be broken. They are increased by all excitement and attempts at voluntary movement, and are decreased by repose. Respiration is apt to become uneven, and the heart beat is made irregular by irregular respirations. Half the cases are bilateral, but the spasms are different on each side. The speech is often jerky, the patient irritable and dull. The convulsions are painless. There is often incontinence. The temperature may be slightly raised and the pulse-rate increased. Anæmia is a common complication. The murmur heard in the heart is often due to anæmia, but endocarditis is frequently developed during chorea, so the heart must be carefully watched. Mitral regurgitation may be left after chorea. The endocarditis is generally very mild. Mild acute rheumatism may also come on during its course.

True convulsions are rare in chorea. The knee-jerk is not always present in chorea on account of the spasm contracting the leg on tapping it.

The symptoms are worse in the morning, and the disease reaches its height in three or four weeks.

We know much more about motor functional nerve diseases, such as chorea, than about the sensory (as neuralgia), because in the latter all

depends on the description by the patient, in the former on the observation of the doctor. The disease must be diagnosed from spasmodic tic, in which the movements are purposive, from disseminated sclerosis, and from movements in hysteria, and in old age from paralysis agitans.

The duration is from six weeks to six months or more; if not cured within six weeks it will generally go on to as many months. It may persist slightly for years.

The treatment throughout is empirical, and consists in isolation, rest in bed, and arsenic. Salicylates are of great use, and in using Fowler's solution in increasing doses it is well to combine it with syrup of the iodide of iron.

In grave cases chorea becomes progressive, involving successive tracts; and whereas usually it is a disease soon recovered from, in these it progresses to a fatal issue in ten to twenty years. There is not, however, degeneration of the cortex.

Mental changes accompanied by high temperature (up to 104°) may occur in grave cases of chorea.

There is one terrible form called maniacal chorea, said to be, fortunately, one of the rarest diseases on earth. In chorea gravis some delirium with delusions is not uncommon, and even true chorea insaniens is but an exaggeration of the chorea simplex of Sydenham. This is charac-

terised by mania and movements of the utmost violence, and differs entirely from choreic insanity, which Kraepelin describes as a quiet, senseless state of hallucination with choreic movements.

Tics or spasms of muscles, including specially spasmodic wry-neck, form a class of functional nerve diseases by themselves.

Tics are divided into habit spasms, wry-neck, and psychic tic.

In the first we get twitchings of the face, forehead, shoulders, &c., from habit.

All cases arise from incessant repetition of the same act till it becomes quite involuntary.

These spasms cease during sleep.

Facial spasms are common in neurotic women after forty-five, and may be partly due to irritation from bad teeth, ear disease, &c.

Cases in women under thirty are often merely hysterical symptoms and easily cured. In these, and those classed as psychic, that come on from purely mental causes, the disease is central and is cured by psychotherapy. Spasmodic wry-neck arises from injury, mental excitement, neurasthenia and muscle strain. It often begins as a "stiff neck," from cold or draught. The least touch on the chin often puts the head quite straight. The sterno-mastoid is really the muscle at fault, but it must not be divided in spasmodic

tic. Force increases the trouble; suggestion is what is needed, and I have cured a most obstinate case of years' standing by a light instrument, practically invisible, that had a small arm resting near the head on flexed side and another on chin on opposite side. As long as the head was fairly straight they did not touch, but as it inclined, the pressure at once became uncomfortable, and suggested the erect position was better.

As the spasm is often reflex, section of the afferent sensory is often more effectual than of the efferent motor nerve.

In obstinate cases, excision of part of the spinal accessory has been successful.

Severe tic can be cured by putting the patient under opium continuously for twenty-four hours at least up to three weeks. This is better than aconitine or hyoscine hydrobromate.

Sometimes an empirical cure can be made in slight cases by severe faradisation of the sound side.

A good treatment for tics in general, as well as for hysterical chorea, is to make the patient perform a slow series of movements to the word of command to overcome the spasm. The patient's fears must first be overcome as far as possible by psychotherapy, as failures are disastrous. I have described this plan in writer's spasm.

Allied to spasms is a disease called astasia

abasia, which is not uncommon. In it, in the act of walking the legs may suddenly give way, or if sitting, the person may fall forward. There is no loss of consciousness and the patient is quite well again after a minute or two. It is chiefly found in gouty people over forty, and is not dangerous, though persistent.

Tetany, sometimes called pseudo-tetanus, is a disease rare in England, though common in Austria, and consists of bilateral tonic spasms of the extremities with increased irritation of motor nerves and muscles and sensory nerves. It comes on in infants (two to four years) and at puberty. The causes are toxic, gastric, worms, pregnancy, puerperal causes, acute fevers, alcohol, uræmia.

The disease is common as a sequela to measles and influenza. Shoemakers are especially liable to it, due to some toxin probably in the leather. It often follows the loss of the thyroid gland. There is no evidence that the cause lies in the cerebral cortex.

It may be due (but this is not proved), to some poison in the anterior horn of the spinal cord, and so be allied to anterior polio-myelitis ; but at present we class it as functional.

The hand is stretched out like an accoucheur's hand, with the thumbs well flexed in the palm and fingers and wrists slightly flexed.

The symptoms begin with tingling and then muscular spasm of hands and feet. It may spread to the body. The spasm is generally of a remittent type.

The pain is often intense before the cramp, and the muscles are tender after.

It has to be diagnosed from tetanus, spinal meningitis, tubercular meningitis, epilepsy, hysterical contraction and hysterical tetany.

Vertigo is of various sorts. We get ocular vertigo, caused by ocular disorder; aural vertigo, or Menière's disease, caused by labyrinthine disease, either irritative or destructive; gastric vertigo, which is, however, rare, and is like a bilious attack. Most cases of Menière's disease used erroneously to be classed under this head.

Other varieties are epileptic vertigo, the vertigo of migraine, vertigo due to organic nerve disease, and lastly nervous vertigo, of which alone I write here, all the other varieties being organic in origin.

Even here, of course, vertigo, which is defined as the consciousness of disordered equilibration, is a symptom; but where it is the only one marked we treat it as a functional nerve disease. It occurs in nervous people from overstrain, worry, shock, sexual excesses: also from excess

of tobacco, alcohol, and tea. It is generally slight, but may be felt even when lying flat or in sleep. It is often worse in crowds or in an elevated position. There may be buzzing in the ears, but no deafness; and there is no loss of consciousness. It distresses the patient greatly, and it is often feared as the precursor of grave disease. The treatment follows the lines of that in other functional nerve disorders.

Exophthalmic goitre, or Graves' disease, or Basedow's disease used to be thought to be entirely due to disease of the thyroid gland, but later researches fail to establish this. Beevor says it is a functional nerve disease of the central nervous system.

This is a disease characterised by prominence of the eyeballs, enlargement of the thyroid and palpitation of the heart, and general symptoms of nervousness. Prominence of the eyes, however, is absent in one-tenth of all cases and enlargement of the thyroid in one-twelfth. Muscle tremors are common.

Retraction of one or both upper eyelids (Stellwag's symptom) is common, and this causes the eyes to appear more prominent than they really are.

The disease is rare in men, but common in women from twenty to thirty. There are changes

in the temper and sometimes difficulty of breathing. The disease is sometimes incurable, and at all times patients only improve very gradually.

The treatment consists, as in all functional disease, in first bringing the body generally into the most healthy condition and then treating the most prominent symptoms. The galvanic current sometimes reduces the thyroid tumour.

Psychotherapeutics are of considerable value in stimulating the nervous system and assisting recovery.

CHAPTER XV

QUACKERY

NOT long ago (July, 1905), in a remarkable address on medicine, Sir J. Crichton Browne spoke as follows:

"Is it, after all, mere fancy that a mental atmosphere or effluence emanates from one person to affect another, either soothing sympathetically or irritating antipathically? Think, in this relation, on the extraordinary (so-called) magnetic personalities which some persons possess, and, again, on the contagious fire of emotion which spreads swiftly and gathers volume in a crowd of people, inflaming them, as the case may be, either to deeds of mad fury or to corybantic displays of religious fervour.

"Now, as fuller and exacter knowledge of the reflex mechanism of the body adds to our means of preventing and curing its disorders, and increasing chemical knowledge points to scientific therapeutics, so may a just conception of the subtleties of the forces at work in mental action

inspire a more advised and methodical use of the resources of mind to cure diseases of body. Is it not *from neglect to employ such intelligent measures* that patients fall into the hands of nature-curers, Christian scientists, mesmerists, and the like faith-instilling persons, and are sometimes cured when drugs have failed? And is it not to the use of such means, albeit not consciously formulated, that the popular practitioner, whose small medical knowledge is the smallest part of his skill, gains the co-operative belief of his patient and owes his fashionable success? It is all very well to say that people are ignorant, foolish, credulous. Of course they are. The world would not have gone the way it has gone were the immense majority not gladly beguiled; but if you would influence the fool for his good, you must enter by sympathetic imagination into the fool's mind and discern the motives by which it can best be moved. And it is still the fact that, as Cicero said of places in his time, every place swarms with fools. Sick persons, even when not foolish, are notably sick in mind, and mostly need a mental tonic to stimulate their weakened vitality; such inspiration serving sometimes to animate the tissues to a strength of vital resistance from which the noxious bacillus retreats baffled—yes, even though it is greedy there and scents the fit

soil, it does not find the fit climate. Few drugs are more helpful than hope, more deadly than despair."

I have italicised in the above the sentence that lies at the root of the present success of quackery, namely, the neglect of medical men to employ intelligently the power of the mind in healing the body.

Another important witness is in a sentence I will quote from a letter of Sir James Paget's to Sir Henry Acland, written in 1866, and is as follows:[1] "What unsatisfactory . . . cases these are! This clever, charming, and widely-known lady will some day disgrace us all by being juggled out of her maladies by some bold quack, who by mere force of assertion will give her the will to bear, or forget, or suppress all the turbulences of her nervous system."

Now, such a letter is absolutely invaluable, and for this reason: Any conscious effort to reveal one's mind or spirit mostly ends in failure. It is when the conscious mind is directed elsewhere, and the man is unaware of being observed, that the unconscious mind shows us as in a mirror the true soul, the real thoughts of the *ego*. A casual letter to a friend reveals more, therefore, in its unstudied phrases than an elaborate essay

[1] "Sir Thomas Paget's Life and Letters" (Longmans, 4th edition, p. 277). Extract of letter to Sir H. Acland. (I have given the whole extract.)

could do upon the subject. Every thoughtful physician knows the real illuminating value of letting a patient describe his symptoms in his own language, however quaint, and how he learns thereby more of the inner working of the disease than by the most cunning phrases which he puts into the patient's mouth. It is so here. This illuminating letter pictures unconsciously, as in a glass, the attitude of the medical mind of 1866 towards mental therapeutics—a mind which is not so very much changed in 1907. Many of my readers will find their own thoughts reflected in it. Translated into bald prose, it sets forth that the disgrace of the writer, of Sir H. Acland, and other eminent colleagues, is expected, owing to the power possessed by some "bold quack" to cure an attractive patient of Sir James Paget's through her mind by mere "force of assertion," the process of cure apparently consisting of the lady "being juggled out of her maladies."

It may be asked, Why discuss this subject at all in this manual? It is because functional nerve diseases form perhaps three-fourths of the diseases cured by quacks (as, indeed, would naturally be supposed), and, therefore, it is impossible to pass by in silence an outside agency, however irregular, that has so much to do with the subject in hand.

If we proceed to review in a little more detail this remarkable subject of quackery, I think we shall understand somewhat better the reason of the physician's agnostic attitude towards mental therapeutics. We see he is beset on all sides by a very army of irregulars, who, in spite of his edicts and medical ethics, continue to defy the laws of both ethics and science by stealing some of his best patients, and, worse still, by curing them by means which to him are wholly inadequate, after the manner so graphically portrayed in this letter from Sir James Paget.

One of the most extraordinary paradoxes surely of to-day lies in the fact that, simultaneously with an advance in scientific medicine wholly unparalleled in the world's history, there is on every side a quackery that flourishes and triumphs as much as, or more than, in the darkest of the dark ages.

It is the general rule that as the true light shines the darkness disappears. It is not so here. Nor can it be said that it is in the less civilised parts of the earth, where scientific medicine is rare, that most quacks are found. The reverse, strange to say, obtains. It is in America, and in the most enlightened parts of America—it is in England, and in the heart of its most intelligent centres—that quackery flourishes. I now speak of quackery pure and simple.

And this success is not for want of efforts made to overcome it. Two things impress one about quackery—its extent and ancient origin and the ineffectual fight against it. Eight pages of the Index Catalogue of the Library of the Surgeon-General's Office (U.S.A.) are taken up with a bare list of books and pamphlets showing up quackery, and each aiming to deal it the long-evaded death-blow—but they are all in vain.

A few years ago there was started most successfully in London a system of curing, not one or two, but all diseases by little bottles of medicine (so-called) sold across the counter by any chemist, the diagnosis being made by the sufferer!

But from the doctor's standpoint worse still remains. Quackery would soon come to an end and fade away before the spread of knowledge, the decay of superstition under the fostering care of the school board, and the higher educational system, but for one thing. It can show real cures, both undeniable and numerous, in spite of the vast number that may not bear scrutiny.

This the physician cannot, alas! deny, though he may deplore it. After allowing full discount for forged and false testimonials (which are not so numerous as supposed), for purely imaginary diseases and the credulity of mankind, and even for the lesser functional disorders, there remains

behind a large residuum that cannot by any ingenuity be explained away. At any rate, a man believes he has suffered from some disease, say rheumatism, for which, in the ordinary course and the absence of the quack, he would have gone to the nearest doctor, with the result of a possible more or less tardy cure and the certainty of a considerable bill. Whereas now, the purchase for 7½d. or 1s. 1½d. of a small bottle of something in a wrapper black with testimonials has already given relief, may be even before it has been taken, from the mere reading of the wonderful cures effected. The ignorant charlatan may thus effect with his shallow mysteries what a great physician cannot do with his science, because wonder and awe have a greater therapeutic power than respect. In this case, of course, the remedies used on both sides are here regarded as inert. In practice, of course, such is by no means the case, for I believe it is true that many of our most useful medicines have been discovered by quacks.

Now, it is quite possible that no one is more surprised, as well as pleased, at the cures than the quack vendor of the nostrum; but it is not for him to deny what he cannot account for, as the doctor is often tempted to do, because his interest is to magnify cures, which he promptly does.

It is therefore doubtless true that, in spite of

all our science, quackery flourishes; and the reason of it is by no means that all men are fools, but that it undoubtedly effects numerous cures, and some, as Sir James Paget suggests, that have been attempted in vain by eminent scientific men, the sufferers having only tried quackery when all else has failed. It is also true that these cures astonish perhaps equally the quack and the doctor.

But let us go a little further, and glance at the pseudo-religious quacks and faith-healers who make a gain of the credulity and folly of mankind without recourse to patent pills or 1s. 1½d. medicines. These are found everywhere, but abound most, like the ordinary quack, not, as might be supposed, in Russia, or in Turkey, or Poland, or South America, or in shady corners of the civilised world, but in the very focus of intellectual and material life—the United States of America.

The greatest of these latter-day mystics is undoubtedly at present the "Rev." Mary Baker Eddy, whose ponderous work on Christian Science is the text-book of the entire sect, numbering some millions, here and in America and elsewhere, of educated followers far above the average in wealth and culture—many, alas! formerly having been among the most lucrative of the physician's patients. This book is appointed to be read by Mrs. Eddy in all her churches,

side by side with the Bible; and in the great central Temple at Boston, and in all their churches, this work, "Science and Health," is read every Sunday to crowded and attentive congregations of upper-class educated people. With their dogmas one need not interfere; cures are detailed and vouched for by the healed at every meeting, and though to some judgments Christian Science contains neither Christianity nor science as generally understood, these cures cannot all be doubted or explained away.

An account of another phase of quackery, in Germany, gives a remarkable picture of the vast field it covers in its very varied methods:

"The most important kind of charlatanism in Germany at present [1907] is the Nature-cure, which not only enjoys a widespread popularity, and an authority which every make-believe scientific movement easily exercises over the public, but has all the advantages of a cleverly-directed organisation.

"Formerly homœopathy did its best to impress the public with the idea that it could and would replace the old and rusty school medicine, whilst in reality it was a sensation, and, when practised by quacks, nothing but a clever evasion of existing laws. The same is now the case with those who pretend to cure by means of Nature.

"Homœopathy traded on mysticism, and

Nature-curers take advantage of an enthusiasm for Nature. The extent to which this form of charlatanism has spread is apparent from the fact that out of 4,104 German quacks in 1902, 3,761 were Nature-curers and 770 cured by means of water, whilst only 262 employed homœopathy, 145 worked by means of magnetism, 79 by electricity, 77 by plant cures and drugs, 74 by affiation, 37 by means of herb cures, 24 by ointments, 23 by sun baths, 14 by hypnotism, 12 by vegetarianism, 6 by Christian Science, 3 by the laying-on of hands, 2 drove devils out, 1 spat on his patients, and, lastly, 1 cured by blessing, 1 by means of shirts, 1 by magnetic water, and 1 by the 'oil of life.' It may be of interest to mention, by the way, that out of these 4,104 quacks 464—that is to say, more than 11 per cent.—had previously been convicted, and 167 of them several times; 16 had done hard labour and 137 suffered imprisonment. Their standard of education is characterised by mentioning that out of 1,440 quacks about whom we are informed, 1,135 (79 per cent.) have enjoyed only the lowest type of schooling, the Volksschulen; there were registered, among others, 201 craftsmen, 35 workmen, 286 peasants, and other agricultural labourers.

"From the foregoing it will be observed that the Nature-cure is the most popular swindle of

the present day. These quacks have not only their methods in common, but ar eall connected by means of a widespread organisation, consisting of some hundreds of clubs for the purpose of promulgating Nature-cure. There are 885 clubs, with 125,640 members; they profess to aim at the enlightenment of the people with regard to health and Nature-cure. Besides this, they carry on a violent agitation against such things as vaccination, serumtherapy, poisons, operations, and the whole medical science, assisted by a few doctors who have become tools in the hands of these quacks. They act as if striving for the public to choose in what manner they will be treated, and to protect them against the 'medical murderers and poisoners.' In reality, of course, they are fighting solely for the privilege of curing without any liabilities and trouble. They 'wish to protect the race against the privileges of the learned fool.' In reality they are fighting for the privilege of the unlearned fool. By means of clever demagogy they have gained considerable ground, and for this medical men must undoubtedly take a certain share of blame. Their disgust and indignation for the vile agitators was justified, but their feeling of security and superiority, which prevented timely interference, was no doubt unwise. The monthly organ of the united German Nature clubs has a circula-

tion of no less than 132,000; besides this there exist sixty-nine other periodicals of the same tendency."

Of the lower class of pseudo faith-healers we hear of one in New Jersey with 15,000 more or less educated patients in one week. Chicago has been turned upside down by the late quack Dowie, amongst others, who had the walls of the largest hall in the city hung round with crutches, splints, &c., presented by cured followers; and, indeed, all over the States the name of these religious quacks and humbugs is legion, and their harvest plenteous and golden. Now, though *populus vult decipi* is undoubtedly true, and though most men are fools, still cures are effected not only by respectable quacks, but by the most arrant knaves, as testified by most reputable persons, and, curiously enough, largely by the clergy. Many, indeed, are not lasting, many are very trivial, and many may be said to be due to hypnotic influence of one sort or another. Turning now from quackery to the province of medicine, let us examine some of its procedure and see if we can ascertain in it and in faith cures all over the world the one underlying principle to which is due the perennial vitality and success of quackery. To what shall we attribute many of the cures by hypnotism in Nancy and the Salpétrière? The investigations

of the *British Medical Journal* have shown that here we have to deal with a quite inestimable amount of fraud and self-deception ; but observe, we have now to examine the work of learned professors, regular and registered physicians, and not that of mere charlatans. We have, or had, Charcot in France, and names of honour and repute in this country, who testify to cures of all sorts without medicine or physical means, but in this case purely (if the word may be coined) by "psychism," the force of suggestions—suggestions, too, which appear powerless when presented directly to consciousness, and only highly efficacious when the patient is in the "hypnotic" state. All these things are a riddle and most perplexing, and when the last echo of the laughter of derision and the last curve of the smile of contempt have died away, there remains much to make the physician of the period at least thoughtful.

Again, what about homœopathy, hydropathy, Matteism, and all the many and flourishing Swedish, German, Austrian, Italian, and other special cures? Are they all unworthy of the name? By no means. Here a semi or pseudo scientific basis is more or less attempted, many excellent hygienic formulæ are observed, which elevate them above the mere rank quackery we have written of. But the great point is that

cures, and remarkable cures too, are everywhere effected. I may say here, indeed, that it is impossible to say all these are what in our ignorance at present we crudely class as "functional"; though, doubtless, most are. Is rheumatism, for instance, a functional or organic disease? Is dropsy, is erythema, is eczema, is paralysis? Some hyperscientist may object that some of these are symptoms and not diseases. But what is a symptom and what is not a symptom? Nay, more, what is a disease? And until we can answer this last profound question, how do we know whether it is functional, or organic, or both? Our own broad definition of the two would be that "functional" disease is that which is of psychic origin, "organic" that which is of physical. At the bottom, no doubt, *all* diseases involve some organic change somewhere.

But this is not all, in the way of inexplicable cures. What about Lourdes? or if that be a centre of imposture, which it is, and yet isn't, what about our own faith-healing centres and others abroad, uncontaminated by the least sympathy with Roman Catholicism or saint-worship?

As these may not be so well-known even to the widely-informed physician, a detail or two may be given, showing they at any rate exist.

A few years ago, in the Agricultural Hall,

Islington, a great conference of some two thousand faith-healers was held, there being then some hundred and twenty faith-healing centres in this kingdom alone, now probably many more. In America there are some thirty homes (one of which cost over £6,000, presented by a "cured" patient) and innumerable centres. There are several in Australia and many all over Europe. A few years ago in New York and Boston there was hardly a believer in faith-healing and now there are thousands. Observe, these have nothing to do with the Christian Scientists on the one hand or the pseudo-fraudulent faith-healers on the other, of whom I have written. From a religious point of view, these are orthodox, severely Protestant, and mostly evangelical.

In one long list of two hundred and fifty published cases of disease cured, we find five "consumptive," one "diseased hip;" five "abscess," three "dyspepsia," four "internal complaint," two "throat ulcer," seven "nervous debility," nine "rheumatism," five "diseased heart," two "withered arm," four "bronchitis," three "cancer," two "paralysed arm," three "weak eyes," one "ruptured spine (?)," five "pains in the head." And these are the results in one year at one small chapel in the North of London! The list causes amusement and perhaps surprise; and impatience

may be felt that such puerile details should be here given. But to the poor sufferers it was anything but puerile to be cured, or at any rate relieved, from diseases from which they suffered, or at any rate imagined they suffered, free of all charge; for none of these are money-making agencies, whatever else they may be.

What about charm cures? Perhaps scientists innocently suppose these have died out. Not at all; for not only in the country districts, but it may be in the humbler regions of the physician's own house, they are implicitly believed in, and, moreover, even here also are cures effected.

What about cures by relics and even by idols? I am told that undoubted cures are effected not only by the Holy Coat of Trèves, but all over the world, notably in India, China, and Africa, by the presence of actual idols. One in India is most famous for its therapeutic power; while large temples in China are covered with votive offerings from the "faith-healed." Trees, plants, flowers, bits of animals, &c., have all their therapeutic powers. But the patience of our cultured reader must not be too severely tried. Turn, then, with relief to something more respectable.

What about the "cures" at home and Continental spas, with their eternal round of sulphur and iron waters and baths? Does the doctor

attached to the spa, in his heart of hearts, believe that *all* the cures which in these cases he cheerfully certifies to *are* effected by the waters, or even the waters and the diet, or even the waters and the diet and the air; or does he not think there must be a "something else" as well? And to come nearer home and into the centre of all things, and the chamber of all his secrets: in his own consulting-room and in his own practice, is not the physician brought face to face with cures, ay, and diseases too, the cause of which he cannot account for; and is he not often surprised to find a continuation of the same treatment originated by the local practitioner is, when continued by his august self, efficacious? And is not the local practitioner not only surprised but disgusted as well, to find such the case?

But we have asked hard questions enough. We will ask an easy one. What, then, is the one effectual agency in quackery, in semi-scientific cures of all sorts, in faith cures, in relic, charm, and idol cures, in many spa and water cures, in some doctors' cures—perhaps in more than they suspect? After allowing fully for the intrinsic value of the quack remedy, of the mystic formula, of the millionth dilution, or of the prismatic electricity; for the sulphate of soda or magnesium, and even for the value of real B.P. drugs, we must answer, It is mainly and primarily *the*

power of the unconscious mind over the body. It is this, and this pre-eminently, that cures; it is this, and this pre-eminently, that is everywhere ignored (as stated in the sentence with which I opened this chapter) however much other minor factors may be extolled.

With regard to nerve diseases specially, Skey says, speaking of hysteria:[1] "It may be asserted with truth that every part of the body may become, under provocation, the seat of an apparent disease that in reality does not exist; that it may, and often does, assume all the attributes of reality with an exactness of imitation which nothing short of careful and accurate diagnosis can distinguish from the real disease. Nevertheless, I unhesitatingly assert that real disease is not found in a greater proportion than one case in twenty; and even this is a liberal allotment."

That is to say, that the vast majority of nervous diseases, being purely mental in their origin, are cured most easily by mental remedies; and there is no doubt that these quack medicines, extravagant doctrines, and varied fetishes afford one and all real and true mental remedies to those classes of minds that can receive them and believe in them. Now, although all sick persons do not run after quacks (for which we may

[1] Skey, "Lectures on Hysteria," p. 44.

be thankful), yet it is true that all sick persons may be benefited by mental medicines in some form or other.

"It should be known," says Osgood Mason,[1] "far and wide, in the profession and out of it, that there is a subjective, a psychic element in the practice of the healing art, and it is in that direction, rather than in the multiplication of drugs, that the therapeutics *of the future is to be enriched.*"

The result of the neglect of this study has naturally been profound ignorance of psychotherapeutics, and nowhere has this had more disastrous practical effect in preventing cures, aggravating disease, and disgusting patients with legitimate medicine than in functional nerve disease.

"To my notion," say Dr. Inman,[2] "there is not in all medical history a more melancholy chapter than that which treats of hysteria; and there are still extant in many books examples of reasoning that are simply contemptible. Who, for example, that knows the nature and character of women, could believe that all of them, from the highest to the lowest, had, without any conspiracy amongst themselves, invented a set

[1] Osgood Mason, "Hypnotism and Suggestion," p. 46.

[2] Dr. Inman, "On the Restoration of Health," pp. 500, 502.

of symptoms whose chief characteristics were pain in the individual and mystery for the doctor, and yet which at the same time should be actualities and nonentities—non-existent, yet aggravated by sympathy—and all dependent more or less upon a desire to be married? I can hardly write calmly when I think of the obloquies heaped upon our females in certain medical works: indignities, indeed, unsupported by a tittle of valid evidence. With these ideas was associated in the doctor's mind a belief that hysterical sufferings were feigned, with a view of eliciting sympathy, and deserved to be treated in a rough manner and by disagreeable medicaments. Upon many a sufferer hard usage was inflicted, where gentle nursing was needed, and a horrible compound of atrocious drugs was ordered as medicine, where all that was really required was good nutrition. Well do I recall the unction with which a hospital physician boasted to me of the efficacy of his Mistura Diabolica, or Satanic Physic in obstinate cases of hysteria."

There can be no doubt that the gradual rise of the study of psychotherapeutics within the ranks of the profession has altered much of this, but enough remains to make me most urgent in pressing the regular and systematic study of psychotherapeutics and the general connec-

tion of mind and body in the ætiology and treatment of disease, not only that we may cease to lose so many of our best patients from the successful inroads of quackery, but that we may be able to treat more successfully those that remain to us, and especially all who suffer from functional nerve disease.

Quackery truly will never disappear, and the ignorant and faddist will always be its dupes; but thousands would never have dabbled in it had they met in the ranks of the profession with the intelligent practice of psychotherapeutics. My final word, then, with relation to functional nerve diseases is that we must recognise that the very essence, the real corner-stone of successful treatment, lies in the recognition of the large psychic element that they contain, and that no treatment can be deemed scientific or will prove satisfactory that does not include the intelligent practice of psychotherapy.

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