

Moral Responsibility. By S. MESSENGER BRADLEY, F.R.C.S.

Moral Responsibility, although often treated from a metaphysical point of view, has seldom been regarded from a physical or physiological side, and yet it is from this source alone that we are at present able to gain any accurate information respecting the working of the mind, and it is chiefly from this basis that I purpose here regarding it. The means of observation which metaphysicians employ have been known to, and employed by, philosophers for the last two thousand years, and yet it must be admitted with but a poor result. Until physiology came to their aid, they had not arrived at a knowledge of the fact that the grey cortical matter of the brain is the seat of the mind, and that intellectual action involves definite physico-chemical changes which we are to some extent capable of estimating. The psychologists, indeed, fixing their attention solely upon subjective phenomena, resemble those fatuous fakirs, who, intent upon a particular point in their own bodies, come to believe that the umbilicus is the seat of wisdom; or, rather, they resemble the horse in a threshing floor, which, however rapidly it may seem to advance, only retraces its steps in one small unending circle. It is a simple fact that, whatever positive knowledge we possess of the mental process has been obtained by the aid of physiology, and it is equally certain that all the knowledge we are likely to attain for a long time, if not always, must be derived from the same source.

The statement of Carl Vogt, and others, that thought is secreted by the brain as bile is secreted by the liver, is inaccurate, inasmuch as the circulation of a healthy blood through the latter organ is all that is required to set the secreting machine a-going, whereas something besides pure blood is needed to put the cortical cells of the brain, or the thinking machine, in action. This additional factor is the very subject matter of thought itself—it consists of something external to the body, and, with the important exception of ideas which are the direct offspring of memory, this external is conveyed to the brain along the avenue of the senses; thus some ideas result from vibrations carried to the brain cells by the auditory nerve, others arise from molecular changes in the optic, olfactory, or glossopharyngeal nerves; while other groups of ideas are prompted by messages carried along the path of the spinal sensory nerves in general. But after all

the brain does not widely differ from some other organs in thus requiring an external stimulus to rouse it into activity, *e.g.*, a rough analogy may be traced between its action and that of the stomach, whose peptic glands secrete the gastric juice from the circulating blood, but need the stimulus of food to excite the process. An apparent exception to this mode of stimulation is afforded by the action of the brain when it responds to an effort of memory, but although in this case there is no tangible external, yet the fact that memory is the recollection of foregone ideas which have had in their creation a tangible external, and which are set in motion in every instance by more or less clearly traced suggestions from without, entitles us to place even memory in the category of external stimuli. When, for example, "a poet puts together some piece of imagery, or describes some fanciful object, such as a castle of indolence or a haunted house, he begins with a mind already imbued with whatever has been written upon the subject before, *i.e.*, he has the external before him of another's description, who in his turn described some natural object and gave it a fanciful name." Thus every act of cerebration, conscious or unconscious, is the result of something existing outside the brain acting on the brain, something which is pre-existent; which is only stating in other terms that no such thing as entirely original thought is possible to the human mind. This statement may appear to open up the whole question in dispute between the two rival schools of moralists, the Utilitarian and the Intuitionist, the former holding the opinion that no innate thought or principle exists in the mind, the latter arguing that we do possess innate principles, of which the "illative sense" of Newman may be taken as the highest example. For two hundred years the battle has raged between the two sects, and the victory cannot yet be claimed by either side. The present argument is not, however, at all affected by this contest, as I will briefly try to show, by quoting the doctrines of the rival schools. "It is an established opinion," says one of the greatest of Utilitarian philosophers, "among some men that there are in the human understanding certain innate principles, some primary notions, *κοινὰ ἔννοια* characters, as it were, stamped in upon the mind of man, which the soul receives at its very first being, and brings into the world with it. It would be sufficient to convince unprejudiced readers of the falseness of this supposition, if I should only show how men barely, by the use of their natural faculties,

may attain to all the knowledge they have without the help of any innate impressions, and may arrive at certainty without any such original notions or principles.”*

On the other hand the doctrine of the Intuitionist may be understood by the following extract from the eloquent work of Professor Sedgwick:—“Naked, man comes from his mother’s womb, endowed with limbs and senses, indeed, well fitted to the material world, yet powerless from want of use; and as for knowledge, his soul is one unvaried blank; yet has this blank been already touched by a celestial hand, and when plunged in the colours which surround it, it takes not its tinge from accident but design, and comes forth covered with a glorious pattern.”†

It is difficult, I say, to see any material difference between these two schools, for not only do they agree in saying that external circumstances are needed to call forth these principles, but that the very notion of the principles depends upon the nature of the external circumstances: thus, *e.g.*, both schools agree in the fact that different nations have various grades, and even ideas, of morality; that the standard varies so widely that one nation may view an action as a cardinal virtue, which another nation, or even the same at a later period, may condemn as a cardinal sin; there is scarcely a single act, indeed, which is regarded as criminal by a Christian people, which has not at some time or other been looked upon as a virtue by some savage tribe. The only contention between the Utilitarian and the Intuitionist would be that one would maintain the notions on these points were part of the mental moral furniture intuitively (*i.e.*, really hereditarily), while the other would hold them to be acquired by the individual during his own lifetime.

The instances which history affords of the sudden appearance of a moral genius in a country may at first sight appear subversive of the statement that absolute originality of thought in moral questions is impossible, but I think it may be clearly shown that all such men as Cakyamuni, Hillel, Confucius, Plato, Seneca, St. Augustine, have derived their ideas from previous sources, so that even here no spontaneous generation of thought has taken place, and in a word, we are correct in saying that “*ex nihil, nihil fit*,” is as true in speaking of thought as of matter.

Speaking of purely intellectual action, physiological ex-

* Locke’s “*Essay on the Human Understanding*,” p. 10.

† Sedgwick on the “*Studies of the University*,” p. 54.

perience leads us to conclude that the work done is dependent upon the physical condition of the cortical cells of the brain. And when we have ascertained the result of such agents as hereditary temperament, physical health, education, social position, climate, age, and so forth, upon the individual, we shall be unable consistently to deny that in every case the product, moral as well as intellectual, is the necessary resultant of a certain incident force operating on certain brain cells variously modified by various antecedents. It is the object of this essay briefly to trace the influence exercised upon the moral nature by such environments as those mentioned, but before doing so we may for a moment try to confirm the first part of the statement as to the action of the intellect apart from any question of morality. Confirmation is afforded by taking the case of two lads of equal age, equal health, and equal habits of application, setting them down to the same studies, and noting the result; the one develops the raw materials of fact so as to advance our knowledge of (say) mathematics, while the other is barely able to gain from the facts an acquaintance with the simple rules of arithmetic. One man sees tongues in trees, sermons in stones; to another "a primrose on the river's brim, a yellow primrose 'tis to him, and nothing more." Again, to show that without experience gathered from the senses the human mind is incapable of producing any thought, we may consider the condition of those who are congenitally deprived of two of the most important avenues to the brain—the senses of sight and hearing. In these cases, when it must be borne in mind there is no defect in the quality or quantity of the brain cells, but when the messages are only conveyed through the comparatively coarse media of the cutaneous nerves, and such modifications of the cutaneous nerves as the nerves of the nose and tongue, the brain never succeeds in developing abstract ideas, such as those involved in the conception of God, eternity, whiteness, and the like; though the excellence of the cerebral organ is plainly seen in the results obtained by diligently cultivating the few channels left open. The parable of the talents is true enough, so far as their different distribution is concerned; but the justice of the verdict is not so evident. The argument might be put aphoristically thus—the brain of man is never a *creating*, but simply a good or bad *answering* machine.

Let us now proceed to point out what evidence there is in

support of the inherent *moral* differences and moral possibilities of individuals. Is there evidence to prove that the human tree brings forth fruit after its kind in moral as well as physical and intellectual characters? We know that the Negro produces Negro, the Jew Jew, the Mongol types after his kind, and so on; but are the moral characteristics transmitted as well as the physical attributes? We shall find that there is probably as much evidence to show the heredity of moral as of physical characteristics, and indeed that this heredity extends to peculiarities of mind and manner just as it does to physical peculiarities. Thus we know that special peculiarities of structure, such as supernumerary fingers or toes, are transmitted from parent to offspring; and we have equally irrefutable evidence that virtues and vices are in like manner hereditary. Another point of analogy is this—in the case of the transmission of physical peculiarities, or physical diseases, such as gout, we find that though certainly hereditary, they may occasionally miss the generation first in order and appear in the grandchild; and in like manner this law of *Atavism* seems to operate in the case of the moral qualities, some prominent trait, such as dipsomania, being absent in the first and present in the second generation. The experiments of breeders have proved that certain moral qualities are transmitted in some of the lower animals; the disposition, for example, of pugnacity in poultry and in dogs may be ensured by careful breeding as certainly as (what is now beyond dispute) can the shape and colour of the tail feathers in a pigeon, or the character of the hair in a dog; and in the human family it is equally certain that “the brave are begotten by the brave.” “We know through the admirable labours of Mr. Galton that genius, which implies a wonderfully complex combination of high qualities, tends to be inherited;”^{*} and we know in like manner that the complex moral condition implied in the term “general nervousness” is invariably inherited, or rather (and this is a more striking fact) invariably transmitted; for as certain diseases (established by Brown Séquard’s celebrated experiments with acquired epilepsy in the guinea pig) when once acquired by an individual tend to perpetuate themselves in the offspring, so in the transmission of certain moral flaws, when once acquired by an individual previously sound, we have another reading of the words—“The sins of the father are visited upon the children.”

* Darwin—“Descent of Man.”

There is no doubt that this transmission of the moral nature is often difficult to discern, just as it is often hard to trace the physical features of either parent in the child; and this is probably due in the first case equally with the second to the varying proportion in which the physiological units of one or the other parent predominate in the offspring, but the more we investigate it the more absolute does heredity appear to be in the moral as in the physical department. If we take a complex subject like the musical faculty, for example, which implies the transmission of both intellectual and emotional qualities, we find overpowering evidence of its being due to inheritance: continual transmission and accumulation at length becoming an inherent property of the brain, which only requires, as in the case of Mozart, stimulating at a very early period to become excited into activity. The argument gains weight from regarding the converse of this fact; thus the way in which a quality of the mind may be lost by continual repression and omitting to call the necessary cells into activity, is seen in the entire absence (or almost entire absence) of this same musical faculty among the Society of Friends, from whose services music has been banished, and by whom it has been disregarded for several generations. This double fact, viz., the national love and capacity for music among the Germans, on the one hand, and the abrogation of this property among the Quakers, on the other, is, I am inclined to think, sufficient to demonstrate the power the brain cells possess of transmitting their most subtle peculiarities. A careful weighing of the evidence, indeed, and "a due allowance being made for the influences which obscure the minuter manifestations of heredity," entitle us to say that the offspring is in every case the exact product of the sperm cell and the germ cell; and that if we knew everything about a man's parents, we could predicate with exactitude his own physical and moral possibilities. This statement carries with it as a corollary the remark that the qualities of a child's nature may not be the exact counterpart of the moral or intellectual qualities of either parent, but may represent the blending of two different but compatible qualities; just as an acid and a base unite to form a neutral salt, so the synthesis of temerity in a father and timidity in a mother may become judicious courage in a child.

To a certain extent this doctrine, that a man's moral nature, like his physical, is made for him, *does* meet with

general acceptance; for in admitting the influence of hereditary *temperament* a large concession is made to the truth of the argument, and no one will be bold enough to deny that different temperaments, which the individual volition will vainly attempt materially to modify, are inherited, such as cheerful, morose, timid, bold, &c.; and that these, again, are associated with special bodily conformations. Referring to this subject, Cabanis, whose work, "Rapports du Physique et du Moral de l'Homme," is full of interesting observations, says—"Les plus simples observations font d'abord apercevoir une correspondance entre les formes exterieures du corps, le caractère de ses mouvements, la nature et la marche de ses maladies, la direction des penchants, et la formation des habitudes." He goes on to show that the different moral temperaments (the amiable, the morose, the courageous, the crafty, &c.) possess corresponding bodily peculiarities, and that the internal organs are modified in each special temperament. The common expressions, "It's just like Roger," "he is cursed with a bad," or "blessed with a good temper," &c., indicate a general acceptance of the statement, that different men possess different moral temperaments. With the man whose nature is passionate, it is a blow and a word; the phlegmatic man under similar circumstances consults his lawyer. It may require the fancy of a poet to read, "rascal in the motions of the back, and villain in the supple sliding knee," but all are able to discern the general *modus* of a man's nature in his face and form. To praise firmness or good temper in some men, and to blame others for weakness or peevishness, is on a par with praising an eunuch for chastity, or blaming an Alfouro for fetishism. Let us here for a moment consider the effect which such a possession as physical beauty exercises upon the moral nature of man. The love of beauty is probably universal; true, the standard varies, but we are not now trying to fix a true type, "one and indivisible," we have simply to do with the fact that love of beauty animates the human breast, and indeed, probably influences not only his actions, but also the actions of many animals below the dignity of man. We not only love beauty, but we behave to it more gently, and more generously than to its opposite. Though no *wishing* will enable a man to add one cubit to his stature, we behave just as if it could so operate; for example, the knock-kneed pigeon-breasted youth who squints does not excite such pleasurable or such kindly feelings as are aroused

by the young Adonis of the same age. These feelings react upon the youths themselves, tending to make the latter fortunate youth proud or vain, according to original elements of character, and favouring by the same law the production of a humble or an evil nature in the former. The universal homage paid to beauty has resulted indeed in its possessor priding himself upon the possession as though it were his by special virtue of his own.

Nor does heredity influence the character in a physiological manner only, but pathology often plays an important part in determining the resultant moral nature. Not only are a vast number of diseases, such as insanity, gout, consumption, cancer, epilepsy, &c., each of which influences the moral temperament, hereditary, but many habits, and even tricks, of manner are ascertained to be transmitted from parent to offspring without any accompanying disease, and such cases may be regarded as instances of the inheritance of moral pathological traits. The influence which many diseases exercise upon the nature of the individual is prodigious, *e.g.*, in the various forms of insanity the whole moral nature is frequently not merely modified, but completely changed, and the bias which the nature takes may be shown to be in every instance dependent upon the *part* of the brain affected. Thus pathology enables us to state that irritation, &c., of the frontal cells produces insanity of the intellect, *acute mania*, &c., and that softening of the same parts leads to dementia; that irritation of the parietal and occipital cells results in moral insanity, *melancholia*, &c., often leaving the intellect quite unclouded; and that irritation occurring still further back in the cerebellum and medulla oblongata produces a want of controlling power over the movements of the body, or what might be called, insanity of the muscles. If we have irritation of the nervous centres below the latter region, that is, of the spinal cord itself, we have either increase or decrease of function, according to the nature of the disease, in the parts supplied by these centres: thus, speaking broadly, a convulsive muscle may be looked upon as evidence of spinal mischief, a convulsive idea as evidence of brain disease.

The combined testimony of those who have devoted special attention to mental diseases bears out the truth of this, which is tersely expressed by Schroeder Van der Kolk, in the following passage: "In insanity proper, in cases of confusion of ideas, and of haughty insanity, I have always found the

anterior lobes of the brain suffering, but on the contrary, in the melancholic, and in those who condemned themselves with or without religious admixture, I have found the upper and posterior parts of the lobes diseased, and that in the latter cases, the understanding often showed no trace of disturbance, inasmuch as the individuals judged correctly and disputed acutely. In those who had at last perished with dementia, I never found the anterior parts of the lobes intact; they were always adherent to the pia mater, and this could not be removed without injuring the grey cortex.”*

It is easy, then, to understand from this how disease will often modify or even quite change a man's moral nature. Solomon, with inflamed frontal cells, becomes a raving maniac; and we have but to irritate his parietal cells to turn Diogenes into a pickpocket; excite the cerebellum, and Joseph is turned into Don Juan; the melancholy Jaques is nothing but Mark Tapley under a bilious attack; and a Bismark is metamorphosed into a Louis XI. by an attack of chorea. The mere presence of some foreign element in the blood will produce pretty much the same effects without special lesion occurring in any part of the nervous system. The presence of alcohol in the cerebral circulation, *e.g.*, stamps out the mind as completely as apoplexy or death itself. Bichat showed experimentally the deadening effect which the presence of venous blood in the cerebral arteries produces upon the mind, and the same fact is daily seen in the disease called morbus cœruleus, in which there is an abnormal mixture of venous with arterial blood in the heart, and afterwards throughout the system. There is a notable difference in the mental symptoms when diseases attack the chest rather than the intestinal tract: “the conversation is more lively, the emotions and anguish are more pronounced, when the lungs suffer than when the disease proceeds from the colon.”† We generally find that jaundice tints the mind with a gloomy hue at the same time that it colors the skin, and dyspepsia vitiates and depresses the moral nature as markedly as it affects the mucous membranes. Men of vigorous action are men almost invariably of vigorous digestion, and I have heard a man declare that he never dare go into the Stock Exchange unless his digestion was in good order.

The individual thus moulded by hereditary influence, physiological and pathological, comes into the world, and is

* Schroeder Van der Kolk.—“Mental Diseases,” p. 46.

† Van der Kolk.—“Mental Diseases,” p. 127.

at once exposed to other influences, which in their turn operate upon the plastic human nature. It is beyond the scope of this essay to discuss these influences in detail, but we may glance at the effect produced by a few of the more important, such as climate, social surroundings, and education.

The existence of well-marked national traits of character is sufficient testimony to the influence exercised upon the moral nature of man by race and climate. In the most general way we find that equable and temperate climes tend to produce a happy national temperament, characterized by liberty of laws and stability of character, while less favored climes, particularly those subject to wide and sudden variations, are more often the abode of a melancholy and changeable race. There is scarcely a race indeed but has its characteristic vice or virtue—the love of the mountaineer for liberty, the bombastic egoism of the French, which humiliation and degradation fail to affect even for a moment, the parsimony of the Scotch, the deceitfulness of the Hindoo, the brag of the Yankee, the humour of the Irish, are examples. I have been told by those who have lived among them, that the different North-American tribes possess well-marked and widely-varying moral characters—that indeed they seem to touch every note in the moral gamut; thus one tribe is invariably truthful, while another is equally notorious for universal mendacity; bold courage distinguishes one entire tribe, sneaking timidity another; with one tribe you may lie down with the certainty that your impedimenta, however numerous, are secure, while with another your blanket and your beads are certain to disappear the moment you lose sight of them: the Indian of the plains is one thing, the Indian of the forest is quite another. Does not the direct way in which temperature stimulates the passions afford further proof of this climatic influence?

“What men call gallantry, the gods adultery,
Is much more common in climates sultry.”

We find vice and cretinism in the Swiss valleys, valour and virtue on the heights above. “Mountaineers who breathe a pure air are more lively, quick, and courageous; and in those dwelling in a damp, misty air, one meets much oftener a sluggish, apathetic temperament.” Villeneuve reports that of ten suicides which occurred in a quarter of Paris in two years, nine happened in rainy and misty weather; and much information of a similar kind is collected by Boudin, Buckley,

and Quetelet. It is indeed quite remarkable how speedily some national characteristics are modified and lost, while others are acquired by fresh climatic surroundings. An immigrant Irishman, for example, in the second generation loses most of his Celtic features, physical and moral, and becomes Americanized. It was found during the civil war in America that migration to the Western States increased the stature and heightened the courage of the people; nay, it is stated by good authorities that even the size of the air-cells is altered by residence in high latitudes. Thus we have two facts—first, that the same climatic surroundings tends to produce a uniformity of morale and physique, and second, that changing the environments modifies both the one and the other. I have elsewhere adduced evidence to show that even the bony cranium is surely changed by changing external influences—thus, *e.g.*, measuring (by means of an instrument employed by hatters) a great number of European skulls, I found, *inter alia*, that the skulls of Frenchmen, whose ancestors had settled in England, showed a marked approximation to the commonest oval type of English cranium, while the French who came to England in adult life possessed crania bearing a strong family likeness to each other; and if this is true of the bony case, *a fortiori*, it must be true of the more plastic brain.

It is not perhaps necessary to press this point further, nor need the influence which social surroundings have in moulding the morals of man detain us more than a moment, as all will be ready to admit that—

“ ‘Tis’n them as ‘as muny as breäks into ‘ouses an’ steäls,
Them as ‘as coäts to their backs, an taäkes their regular meäls,
Noä but its them as niver knaws wheer a meäl’s to be ‘ad.”

“Starve me,” says Thackeray, “keep me from books, and honest people, and educate me to love dice, gin, and pleasure, and put me down on Hounslow Heath with a purse before me, and I will take it.” The reason why *Gina’s Baby* took with the public was because it brought this truth home. Take two children, twins, say, and bring them up with different social surroundings from the moment of their birth, the one in poverty, hunger, and dirt, the other in a palace; the one becomes a pupil of Fagin’s and rots in a gaol, the other has his attention drawn to questions of legislation, and revises the sanitary code of his country. Are not the police reports, are not the horrors of the Alsacias in every town

sufficient to show the terrible influence of early evil surroundings? How can these poor wretches be virtuous when they know no crime save the crime of being found out? Though not omnipotent, the influence of such externals is powerful enough to largely determine the future moral character, and surely must diminish in our minds the moral responsibility of the criminal. The influence of education is but a part of such surroundings, but is so important a factor that it must be separately touched upon.

It is scarcely too much to say that education begins at birth, and that at a very early period impressions of a lasting nature are made upon the plastic brain. Most of the religious and political bias we see around us dates from the education during childhood; thus it is very generally true that the Wesleyan begets Wesleyan, the Ritualist begets Ritualist, the Radical father has Radical son, and so on. Even among superior minds the influence of early education is very potent—thus, *e.g.* we cannot doubt that in such men as Mill, Gladstone, and Newman, the explanation of the different results they arrive at in theological matters, is in a great measure to be sought for in the character of their training in youth, though of course something is due to the original inherited character of the brain. It is pertinent to the subject in hand, and at the same time interesting, to draw attention to three men of such genius, equally well informed, and on the same subjects too, equally accustomed to weigh evidence, equally in earnest, and equally honest, who arrive at three such different conclusions, after weighing the evidence, as Rationalism, Ritualism, and Ultramontanism. But indeed we trace the effects of education on every hand and on every subject; the education of the vestry leads to the acquirement of the “parochial mind,” the lawyer looks at a question from a legal point of view, the politician regards matters in the light of his party. The same people who approve of the Permissive Bill are found in the ranks of the Anti-Vaccinators, and at present swell the clamour which opposes the efforts of sanitary authorities to check a disease which most seriously affects innocent women and children. The High Church Party regard the men of science as dangerous innovators; the men of science are of opinion that the clergy are blind leaders of the blind. “Jack on his ale house bench has as much conceit as the Czar,” and the John Thomases of society are as thoroughly saturated with mannerism and formulas as

their masters. Even tricks of manner, the result of early training, thus often become integral parts of a man's nature, so that it is easy to say of such and such a work—"that is Dickens's, or Macaulay's," as the case may be. Nay, this is even true of the mere mechanical work of the hands; the fingers of an artist, for instance, often acquire a stereotyped style of movement, which it is impossible for him to avoid, so that at last the manipulation of Birkett Foster, or of Turner, becomes as much a part of himself as the shape of his hands. These few examples serve to show as well as more the all but infinite power of education upon the character; indeed, acceptance of the theory of no moral responsibility, far from ignoring the value of education, or denying its influence upon the character, raises it to the most exalted position, and goes as far indeed as to say that it can do everything but absolutely change the original conformation of the mind; for by habitually acting upon thought, it so modifies thought as to frequently render it difficult to detect the *inherited* nature, difficult, that is to say, to distinguish between natural and acquired characteristics of mind and heart.

If the foregoing statements be correct, what then is the law which dominates humanity? There is little difficulty in answering: the same law which governs the rest of the animate creation. This perhaps requires a few words of explanation.

He who looks with unbiassed mind at the world will readily enough discern that the struggle for existence is as keen and general among men as among the so-called inferior orders of creation.

In regarding this struggle for existence, we have nothing to do with the qualities of benevolence or malevolence in the designer of the Universe; we have only to do with the fact that the struggle exists. The law is one of might, of power, of ability, to live and flourish even at the expense of others. "The Mayfly is torn by the swallow, the sparrow speared by the shrike," may be applied with perfect truth and no great difficulty to the affairs of the human family. In a state of high civilization, such as that in which we live, this law is less apparent than in less civilized communities, but it is easy to see that it nevertheless exists. In savage races the law works without control; the weak one goes to the wall, and the fittest alone survives: the fittest, among such people, being the strongest of arm and the clearest of brain. When

artificial props and certain controlling agents come into play, such as civilized nations possess in hospitals, workhouses, and the like, many of those who would perish if left to the law are preserved, and so partially obscure its working; but it cannot be doubted that in England, at the present day, this law is as much an existent fact as in the wild regions of Equatorial Africa; that is to say, that a law which determines the survival of the fittest, survival in life, arrival *at* and survival *in* success of all kinds, is really at work. This law, inexorable like all natural laws, presses hardest upon the weakest, so that it comes to pass that the weakest class is at once the poorest and the most afflicted. They who from the nature of their surroundings have the least chance of raising themselves in the world, they who from the nature of their surroundings are necessarily debarred from any but the most wretched and too often the most brutalizing pleasures, are at the same time, and by the same circumstances, condemned to a life of much physical suffering, and it is amongst them in consequence that not only vice, but disease also, chiefly dwells and flourishes.

Let us now gather together these various arguments, and see to what conclusion they lead us. We have tried to show that man does not possess the power of original or of originating thought, but that his mind can only answer to a suggestion from without; we have brought evidence to show that the child is the *necessary* physiological result of the parental nature, moral and physical; that it is as impossible to breed children of a type different from their parents as to gather grapes off thistles, although outside influences largely operate to mould the subsequent character. We have further shown that disease often changes the whole moral and intellectual character of man, making the bold man timid, and changing the spendthrift into a miser; we have sketched the influence of climate and soil upon the human character, and have seen that the national peculiarities of man's moral nature are as indelibly stamped in as are his outward physical distinctions; we have seen that, though from want of perfect knowledge we cannot always predict the exact action any given man will take, we yet are justified in asserting that every man acts according to his nature. While admitting to the full the influence of education upon the character and the all but absolute power of externals generally, we have endeavoured to show that an inexorable law governs the resultant character, and that the struggle for existence is similar in character to

that which obtains amongst the lower orders of creation—the whole evidence thus converging to prove that the actions of men are the inevitable consequences of preceding circumstances. While the acceptance of this theory makes man part of a foregone scheme, while it involves the conclusion that the deeds, and even words, of both individuals and nations are dictated by the necessity of their natures, it leads us at the same time to infer, that inasmuch as every external circumstance exercises a certain and definite influence upon all that it comes in contact with, that inasmuch as the evolution of the world is ever progressive and attaining higher and higher standards, that as knowledge and truth are cumulative, therefore human nature will attain to an ever increasing excellence, and so we may rationally believe that the future of humanity will be brighter than its past.

It may occur to some that if this conclusion be sound prayer is necessarily absurd or at least idle. This is not so; the feeling of adoration, the need of worship, the desire to cling to an unseen and omnipotent power, are probably as much elements of our nature as filial and maternal love. Nor must the advantage of prayer be for one moment overlooked. True, prayer cannot reverse law, but it nevertheless strengthens the mind of the petitioner. Prayer is, in fact, good for the brain, just as exercise is good for the muscles; it is in fact exercise, and is necessary to keep the brain in health. In this way the rationalist may pray with earnestness and propriety; he does not suppose that prayers for rain bring down the clouds, or that prayers for peace hasten the termination of war, or that prayers for the sick influence the result of disease, but he may with earnestness and propriety pray for patience under affliction, for charity, for courage; prayers for such subjective qualities may, indeed, be said to assure themselves being heard and answered, for by placing the mind in an attitude of patience, or charity, as the case may be, they fit it for the habitual exercise of those functions.

Paradoxical, indeed, as it may sound, it nevertheless appears that the doctrine here upheld is not without its *moral* lesson, for though man be no more responsible for his moral disposition of good, bad, timid, courageous, false, truthful, cruel, or kind, than he is for the colour of his hair or the shape of his nose, still he would do much towards improving his species if he paid more attention to artificial selection; if he accepted the doctrine of the transmission of moral qualities

more fully, he would take more pains to select suitable wives; he would fix his attention less on dowries and the like and more on the fitness of the moral disposition. If this theory of no-moral responsibility were accepted along with the causes which I have endeavoured to show go to make up man's character, we should be more generally charitable in our judgments, more universal in our forbearance; though the proper treatment for vice might still be coercion (as I most firmly believe it is), still we should come to hate the sin and not the sinner, we should learn to look upon vice as "a miscalculation of chances, a mistake in estimating the value of pleasures and pains, as a false moral arithmetic." Above all it would lead us to be more than ever careful in the education and early surroundings of our children; we should emulate the method pursued with young Cyrus, at whose school we read, *ἔνθα πολλὴν μὲν σωφροσύνην καταμάθοι ἂν τις, αἰσχρὸν δ' οὐδὲν οὔτ' ἀκοῦσαι, οὔτ' ἰδεῖν ἔστι.*

In a word, we should endeavour to make the best instead of the worst of people and of circumstances. We should learn to live not *on* but *by* one another; brotherly love would no longer be a mere empty phrase, but a real bond of union knitting all hearts, and verily making the whole world kin.

Two Cases of Apoplexy of the Pons Varolii, with Remarks on Syphilitic Disease of the Arteries of the Brain. By JOSEPH J. BROWN, M.B., M.R.C.P.

(Read at a Quarterly Meeting of the Medico-Psychological Association, held at Glasgow, May 13th, 1875.)

CASE I.—J. W., æt 26. Admitted August 19th, 1874. Married. Blacksmith. Resides in Edinburgh.

History.—Patient's mother is of very intemperate habits, and has been so for many years. His brother died insane in this institution, and, besides the brain affection, suffered from phthisis pulmonalis. Patient enjoyed good health until about three months ago, when he began to suffer severely from pain all over his head, but most acute towards the vertex. This pain was not constant, but generally came on at night, or after much exertion of any kind. Five weeks ago, while he was at his usual work, he felt a creeping sensation over the left side of his body, and then felt as if all his muscles were drawn together. He lost the power of his left leg, and fell to the ground, lay for a few minutes, and then resumed his work again. After