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# The pathology of mind

## A study of its distempers, deformities and disorders*

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### Chapter I

### Insanity: what is it?

By insanity of mind is meant such derangement of the leading functions of thought, feeling, and will, together or separately, as disable the person from thinking the thoughts, feeling the feelings, and doing the duties of the social body in, for, and by which he lives. Alienated from his normal self and from his kind, he is in the social organisation that which a morbid growth is in the physiological organism: something which, being a law unto itself, in the body but not of it, is an alien there, a morbid kind, and ought in the interests of the whole either to be got rid out of it or sequestrated and rendered harmless in it. However it has come about, whether by fate or fault, he is now so self-regarding a self as to be incapable of right regard to the notself; altruism has been swallowed up in a morbid egoism.

Forasmuch, however, as societies differ much in different ages, places, and peoples, and in different social sections and strata of the same people, it does not fail to happen that thoughts, feelings, and acts which are natural and avowedly sane at one time and in one medium are unnatural and pass for insane at another time and in another medium. He who has in him the current social nature of one epoch and is suited to live in it may be quite out of harmony with the social thought and feeling of another epoch and unsuited to live in it. Were anybody nowadays to build a column sixty feet high and to live on the top of it, occupying himself from morn to eve with repeated

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bendings of his body from forehead to feet, until curious spectators tired of counting the number of his prostrations, he would without doubt be thought mad; but when Simeon Stylites, performing a Christian plagiarism of pagan examples, built his lofty column and acted in that way he was esteemed a signal example of religious devotion and extolled as a saint. As all living things are in a continual flux, never constant in one stay, but are by change brought to perfection and then by continuance of change to decay, it comes to pass that religions, like empires, decay and die, and that in the whirligig of time it is the lot of the distinguished saints of one religion to be accounted madmen or impostors by the partisans of a succeeding religion. There have been savages who have deemed it piety to kill and eat their aged parents when these had become burdensome to themselves and to them, and others who, counting it no shame to perform their sexual functions in public, have thought it gross indecency to eat in public. What would be thought now in any civilized country of a person who practised the piety of those or the open intercourse of these savages? When the belief in witchcraft was as strong and general in all countries as it is still among barbarous peoples, the complaint of any one who proclaimed himself bewitched was received as awful truth, and the malignant which forthwith sought out, tortured, and put to a cruel death; but if any decently educated person were to believe himself bewitched at the present day he would be thought to labour under an insane delusion and to need medical treatment. Every day in the lowest strata of society a person says and does habitually that which, were it said or done by a person of the more refined classes, would infallibly denote mental disorder in him. So much do the particular conditions of the society in which the individual lives fix the meaning off his thoughts, feelings, and acts, and so incumbent is it to weight them critically when judging what is or not madness in a particular instance. Nay more: to take exact account also of the particular circumstances of the incident in questions; for that which would be a natural and fitting act in its proper circumstances might be so extraordinary an offence against propriety in other circumstances that it could then proceed only from aberration of mind.



Insanity means essentially then such a want of harmony between the individual and his social medium, by reason of some defect or fault of mind in him, as prevents him from living and working among his kind in the social organisation. Completely out of tune there, he is a social discord of which nothing can be made. What is the nature of the fault in him? It may be simply a natural defect or congenital deprivation of mind, one or more of its faculties being absent or stunted owing to defective cerebral organisation; in which case the person is *idiot* or *imbecile* according as the degree of mental deprivation is greater or less. Or the fault may be a derangement of mental functions not originally defective, owing to disorder of their extremely fine, complex, and intricate nervous substrata; in which case he is deranged, out of his mind, *insane* or *lunatic*.

Obviously the derangement may be brought about in two ways – either mainly from within, when there is much natural infirmity and instability of the mental organisation, or mainly from without, when a powerful extrinsic cause of disorder acts on a mental constitution in which there is little or no intrinsic fault. The strongest mind in the world could not help being overthrown by such external cause as severe injury to the brain, or gross disease of it, or by the flow of a much vitiated blood through it; and in that case the derangement might properly be described as accidental or occasional. But when the alienation of mind is the result of a great native instability thereof, whereby it easily topples over, or is the culmination of an irregular and perverted development of faculties, whereby it has grown awry into such disproportion or actual deformity of its parts as to be incapable of social functions, or easily to become so on the occasion of a slight external shock or strain, the disorder is essentially natural or intrinsic. Most instances lie between these extremes of strong and weak mental organisation; they represent a conspiracy, in varying contributory proportions, of external and internal factors. Few are the cases in which, when an outside event overthrows the mind, it is not right to suspect and, suspecting, to search for the secret coefficient of an infirmity of mental constitution, whereby a sorrow, need, trouble, or other adversity which glides easily off persons of a more robust nature causes a kind of degree of commotion of mind fatal to its balance.



It is the custom to speak of insanity as disease of mind, but in a large class of cases it is not disease in the ordinary sense of the term so much as distortion of deformity – that is, growth gone awry. Unpropitious conditions of nurture and training have conspired with an innate bias of nature to produce such a wry and disproportionate growth of one quality or set of qualities of mind, such a want of proportion or *ratio* of them, that the person is *irrational*; the exaggerated growth then becoming the predominant note of a particular variety of insanity. Since the mental distortion may be of every degree and kind, so slight as to be no more than eccentricity that is consistent with sanity or so great as to go beyond the bounds of reason, it is not possible to draw a distinct line of division between sanity and insanity. There exists no such separating boundary on the one side of which lies positive disease and on the other side not; there will always be persons whom some will think mad and others think not mad, or who might be thought mad in one place and time and not in another place and time.

In speaking of insanity as *disease of mind* the difficulty lies not only in defining exactly what is disease, but also in obtaining a clear and exact idea what mind means. The notion of a spiritual entity which exists and can be diseased apart from the body is pretty well obsolete, albeit many of those who make this acknowledgment in the general, having made it, go on forthwith to speak of its functions in the particular, especially of imagination, moral feeling, and will, as if they had abstract being, and it were a derogation from their dignity to think of them as dependent on a physical

basis. Failures of morality and will therefore they view not as faults which are avenged on mortals by process of natural law in this world, but as sins which will be avenged on immortals in a world to come. Were they to substitute the term mental organisation for the term mind on every occasion of its use, forming for themselves a conception of an area somewhere instead of a metaphysical point nowhere, the exercise might be profitable and its results fruitful in giving substance to thought and meaning to words. Anyhow, that is what the practical psychologist must needs do who can find no footing for himself in metaphysical abstractions, but has to deal with the defects and disorders of the fine and complex nervous plexuses which subserve all mental functions, the highest equally with the lowest – with defaults, that is, of the mental organisation.

What is the mental orgnisation? The key of its structure and function is a simple reflex or excitomotor act. The type of its structure is, on the one side, a sensory or afferent nerve along which, in response to an impression made on its endings, an ingoing current passes to a central nerve-cell, and on the other side a motor or efferent nerve connected also with the nerve-cell, along which the resulting outgoing current passes to the muscles that react on the outer world. Such simple nervous structure by which a message is received from without and fit reaction made to it is practically the entire nervous system of the lowest creature which owns one, ad it is the basis of the more complex structures that subserve the adjustments of the highest creatures to their external conditions; for it is by the multiplication of cells and fibres, and by complication of tracts and connections, that their nervous structures, however complex, are built up. In the complex plexuses formed by the multiplication and complication of cells, fibres, and connections, there are the obvious means of associating several ingoing currents proceeding from different sensory endings and of making fit distributions of energy and different combinations of distributions along several tracks or lines of conduction. Moreover, in the ascending scale of animal organisation from the more simple and general to the more complex and special structure there is a further complication of different levels of nerve – plexuses; and it is obvious that in the superposition of areas of higher level of reflex action with which areas off lower level are connected, and in the more abstract superordinate functions of which their lower functions are represented, there are the means by which pregnant impulses may descend from the higher areas of nervous hierarchy to the several subordinate centres and be there suitably analysed, as it were, and distributed.

Considering that there are some hundreds of millions of nerve-cells and fibres in the cerebral cortex of a man, that every cell which is not unattached has its own connection or connections, and that every one of the multitude of fibres goes separate to its destination, whatever that be, imagination may go some way to realise how exceedingly fine, numerous, intricate, and complex are the nervous networks which

constitute the mental organisation. There are abundant means of physical reflection to serve all the purposes of mental reflection, more perhaps than have ever yet been made full use of by minds of the largest capacity; indeed it is a specious surmise that there are multitudes of available cells in the cortex waiting to make their connections as fast as new observations and reflections shall require and use them to register newly discovered relations of things.

As the mechanism of a simple reflex act is the elemental type of the complex mental structure so the simple reflex act is the elemental type of the complex mental function. To receive an impression and to make a fit reaction to it, either in order to embrace the stimulus when it is agreeable and useful or to repel and evade it when it is painful and hurtful, that is the fundamental factor in all mental function; the most complex of which represents essentially, though in abstract representations, by cortical registrations – as it were by a system of algebraic symbols – the greatest number of the fittest movements in answer to the greatest number of fitting impressions. Many small creatures are admirable in the adaptations of their acts to their ends, being more perfect than man in that respect, but the range of their impressions is very limited and special compared with the wider and ever-widening range of experience which his senses open to him; they are perfect machines for their comparatively narrow ends, their more simple nervous system being wholly appropriated and, as it were, stereotyped to certain set uses; whereas his complex nervous system is a progressive and perfecting machine plastic to the new uses which his pains and gains through the ages gradually incorporate into it. What could be more clever than a bee along the tracks of its instincts, what more stupid than a bee outside them? Growing reason is the progressive gaining by experience of what, in elementary form, is innate or instinct in many of the lower animals.[1] Purposive reflex action without conscious design we call instinct, and the more complex the act the more wonderful the instinct, but purposive action consciously adapted is called reason, because it is desire guided to its end by experience. At bottom the latter is just as reflex as the former, and the former as essentially reason as the latter,



1. Having found the powers to do a variety of acts instinct in different animal organisations, men have thereupon made *instinct* a substantive faculty and treated it as an explanation. It would be just as good an explanation to make of *innate* or of *implant* a substantive faculty and thereupon to ascribe them to it. That so much time and work have been given to tedious doubts and discussions whether such animals as dogs and horses possess reason is a proof how little psychology has been a science of observation, and how much its concern has been with words not things; since there was not an intelligent shepherd or groom who could not any time, had the problem been intelligently put to him, have settled it off-hand and was not daily solving by his daily management of these animals. The question, Are animals machines? might profitably be supplemented by the question, Is reason mechanical? That is to say, organic machinery in mechanical making.

instinct being formed reason and reason instinct in process of formation; or they are both alike acts of reason, if that description of them be preferred, the one of implicit the other of explicit reason, – the actual processes of the same nature, however we choose to name them.

That the fit adjustment of movement to impression is the quality of perfect reflex action is plain enough, but it is not so plain that it is the fundamental quality of the more complex process of reason or intelligence. Nevertheless that is so; to perceive or be sensible of a coexistence or sequence of impressions and to determine consciously fit actions in relation to them is to distribute the aesthesodic or afferent impulses through central junctions along nerve-tracks whose union in function shall effect the desired end; and that is to act with purpose after reflection – in other words, to understand and will. The true nature of the process is masked by its complexity, and especially by the symbolic representation of bodily functions through the highest cortical reflexes of the brain; but still more masked perhaps by the presence of consciousness and by the traditional misconception of what it is and does in mental function. It has been very difficult to persuade the speculative psychologists who elaborate webs of philosophy out of their own consciousnesses that consciousness has nothing to do with the actual work of mental function; that it is the adjunct not the energy at work; not the agent in the process, but the light which lightens a small part of it. In no case does the consciousness of a particular mental state go before and dictate it; it comes into being only with the actual state, attending or following it; no one is ever, nor for the life of him could ever be, conscious of the state until the state is. We may put consciousness aside then when we are considering the nature of the mechanism and the manner of its work, for it is a pretty safe assumption that when the same act is performed consciously on one occasion and on another occasion in exactly the same way unconsciously the same mechanism has been at work. Dreams and the dreamlike products of imagination might occasion less surprise to psychologists could they but see and acknowledge that the brain has and performs mental functions and get rid of the notion that it does not and cannot perform the functions we call memory, reason, and imagination without extraneous metaphysical help.



Nothing is more certain than that when we have done an act a thousand times, whether it be an act of bodily skill or an act of judgment, we can do it better without consciousness than with it. Every immediate perception or apprehension is a proof of this; for although it appears to be instant and instinctive, it is actually, in origin and nature, just as much an inference as any act of judgment or long discourse of reason which we perform deliberately; neither more nor less than gradually learnt motor adaptation to special sensory impression – literally, the right *apprehension* or grasp of the object. The forms of objects and their various qualities are essentially such fit motor apprehensions. But because the process of learning begins with life and goes

on continually and insensibly through it, its steps lapse in consciousness and the apprehension which had to be tediously acquired comes to seem immediate and intuitive. In like manner a judgment which, being well based on sound experience, is instantaneous and instinctive, is so because the steps of its process have lapsed in consciousness. In both perception and judgment, the premises being given, the conclusion which follows inevitably in every soundly constituted mind is just as necessary a reflex act or effect as is the infant's sucking when the mother's nipple is put between its lips.

I may set it down then that in the development of the functions or so-called faculties of mind we have to do with a process of gradual mental organisation after the type of reflex action – in fact, with the formation of a number of special and complex interlinked cerebral reflexes. Consciousness attends the process of adaptation, tentative endeavours, the practice of means to ends, the steps of organisation; it lapses when skill is perfect, whether it be skill of thought or skill of action. An angry wasp stings instantly with perfect art and skill, because a perfecting practice through the ages has been embodied in a most fit mechanism, owing to a process of extinction of the wasps which did not, and of the survival of those which did, succeed in so defending themselves: it does not now need to remember how to sting because its memory is so complete as to be unconscious, working so well that it does not know that it is at work. In like manner, when any one is an instinctive thief or liar, as the best thief or liar always is, or a born poet, as the true poet must be, he is so because the foundation of the fit nervous structure has been infixed in his constitution by prevenient bane or prevenient grace; that is to say, by the ancestral exercise of a predisposing function before ever he was begotten. All the pains and practice in the world could never make a great criminal of a person who entirely lacks criminal proclivities, any more than they can make a great poet of one who toils and moils painfully to manufacture consciously the inspiration which is not in him. Great artist of his kind will neither of them ever be. Virtue itself is not safely lodged until it is so grounded inward in the nature that it is a habit and its exercise a pleasure; so long as it is self-conscious it is not fixed and stable, being at best in process of formation rather than formed, its reflexes not firmly and definitely organised. Of vice too it may be affirmed that it never reaches its skill of perfection until it is sublimely unconscious of itself and, masking its wiles and guiles, its shifts and deceits, its essential egotistic foulness, in the guise of virtue or the garb of religion, gratifies itself from superfine moral motives and is vain of its superlative virtue.

Not only does special function imply special structure, but special structure means the incorporation of that kind of function which has been the condition of its formation. Organic growth has taken place along the lines of habitual activity, and that form of nervous system survived in development which was the most fit to survive in the actual conditions and because it was most fit. The difference in

structure and form between the simple nervous system of a creature low in the scale of organisation and the complex nervous system of another high in that scale represents the form, measure, and means of the difference between the few, simple, and general reflex acts of which the one is capable and the many complex and special relations with the external world which the other has. With the progressive increase and specialisation of these relations the progressive development of the nervous system has gone along; its formal structure in each species incorporates the accumulated experience of the species in its progressive adjustments to its surroundings, and accordingly it displays explicitly when it functions what it contains implicitly. The stimulus which acts on it excites not merely a simple, direct, or plainly proportionate reaction, which ceases when it ceases to act, but effects that are indirect, circuitous, complicated, continuing when the stimulus ceases, and reaching back in secret and silent operation through the embodied history of the species. Moreover the specific nature of an organism necessarily determines and limits the number and kind of its relations to the external world and renders it incapable of the special responses thereto of a differently constituted organism. Thus it comes to pass that every species of organism has its own world: the worlds of a tiger and of a tiger-moth are two quite different worlds, one as good as non-existent to the other; and the eternal truths of the wisest monkey's mind are not the eternal truths of a human mind. The very different and at the best very limited relations of organisms to the external world we might compare to the graduations of a thermometrical scale; one scale is divided into more and another into fewer degrees, and there is no limit to the number of possible divisions; but in every case, whatever the length of the scale and the number of its divisions there is an ungraduated infinity below the lowest and an ungraduated infinity above the highest degree. Knowledge is but a little gleam of light between two infinities of ignorance – the infinitely little and the infinitely great; it is just as impotent to reveal the microcosm of self as the macrocosm of the universe.



That human minds differ much in their natural capacities, some being capable of developments which others could never attain to, whatever training they might undergo, is an obvious truth; and it is not less certain, albeit less obvious, that such differences go along with differences in the complexity of the structure of the cerebral cortex. We cannot demonstrate arithmetically that the nervous plexuses are fewer and more simple in the cortex of one brain than in that of another on the same level of general civilization, seeing that it is impossible to make the innumerable nice countings and measurings necessary to prove it, but they are notably fewer and more simple in the brains of the lowest savages than in the brains of the highest races of mankind. The superior structure is the embodiment of superior function which has been developed through the ages; and therefore no amount of education, even were it begun from the first and continued to the last hour of life, could raise the low savage, who lacks the nervous substrata of the highest mental functions, to the level

of the civilized person who possesses them. The former lacks by nature that which the latter has lost by disease when he is the outcome of a morbid degeneration of kind and, sunk to a congenital idiocy by reason of defective nervous plexuses, is less capable of ordinary intellectual and moral culture than the low savage. It is at the beginning of the development of mind in the lowest specimens of the human kind, who have not yet a full human heritage, and at the end of the degeneration of mind in its highest specimens, who have lost it, that we discover plain evidence of structural defects which, though inferred with certainty, are not manifest in the intermediate stages.

Not that the defects in such case must needs be actually missing cells and fibres; for these might be there in full number and yet be unfit to subserve the proper faculties, either because of some defect of their quality or because of the absence or fault of the requisite fine connecting processes. It is not enough to have a line of nervous conduction laid if it be so badly laid that it will not conduct, nor to have the full number of lines laid if the junctions of tracks are wanting; in neither case then would there be the capability of a proper mental organisation. The cortical plexuses neither act all together nor act at random when they discharge the several functions of mind, any more than the muscles do when they perform bodily acts. Definite combinations or patterns of nerve-tracks are formed to serve the different requirements of sensory impressions and motor reactions; and these central patterns or forms of associated tracks are more or less temporary or permanent according as they minister to temporary needs or to fixed habits of function. In some brains it would seem that certain associations of tracks, ready-formed or easily formed, constitute natural endowments of structure and are the foundations of special bents and aptitudes of mind; an ancestral mental habit having presumably endowed the offspring with such a trend and aptitude to the exercise of a particular function and to the acquirement of an instinctive excellence of it in consequence. What other explanation can be given of singular tricks of gesture and even peculiar modes of thought or expression exhibited sometimes by a child which never had the opportunity of learning them by imitation of a father or a grandfather whose characteristics they were? Or of the signal talents of a special kind which are met with occasionally in persons who in all other respects are no better than imbeciles?



In the varying firmness of an organised tract of thought lies the explanations of the effects or the non-effects of education to undo it. For it may be so firmly set that a systematic training to a new order of functions will not permanently dissolve it, the propensity to fall back into the old form and to resume the old activity being irresistible; or the association of its parts may be so loose that another kind of training than that to which it owed its formation breaks it up easily and uses them for the organisation of other forms of activity. In the latter case education and training may do much to mould mental formation; in the former, they can do little to change the

innate set lines of function into the maturities of which the mind is destined to grow. If there takes place inwardly and invisibly in the combinations of nerve-tracks something like that which takes place outwardly and visibly in the combinations of muscles to perform complex movements – which are notably first associated fitly by tedious exercise, afterwards act together easily, and at last can only with difficulty be dissociated – it is easy to perceive that to undo a mode of thought might become as hard a business as to undo an accent of speech. Man's constitution responds best to cultivation and training, right or wrong, for the highest organism is always the most modifiable, and most modifiable in its highest developments; his complex nervous system affords thee conditions of many and various incidences of impressions and of many and various reactions thereto, as well as an available store of plastic substance to undergo new organisation. The character of the ant or the bee, its nervous plexuses being comparatively few and simple and set to certain definite functions, it would be vain to expect to modify materially, whatever changed circumstances it were placed in and however soon in life the experiment were begun.

In man also there are certain fundamental lines of thought, feeling, and action which have been infixed in the organisation through the ages of its fabrication and which no education could subvert. To require him to move off them would be as ridiculous as to require the bee to move off its instincts. Such are (a) the forms or categories of the understanding in his intellectual life; (b) the forms of pleasure and pain in his life of feeling; (c) the forms of bodily activity in his motor life: all alike the necessary consequences of the present physical structure, sensory and motor, of the human body. They are implanted powers of, and at the same time the limitations to, the variety of thoughts which he can think, of feelings which he can feel, and of deeds which he can do; to transcend them he would have to transcend his present structure. The infinite variety of human nature, when we look critically into it, is reduced to basic lines of somewhat mechanical repetition, with variations that are themselves repetitions. For the life of him man could not now invent a new virtue or a new vice or a new movement, any more than he could invent a new form of thought – would be as stupid in that respect as a bee outside its instincts.



If a mind be free from dominating proclivities, still more if training be applied specially to foster suitable proclivities in it, then it may almost be moulded to any pattern, though not to any height, of thought and feeling that is whished, provided that exclusive training be begun early enough and uniformly enforced long enough. Get exclusive hold of it from its first dawn, subject it systematically to a special class of impressions and to an answering ser of reactions, sequestrate it from all conflicting and distracting impressions, and exercise it constantly in the way in which it is desired it should think, feel, and do, – the certain physical effect is the formation of a mental organisation which shall discharge that function and take pleasure in discharging it; which shall function in one sort of belief and practice in one age or country and in

another sort of belief and practice in another age or country, and which always shall resent and recoil from any alien function. How can a being so manipulated, trained, and manufactured to a set form of mental growth by tradition, special education, custom, and habitual practice in relation to special conditions of environment, observe, reflect, and judge in relation to matters outside his range of set functions? It would be as reasonable to ask one species off insect to have the sensibilities and to perform the acts of a different species. How can a Mussulman who has been taught to spell the Koran, to read the Koran, to write the Koran, to recite the Koran, as his sole school-lesson, and to believe that there is nothing true outside the Koran, and whose ancestors have done the same thing for more than ten centuries, have any real sympathy of feeling and thought, a real community of nature, with a Christian, or do otherwise than loathe, hate, and despise him? The two beings are of the same animal species, but they are now virtually of different mental kinds. But why multiply instances? There is not an inconsistency or contradiction of thought and conduct, however flagrant, which may not exist in the same individual; not a folly of belief nor absurdity of practice, however monstrous, which has not been cherished piously somewhere or other at some period or other of human history.



Having a firm grasp of the principle of the reflex structure and function of the brain, and of the mode of building up of a mental organisation, it is easy to understand how the most distorted mental mouldings are inevitably accomplished when they are resolutely put in hand steadily carried through. That is done for the individual by artificial selection which he does for himself by natural selection, when, owing to the strong base and bias of some such passion as pride, suspicion, jealousy in him, which takes all impressions and turns them to its nature and nurture, his mental development is warped into deformity or actual insane delusion. Then he is utterly incapacitated from getting into true relations with men and things, his deformity precluding a just mental contact: he lacks a rational basis of nature, that just proportion of parts whereby they act in harmony among themselves and in fit adjustment to the outer world. Now, as everybody fulfils the capacities of being more and more fully in proportion as he multiplies and makes more intimate his relations with nature, social and physical, and becomes a more and more complete part of it in a circuit of intaking and outgiving, receiving and reacting, feeling and doing, it is obvious that so far as he stands out of it by any intemperate development of self, any growth of it which is not justly motived by external conditions, he is a social malformity and an encumbrance or injury to the social organism. Wrong thoughts and feelings there will always be from inadequate attention, bad reasoning, passion, prejudice, tradition, custom and other common causes of error, to be corrected by better information, sounder reasoning, and more wholesome social sympathy; but they are widely different, at any rate in degree, from those firm sets of mental organisation underlying fixed morbid habits of thought and feeling, not to be corrected anyhow, which mark

certain types of character and, if not actual mental derangement, are well on the road to it.

That which disease or distorted development does for the individual when it produces a dominating delusion or a prevailing cast of deluded thought with its corresponding hallucinations and conduct is very much what the so-called mesmeric or hypnotic operator does for his subject when he puts him into the hypnotic state. What may we suppose to take place when a person is thrown into such a trance in which, machine-like, he is governed by the suggestions which the operator makes, touching, tasting, seeing, hearing, thinking, and doing just as he is bid? That by the special suggestions made the fit tracks of his brain are stimulated to a separate and pretty nigh exclusive activity, while the function of the remaining tracts are suspended. Thereupon he cannot choose but perceive as he has been made to think; must translate every impression on sense into the language of the solely active idea and shape it to its features, or else have no consciousness of it at all. He cannot possibly perceive in the terms of ideas that are entirely inactive. The one active cerebral tract is virtually the whole and sole mind which he then has, and to obey it in sense and act is a compulsive necessity. For the time being he is as effectually severed form full mental contact with things as if he had been educated through life to exercise that tract and none other, or as if he were a madman dominated by its morbid growth and function. There is good reason then why persons of weak and unstable nervous temperament can, while persons of strong and compact mental organisation cannot, be thus put out of possession of themselves, and why those who have frequently allowed their mental being to be thus dislocated become so unstable at last as to fall out of mental joint at the least suggestion. Nay more, there are persons who under enthusiasm or other mental excitement can perform a self-hypnotism and afterwards so cultivate the acquired function by strain and practice as to repeat the operation at will with the greatest ease. That is the explanation of the success of those hypnotics who, when told that they will fall into a trance at a certain hour on a certain day, fail not to do it; the explanation also of the hysterical trances of the religious ecstatics which, like epilepsy and other abnormal nervous functions, have been ascribed to supernatural causes; the explanation again of the set forms of thoughts and feelings into which all fanatics and very many who are not fanatics fall instantly when, confronted with unwelcome facts absolutely opposed to what they believe, they blindly ignore them in blind ignorance of their own blindness.



Enough has been said to make plain where the physical disorder lies in mental derangement and how exceedingly fine, complex, and intricate is the anatomical structure concerned. The problem of the physician is to find out by what causes and in what ways this fine and complex substratum of the mental organisation is deranged: whether by such gross disease as apoplexy, tumour, softening of the brain, and the like, in which case the mental impairment, being regarded as a by-event, is

not technical insanity; whether by such intimate and insensible molecular disorders as give rise to the commonly recognized forms of insanity; whether by such positive fault of structure as is the frequent cause of idiocy. At the bottom of all mental impairment there is impaired structure of some kind, at the bottom of each particular mental disorder the fitly disordered structure.

The two guiding reflections to be kept in mind are: first, that the mental organisation has been perfected by a gradual development through untold generations and embodies in its formal structure the acquisitions of the race through the ages, from the first gains of culture to the latest gifts of heredity; secondly, that the plan of its complex structure and function is the simple structure and function of a reflex act. It follows then that the study of its pathology must in every case be of two kinds – first, historical and social, and secondly, strictly pathological.

The study of the individual as an element of social pathology will plainly be a long, laborious, and difficult business of the future. For it will be a study of the progressive formation of the social being and of the causes, nature, and features of its disruption when his social nature is going through the regressive processes of being unmade. Nevertheless, if psychology is ever to be a solid and fruitful science, it must cease to take the individual and his qualities for granted as something final, behind which it is vain to go, and must search out the differences of individual minds and how they have come to be. What the astrologer aspired to do when, noting these differences of character and the need of an explanation of them, he thought to find it in the aspects of the planets under which persons were born; what the phrenologist thought to do later when he claimed to discover the seats of the faculties of mind by inspection of the protuberances of the head; – that the psychologist must some day do by patient scientific study of individual character as the natural product of organic processes of mental growth and decay. Hitherto he has been so high in the clouds of speculative abstractions that he has not been in the least touch with the real being of flesh and blood who plods painfully on the ground; therein not unlike the shoemaker who, able to discourse largely and learnedly about shoes, was not able to make or to mend one. Having obtained his exact knowledge of individual characters and found out what the different qualities mean, he will have no difficulty in tracing the growth of false fashions of temper and thought into the excesses which become insanities, whether in the course of individual life or in the course of pathological development from generation to generation.

The strictly pathological study of insanity will perhaps show that disorders of the mental organisation run parallel to disorders of the lower nervous centres. A disordered reflex act may be taken as the type of the disorder of the most complex mental functions, provided that due allowance be made for the fact that we have to do not with simple and direct reflex action, but with special and complex reflex action taking place indirectly and circuitously, in many windings long drawn out, through

the intricate and complex network of the cerebral cortex in which is intreasured the capital of human experience. The inquirer who translates the terms of the morbid functions of the lower nervous centres into terms of morbid cerebral functions finds himself in presence of the varieties of mental derangement. What is mania but the counterpart of convulsions, at a higher remove or level? What is torpid melancholia but the counterpart of sluggish and pretty well palsied movements, at a higher remove? What is a morbid distortion or deformity of mind but the counterpart of a fixed spasm or deformity of movement? What is absolute dementia but a lasting paralysis of mind? Lessened and increased irritability, lessened and increased sensibility, neuralgias, and their kindred nerve-storms on the afferent or sensitive side; violent and irregular movements, spasms and convulsions, partial or complete paralyses on the efferent or motor side; – these are the varieties of morbid function which are represented in the mental disorders of the cerebral cortex. Like them, they may properly be described under the headings of – I. Depression; II. Excitement; III. Perversion or distortion; IV. Weakness or privation of function.



Note: More detailed arguments in support of the propositions set forth in this chapter will be found in two articles in Mind, viz:-

1. “The Physical Conditions of Consciousness”, v. xiii, n. 48.
2. “The Cerebral Cortex and its Work”, v. xv, n. 58.