Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☐ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☐ Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.

- ☐ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☑ Showthrough / Transparence
- ☑ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary materials / Comprend du matériel supplémentaire
- ☐ Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from scanning / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été numérisées.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.

Original Communications.

Mans Moral Responsibility viewed from a Scientific Standpoint. By Henry Howard, M.D., M.R.C.S., Eng., Medical Superintendent Longue Pointe Lunatic Asylum. (Read before the Medico-Chirurgical Society of Montreal December 3rd 1795.)

MR. PRESIDENT AND GENTLEMEN,

The subject to which I beg to draw your attention this evening is, I consider, one well worthy of your consideration. *Man's Moral Responsibility* Examined by the Light of Science,' in other words, how far man is obligated to obey that Moral law which governs the universe, that great unwritten law, stamped upon the soul of man by the hands of its Creator, but which, through physical defects, the creature does not always recognize. It is a very easy thing to say that every man is morally responsible for his acts, but it is quite a different thing to prove the assertion. I believe that, under certain circumstances, man is morally responsible for the greater part of his acts; under other circumstances he is not morally responsible and that, under no circumstances, is he morally responsible for all his acts. To assume that a man was thus responsible would be to assume, not that every man had a free will, for that every man has, but that every man was so organized, mentally and physically, as to direct his will and make all his thoughts, acts and deeds subject to his will. Now this we know is not by any means the case: every man from his own experience knows that he cannot always, in deed that he very seldom can, control his thoughts. We frequently think of the very thing we do not wish to think of, and cannot think of what we would wish to think of. A horrible sight attracts our notice, we would feign forget it, but our thoughts haunt us with it night and day, and no force of our will can enable us to forget it. How many thousand occurrences of our past lives would we not all willingly forget, but we cannot do it,—the most simple occurrence, brings the past into our thoughts, with the greatest vividness, without any action of our will. On the other hand, how often do we will to remember the most simple thing, such as a word or the name of a person, and by no act of our will can we think of either the one or the other. Again, take the passions arising from our emotional organization—love, joy, grief, jealousy—none of these are at all times under the control of the will; we may conceal them to a great degree, but we cannot always control them by any force of the will. Thought and desire, then, is, to say the least of it, not always under the control of the will. Are our acts to do or not to do, always under the control of the will? I think not. We all know how many things we will to do and cannot do from one cause or another; and I believe that it is the experience of nearly all men that, at some period of his life, from an internal force, he was impelled to act contrary to his will. Again, no matter how much we will it, we cannot always control or change either hereditary or acquired movements of our body, or peculiarity of action. It is a truly scientific fact that every man has a free will, and it is simply nonsense to talk of any one in the world controling the will of another. Our acts may be controlled by external circumstances contrary to our will, but no external power can control our will, though a man may be so situated that he is powerless to obey his will. An other important scientific fact, the comprehending of which is necessary for the well-being of man himself in particular, and society in general, is that the will itself, unless it is properly instructed through the organs of sense, cannot be a guide to our physical organization, and, unless that the mental organization is healthy and well-balanced, the will can only act upon it by directing it wrongly, as it does the mental organization of the idiot, the imbecile, the lunatic, and the morally insane, which causes them all to be irresponsible for their acts. Again, no matter how well instructed the will may be, and how strong may be a man's reasoning powers, if he is born a cripple he is not responsible that he cannot run, nor if he be a paralyzed man that he does not escape from a burning house.

There are very many circumstances over which we had, or have, no control—that lessens our moral responsibility. None of us had a choice of parentage, the time or place of our birth, our early education and surroundings; we came into the world without our will, and we will leave it whether we will it or not.

A man's moral, as well as his physical, nature is made for him; whether that moral nature be good or bad, he is indebted to his progenitors for it; it is his inheritance, as much as is the colour of his eyes or the shape of his features. The mental and physical organization being one, mind and body constitute one animate man, inseparable and indivisible: both are the act of procreation, from the moment man is conceived in his mother's womb.

Locke, and the philosophers of the Utilitarian school, taught that there were no innate principles in the human understanding, no primary notions, stamped upon the mind of man. He would not have fallen into this error had physiology and pa-

thology proved in his day, as they have in ours, that mind and body are one, nor would he have confused the mind with the soul. He would have seen that procreation was a whole, not a part, so far as the natural order went; and that man's mental organization was as much due to his progenitors as was his physical formation. The opposing school, the Intuitionists, recognized the fact of mind and body being one procreated animal man, and the soul a distinct thing, coming from the hands of the Creator, at the very moment of conception. They consequently recognized the fact that there were primary innate principles stamped upon the mind of man. Metaphysicians have not agreed, and perhaps they never will agree, as to the exact time during gestation that the soul enters into the child. But this has nothing to do with the question before us, so long as we recognize the fact that man possesses a soul, a supernatural part, that he does not inherit from his progenitors, but is given to him direct from God, and that it is this soul that makes the differrence between man and all other animals, — I say so long as we recognize that man possesses a supernatural part, the soul, for my lecture is only intended for such. I am not going to enter into the question whether a man does or does not possess a soul, but simply take it for an undisputed fact. If, however, you ask me what is the power of the soul upon the body, I answer, that the soul and will are one, or rather that the will is the operation of the soul, and, as I have already said, perfectly free in its action for good or evil, though limited in its power, according to the physical organization it has to deal with. It can do very little with the mental organization of an idiot, an imbecile or a lunatic, and that little is all wrong; but it can be directed by the reasoning powers of the strong intellect, and by so doing bring the whole man into subjection.

I would not have you to suppose that the only attribute of the soul is will, but that by this attribute do we best comprehend it; by this attribute we know that it is something, not of, but acts upon the intellectual portion of our mental organization, and is again acted upon by it. It is neither mind nor body, but something distinct from both. Conscience is another attribute of the soul. You may ask, is it matter, or is it spirit? For nearly two thousand years the answer to this question has been fought in every shape and form, and with much injustice, bitterness and bad feeling, by two contending parties, the Materialists and the Spiritualists, both parties defending their opinions by appeals to Scripture, thereby admitting that it was outside the *dome* of Science. And it appears to me that the battle has been, and yet is, a very fruitless one, particularly as both parties agree that the soul leaves the body at death, and lives for ever, that it is immortal. Now I *believe* that the soul is spiritual, but I am not going to find fault with Mr. Tyndall because he *believes* it material, when, as I have already said, he believes it, if I understand him right, to be immortal. No doubt but that the difference in our views is due to the difference there is in our mental organizations, and the impressions made upon the same in our childhood, so that if we would we could not think alike on a subject that science cannot explain by either physiology or pathology, like it does mind and body.

Mr. Tyndall admits the grand, inexplicable mystery of procreation, but in my opinion he only adds to the mystery when he endeavours to prove that the *immortal* soul is derivable from the mortal parents, as is the mortal mind and body. I think it is much easier to believe that our immortal, ever-living part comes direct from God.

The more I have studied the question and the more I have observed mental diseases, and particularly their history, the more am I convinced, not only that mind and body constitutes one physical being, but that man inherits his moral qualities from his progenitors, the same as does any other animal inherit the particular characteristic of its species. Whatever the parent is in kind, such will be the offspring; we do not breed a terrier from a bulldog, nor a hunter from a carthorse, neither a greyhound from a foxhound, and, so far as the animal goes, there is just as great a difference amongst men. One thing we all have in common, and that is what God specially gives —the supernatural soul.

Messenger Bradley, writing on the subject of the hereditary transmission of our moral qualities, says: "To a certain extent the doctrine that a man's moral nature, like his physical, is made for him does meet with general acceptance, for, admitting the influence of hereditary temperaments, a large concession is made to the truth of the agreement, 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 conformation. The common expression, it is just like Roger, he is cursed with a bad or blessed with a good temper, &c., indicates a general acceptance of the statement that different men possess different moral temperaments. With a man whose nature is passionate it is a blow

and a word; the phlegmatic man, under similar circumstances, consults his lawyer." 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 alfuro for fetichism. 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 in 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 parents to offspring without any accompanying disease, and such cases may be regarded as instances of the inheritance of moral pathological treats. The influence which many diseases exercise upon the nature of the individual is prodigious, *ergo*, 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 of the frontal cells produces insanity of the intellect, *acute mania*, 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, or what might be called insanity of the muscles. "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 the parietal cells to turn Diogenes into a pickpocket; excite the cerebellum, and Joseph is turned into a Don Juan."

It is evident then, gentlemen, that man is a mere creature of circumstances; he has nothing to do in the choice of parentage; his mental organization is made for him, as well as his physical; he has no choice as to what his surroundings are to be in childhood, or how he is to be educated; it may be as a thief, a liar, a hypocrite, or a *fanatic*, or it may be the very contrary; he is lead he knows not how, he cares not where. With all these facts before us it is hard to see where or when a man's responsibility begins; yet under certain circumstances man is in a great degree morally responsible for his acts; that is, he is (I take it) merely responsible for what he has received, and no more. If he has received the ten talents he is responsible for the use he makes of them; if but the one, he is only responsible for the one; and if he has received no talent, he has nothing to give; therefore nothing can be required of him: nothing from nothing and nothing remains. Such, for example, is the case of the imbecile and idiot; they have received nothing, and consequently have nothing to give.

The man of a weak or badly-balanced mental organization has only one poor talent; little can be expected from him; and that little becomes less, if his early surroundings are bad and vicious. On the other hand a man who does not inherit any criminal or disordered taint—a thing rare to find; whose mental organization is healthy and well-balanced, whose surroundings from infancy to manhood have been the good and the beautiful, whose moral education has been well attended to, and who is as strong and healthy in body as in mind,—in fact, a man that has received his full ten talents, that man, as long as his health remains, is as near to being a truly responsible man as we can possibly conceive a man to be.

Gentlemen, we can each and all of us without much trouble come forward, when required, and declare the maniac, the imbecile and idiot not morally responsible beings; but it is not so easy to point out and say: that man has received his ten talents, and is responsible in the highest degree, and that other man has only received his one talent, and has but little moral responsibility. No man in such cases can certainly judge of his fellow, but every man can judge himself and know exactly his responsibility.

I have spoken of moral insanity: I shall now explain to you what I mean by that term. To Mr. Maudsley of all other men belongs the credit of having drawn attention to this form of mental alienation. Like any other form of insanity, it is caused either by hereditary transmission or physical disease.

In both cases there is some abnormal state of the moral portion of the nervous centre. Pathology has shown that, according to the symptoms, the disease will be in the cells of the cortical portion of either the latter and posterior portions of the cerebrum, or the cortical portion of the cerebellum and medulla oblongata. What is extraordinary in this form of insanity is that the afflicted person is in no sense a maniac. His intellectual organization will be all right; no hallucination, illusion or delusion. A morally insane man can reason just as well as he ever reasoned; indeed in some cases the reasoning power seems to be sharpened. Yet, is the person actually mad and irresponsible for his acts? His

disease impels him to commit acts contrary to his reason. The honest man of yesterday becomes a rogue to-day, by an impulse that he cannot control. The sober man of yesterday becomes the drunkard of to-day from a similar reason. The peaceful man suddenly becomes a murderer, and the chaste man impure. And all this simply the result of disease; simply cases for medical treatment, and not for punishment. It is not moral depravity, it is moral insanity.

Let us suppose a few cases of ordinary occurrence. A mercantile man, whose whole life has been that of an honest honorable trader,—a man of irreproachable character, most particular in all his money transactions. This man gets an attack of fever, and, to all appearance, recovers, going again to his business office with his intellect clear and sound as ever; after a short time, society is startled to hear that he is a forger and robber. He stands his trial for the offence, perhaps pleads guilty; he is committed to prison; then perhaps for the first time comes out his secret, that he was impelled by a power that he could not control, and that no one was more surprised at the act than he was himself; he calls it the temptation of the Devil, and that he has a right to suffer punishment for his crime. Not only that, but the tells you he believes if he was free he would be guilty again. No one believes his story, a few months more, and he becomes a raving maniac, then good people say it was his *conscience*. Nothing of the sort, it was the spread of the disease from one part of the brain to the other. He dies, and pathology proves, too late, that the man had been morally insane. Society is very sorry. Had that man gone back to his medical man when he first felt what he considered a temptation from the Devil and told him his secret, his medical man would have seen he was suffering from disease, and he never would have been the inmate of a felon's cell.

Another case: a young girl, mild, modest and amiable, neat and proper in her person, has, through the neglect of teachers, and ignorance of parents been educated to death, becomes languid, loses her appetite, suffers from neuralgic pains in the head, next comes sleepless nights, she wants to be alone, shuns the society and pleasures of other girls, negligent of her personal appearance, all these symptoms followed by strong sexual desires, which renders her miserable and unhappy,—this last symptom she conceals through shame, but by and by she breaks all bounds, and she falls into a life of shame and misery,—society crushes her down, not knowing or believing that she was morally insane, because her intellect had not been deranged.

Again, a nursing woman feels a sudden impulse to kill her child; she cannot understand what has possessed her; she frets and prays, and the more she does so, the stronger is the temptation;—some dear friend, her husband, mother or sister, sees her fretting and, after much difficulty, gets her to confess the cause; medical advice is sought, the medical man sees at once, it is due to weakness of the brain, caused by the drain on the system—he orders porter, and the temptation is removed,—this is neglected, she kills her child, and ends, from the spread of the disease, in becoming a furious maniac.

Again, a well-educated, highly-intellectual married man, of irreproachable character, a hard student, loves his wife and children, and works hard to make provision for them, has a sudden impulse to kill his child,—he has no reason for such an act, it is simply an impulse that he feels he cannot control,—he has neither halucination, illusion, or delusion, but he feels this terrible impulse growing upon him from day to day, and from day to day growing stronger. He makes known his desire to his wife or medical adviser, is properly treated, cured, the desire departing from him; he is saved from the felon's grave.

Gentlemen, these are not mythical cases, they are actual, and came under my own observation, with very many similar cases, all presenting different characteristics, but all cases of moral insanity, and none of them very difficult to diagnose, and see that they were not cases of moral depravity. There is one important fact, which I have not seen attention drawn to by any author, and which I have always observed, and that is that the morally insane are only insane on the one particular point; they generally only commit one crime, or one sort of crime; they will not rob and murder, if the impulse be to rob they will rob, if to kill, they will kill, or attempt it. The boy Pomroy, for example, whom we have heard so much of for his blood thirstiness has only been accused of the one sort of crime, and that without any apparent motive,—of course the boy was morally insane.

I have spoken of moral insanity from hereditary transmission. It is harder to draw the distinction between this form and moral depravity than the form that appears from accidental disease, such as I have described; yet it is a distinct disease, just as much so as is gout or phthisis, and, like those diseases, may remain dormant for years, perhaps never appearing, unless some particular exciting cause calls it forth. The symptoms are very similar to those that occur in the forms I have described, but more vari-

able in their characteristics. You will invariably find that the victim is the offspring of parents who, if not actually morally insane themselves, are what is called very eccentric, and you are sure to find that some of their progenitors were actually mad. To find out this fact is a very important proof of hereditary transmission of moral insanity; but this generally is a very difficult task to execute. It is extraordinary, but nevertheless true, that the very last thing that any one will admit is that there was ever insanity in their family, and generally it is only in some accidental way that the discovery is made. The hereditary morally insane are more impetuous, there is less hesitation about them, they execute more rapidly, when there is the impulse to kill they do kill or attempt it without any hesitation, when the impulse is to commit suicide they generally succeed, and if saved at the first attempt they will go at it again and again till they do succeed, differing from the other form where the patient is very often cured of the desire, when saved in the first instance,—so is it with all the other impulses. I have also remarked that the hereditary morally insane, when their impulse is to drink they never can be cured of the desire, and when they drink they do not get drunk like other men, but for the time being they become regular maniacs. The morally insane from accidental circumstances are generally curable. The moraly insane, from inheritance, are incurable. They may be relieved and discharged from an asylum, but they always turn up again. I could give you many of such cases that were under my own treatment, but it would be only occupying your time.

Writing on the subject of moral insanity, Maudsley says: "When an organism is out of harmony with the circumstances in which it should live, by reason of internal derangement, its tendencies are to self-extinction, which it would often reach quickly if it were not carefully guarded from the destructive action of its perverted affinities. Persistent suicidal impulse marks the replacement of the self-conservative, by a similar self-destructive impulse. The impulse to burn, to steal, to kill, are, in like manner, occasional symptoms of deranged nerve-element, and have nothing in their nature more exceptional or surprising than other insane impulses." Gresenger, the German authority, speaking on the subject, says: "Individuals hitherto perfectly sane, and in full possession of their intellects, are suddenly, and without any assignable cause, seized with the most anxious and painful emotions, and with a homicidal impulse, as inexplicable to themselves as others." So much for moral insanity. Gentlemen, fearful as is the contemplation, yet, nevertheless, it is a fact, that there is a well-defined class of society, called the criminal class, and we must consider how far are they morally responsible beings. They are not idiots or imbeciles, but they are upon what Maudsley calls the border land between sanity and insanity. They are born of criminal parents, from the moment of their conception they have in them the criminal neurosis; they are in infancy nurtured in crime and misery, and all their habits in childhood are criminal, in fact they are conceived, nurtured, and brought up in crime, so that evil becomes their good. God help them! they cannot surely be very responsible beings, it is very questionable if they have got even the one talent, yet we treat them as if they were morally responsible for all their acts, punishing them, as if punishment would make them better, when statistics shows that it makes them worse, that the greater the punishment the greater the criminal,—still we go on punishing. And yet these creatures are not wholly bad, there is some good quality, though ever so small, in them all, and they only follow after their kind, they only obey their mental organization; I believe they have just one idea in common with the whole human race, and that is the only idea there is in common, it is the desire for the greatest possible amount of happiness, which is the greatest possible amount of pleasure, whether that happiness is to be obtained in the present or the future. Men differ very much in their idea of happiness, depending upon their organization; what is pleasure to one is pain to another, but all seek for happiness, and the criminal in his own way. And again it must be remembered that man is the most destructive of all animals, in fact we must destroy that we may live; and such is the terrible competition in the present day, that the strong and successful portion of the educated and civilized destroy the weak, just as successfully as does the uneducated and uncivilized criminal, only it is done in a more polite way and does not bear the stamp of criminality.

It is impossible for me to conceive any one in the world committing crime simply for the sake of committing crime. I believe every man commits crime for the pleasure he derives, or believes he will derive from the act, or under the influence of uncontrollable passtion. It is only upon this theory we can ever comprehend the criminal class of society. We can no more enter into their ideas or thoughts, or their motives, if we reject this theory, than we can enter

into the thoughts and motives that guide a lunatic, which they so nearly approach,—indeed it is only upon this theory that it is possible to conceive any one doing that, wilfully, which he knows or believes to be wrong, and the criminal class have such perverted minds, that what we see as good, they see as evil; they don't look upon things from the same standpoint we do; and here it is necessary for us to examine and see what it is that constitutes a criminal act: there are three essentials necessary *viz*,. *knowledge, liberty* and *will.* Now how many of the criminal class have knowledge of the moral law, although it is imprinted upon their souls by its Maker. I venture to say not very many, their reason is too limited to comprehend it, and liberty and will has no meaning to them but the right to take what they will to have, and the easiest way according to their ideas, of attaining to the greatest amount of pleasure,—you will bear in mind that I am speaking of a certain class of society; I am not speaking of mankind in general; I am not trying to excuse crime: but, no matter what the crime was, or who was the criminal, while I condemned the crime I would not only pity, but be as lenient as possible to the criminal, more particularly if the cause of the crime was poverty, no matter who was the criminal.

Gentlemen, I have endeavoured to prove to you, to the best of my ability, that body and mind constitutes one person, that, consequently, man inherited his mental organization, and, with it, his moral nature, whether it was good or bad; that the will was free to act, but limited in its power, that power depended upon the mental organization of the person; that consequently, all men were not equally morally responsible for their acts, that some had a great responsibility, while others had very little, and others, such as the idiot, imbecile, and insane had none at all; and I have ventured to express a very strong doubt of how far the criminal classes were morally responsible for their acts.

We will now consider what would be the consequences, if society would accept all my statements as scientific truths. I may not be altogether scientifically correct, but, if so, as science is truth and cannot err, good, and not evil, must come from the acceptance of truth.

I take it that the first effect would be for us to take as great an interest in the procreation of the human race, *at least* as we do in the breeding of horses, dogs, or fowls. It is wonderful what interest there is taken in the present day in the breeding of *dogs* and *birds*,and very properly so. Some few weeks ago I saw an account of a dog show in England where a dog was valued at £10,000, that was a dog with a vengeance. I would like some one to figure it up and show, if a dog was worth ten thousand pounds, what was a man worth. I would like to see the man or the country that would give ten thousand pounds for a man, *aye*, or for a woman either. Well, gentlemen, if men believed that they handed down to their children their moral qualities there would be more prudent marriages, I mean prudent in a scientific point of view, not according to the well-understood meaning of the word, which is, money. A man would chose a woman for his wife, healthy in mind and body,who had a good moral, domestic education; if he was a moral coward, he would chose a woman of moral courage, if he was a timid, he would choose a brave woman, if he had a hasty temper, he would choose a mild woman; if he was a man of high moral qualities he would choose a woman to be as near as possible his equal, or his superior, and that is no very difficult thing to find, unless he be a mighty extraodinary man. Again, if parents believed that by drunkenness, gluttony or impurity, they injured their offspring, they certainly would be more cautious and make every effort to curb their desires, and not give a loose rein to their passions. Then, as parents know their own weak point they would watch for its' first appearance in their children, and do all they could to throw up a barrier against their inherited weakness, simply by *habituating* them to act the very contrary. We cannot have too high an opinion of the effects of habits,it is the most powerful means we have for good or evil: it cannot destroy inherent principles but it can so modify them as to render them very harmless; therefore, it is impossible to begin at too early an age to habituate a child to do what is right, and that great right is simply to be humble, respect their parents, and be obedient to parental authority. The next good that would result would be, that where a man,who had previously borne a good character,committed a crime, we would carefully examine and see if he was not morally insane befere we condemned him.

Next we would take a different view of the criminal class, and provide other means than that of punishment to protect society from their ravages; for punishment for the prevention of crime has been a melancholy failure; in fact, it has only made the criminal more criminal. So much has been suggested to reform the criminal class that it is very hard to suggest a new remedy. I think the best thing to do with those adults and adolescents who are well known to belong to the criminal classes,—those creatures who are always to be found in either the court-house, the prison or lunatic asylum, I say, lock

them up for life, not as a punishment, for I would have their lives made to them as happy as possible, but to protect them from themselves, to protect society from them, but above all things to put a stop to the procreation of such a class of beings; for as long as they live together and procreate, so long will we have a criminal class of society: therefore, I say, separate the sexes and lock them up for life. Very good, you will say, in theory, but very difficult in practice. Perhaps so.

As to the juvenile class of criminals, place them at the earliest possible age in reformatory schools. Let them be treated as boarding-school scholars, and not as criminals. Let them be habituated to the good and beautiful: let them see, feel, and know that they can have a thousand times more happiness and pleasure in the path of honesty and virtue than in the path of crime. Above all things, let them feel and know that they are not disgraced from being brought up in a reformatory school, and when their time comes to be placed in the world, the great probability is that they will make respectable members of society, notwithstanding their inherent criminal neurosis. You will bear in mind that the class of society I have spoken of is the criminal class properly so called. I don't mean to say that all crime should go unpunished by any means, but that the punishment should be for the crime, and not for the prevention of crime, for it does not prevent it. Shooting and flogging in the army did not prevent crime. Hanging did not prevent horse and sheep stealing, from which came the old saying of those days that "a man might as well be hung for a sheep as a lamb;" in other words, where the punishment was as much for a small as a great crime men prefer to commit the greater.

Another good result, I think, that would come from the views I have ventured to place before you, would be that we would have larger views, and our ideas less contracted, with regard to other men and their opinions. We would respect the opinions of those even that differed most from us; we would more readily give them credit for their good intentions, and not be always trying to find fault and misrepresent them. We would not be even too hard upon the most dangerous member of society, the *fanatic;* we would rather in our charity pity him, knowing that his fanaticism was due to some mental crookedness, something that he could not control, due either to inheritance or early-formed habit.

Gentlemen, you know well that there is much more to be said upon this important subject of "man's moral responsibility"—in fact that I have but lightly touched upon the question. It is not a subject to be treated of in full, in an evening lecture. What I have done I feel I have done with scant justice; but I have done my best, and trust that my efforts may be followed with some good results, and that my critics will be very merciful in their criticism—at least only criticise me on scientific grounds.

And to you, gentlemen, who feel you are strong in body and strong in mind, before entering into judgment upon your weaker brethren, remember that men, even if they would, cannot think alike—and be pitiful and courteous.

Fibro-Cystic Bronchocele—Operation and Recovery. By WOLFRED NELSON, C.M., M.D., Assistant Demonstrator of Anatomy and Curator of Museum, Medical Faculty, University of Bishop's College, Montreal, Physician Accoucheur to the Female Home, &c., &c., (with Photographs:) Read before the Medico-Chirurgical Society of Montreal on the 17th December 1875.

Family History.—Goitres of various developments have been hereditary in the patient's family as follows:—

Maternal grandmother, married at the age of eighteen; when carrying her first child, goitre appeared; she had fifteen children, of whom four are living; her sister also had a slight goitre.

Mother is living in good health, aged sixty-two. The goitre in her case commenced at the tenth year. The tumor is a large and well developed one, about the size of a man's fist, on the right side of the neck; it is attached to the sterno-mastoid muscle; is hard, and seemingly purely fibrous. Early in life it interfered with respiration, it then pressed outwards, and the difficulty ceased, and only troubles her at present when she works hard, when it slightly interferes with respiration.

Paternal grandmother, her brothers and sisters, all had goitres; they inform me that the goitres in their cases were enormous. Of six of her sons, brothers of the patient's father, one only escaped having the disease; two were treated early in life with Ung. Iodi. for a long time, and are reported to have been cured, as the enlargement ceased, and they experienced no further inconvenience.

Father of patient, a day laborer, aged sixty-four, enjoys excellent health; has a well developed central goitre, about the size of an egg, seemingly fibrous, attached to the trachea; it appears to be bound down by fascia to the sternum, as it moves

but slightly during the act of deglutition. The bronchocele in his case first made its appearance at the age of forty, after having moved into the parish of St. Sauveur, to be hereafter described, when he commenced drinking well and spring water,—he dates his trouble from that time only. The locality is that of St. Sauveur, County of Terrebonne, Prov. Quebec, some forty-four miles north of Montreal, on the North river. Also that of St. Scholastique, in the same location, and its neighborhood, the country thereabout being hilly and rocky, of the magnesian limestone formation. Nearly all the inhabitants drink well or spring water, or that from small rivulets. The water is described as brackish; when allowed to stand for a few hours in tin vessels it leaves a yellowish white stain, making their surfaces rough. The stones and pebbles found in the water are coated with a gritty slime.

Goitres are very common all through this part of the province, particularly at the Rivière à Gagnon, where the *habitants* all say, when questioned about their necks, "*c'est l'eau qui cause cela.*" Dr. Kennedy has some twelve or fifteen families among his patients who have moved into Montreal from this locality, and many others have consulted him from there, in nearly all of whom the disease obtained in some form. In several it became partially developed cretanism.

To return again to the history of the patient's family. Two of her sisters have general goitres, causing great fullness of the neck, but no marked deformity. The families of the patient's people—father excepted—were all born in the above parishes. The goitres steadily increased in growth while there: all enlargement ceased, however, after coming into Montreal, where they have resided for the last eight years.

Patient's History.—She is a single woman, of small figure, aged thirty-two, and has always enjoyed fair health. The bronchocele in her case first appeared at the age of sixteen. The tumor went on gradually increasing until it had attained the size of a small teacup; it at times caused difficulty in breathing. The patient first consulted me on Sunday, October 18th, 1874, to ascertain if anything could be done to remove the deformity.

The tumor on examination, was found attached by its base to the left side of the trachea, and deeply between that organ and the sheath of the carotid; it appeared to involve only the left thyroid gland; it had no pulsation, and rose and fell during the act of swallowing. On examining it carefully, I considered that an operation was justifiable. She readily consented, as for several years she had kept in-doors, being very sensitive about the attention that her apperance in public created. Dr. Kennedy saw the case with me in consultation afterwards, and confirmed my opinion. It was then decided to operate for the removal of the tumor on Saturday, October 24th, at 10 a.m. The operation commenced in the presence of Dr. David and other physicians. The patient was placed on a suitable table at her residence, chloroform being administered by Drs. Reed and Webb. She came readily under its influence without any difficulty, and throughout the anæsthetic acted very satisfactorily. Assisted by my friend Dr. Kennedy, Professor of Surgery, Medical Faculty of Bishop's College, an incision was made five inches long, extending from a point about one inch on the left side of the trachea, on a level with the upper border of the thyroid cartilage, passing somewhat obliquely downwards and inwards to within a short distance of the sternum. On reaching the fascia it was taken up carefully and divided layer by layer, all vessels being tied before severing. No veins of any size were divided. On coming to the last covering, the tumor slipped out freely from its sac, leaving it attached by a base of two inches in diameter; the vessels entering the tumor were carefully dissected out. Extreme care had to be observed at this stage of the operation, owing to the intimate relation of the tumor to the sheath of the carotid. At this point the superior thyroid was ligated. Growth here had extended downwards between the trachea and the sheath, pushing the latter to one side outwardly; the tumor was then completely removed by a few final touches of the knife. Very little blood was lost during the operation, probably not more than three or four ounces. The cavity was then carefully sponged out with carbolic lotion, 1 x 60. It had rather a formidable appearance, the finger was easily passed between the carotid vessels and the trachea. Some time was permitted to elapse to allow for the stoppage of venous oozing, the sides of the wound were then closely brought into apposition and carefully closed by silver sutures. The effect of the chloloroform having passed off, she was enjoined to be quiet, cold water dressing was applied. Pulse full and regular. About half an hour after the operation she vomited some bilious-looking fluid, when blood was observed to be flowing from beneath the dressing. On examination the cavity of the wound was found to be filled with blood, which was forcibly ejected from beneath the sutures; they were removed and all clots washed out. The bleeding appeared to be due to capillary oozing;

it was considered best to religate the superior thyroid. The cavity was then washed out with a solution of ferri. perchlor., 1 x 20, this at once checked the bleeding. The wound was allowed to remain open until it became thoroughly glazed, the sides were then again brought into apposition, but no sutures were put in, the parts being kept together by means of adhesive straps and pads. At one o'clock she again attempted to vomit, when I held her head to prevent any stretching of the neck. The slightest movement seemed to increase the irritability of the stomach. I kept her in one position until three o'clock, when on slight movement the nausea again returned. By holding her head firmly against the pillow no bad results followed. At six, when I carried her into another room to her bed, nausea again caused me some anxiety; securing her head as above prevented any stretching of the parts. She was placed safely in bed, but a few drops of blood coming away.

After Treatment.—Saturday, Oct. 24th, 7 p.m.—Pulse 98; 11 p.m., 110. The cold dressing was carefully renewed by attendants. She was kept on her left side, the head steadied by several pillows, to allow for any drainage. Positive instructions were given her not to stir. At midnight she felt pretty comfortable; slept at intervals; made several abortive attempts to vomit. A small quantity of brandy and water was ordered to be given every hour, when awake—a dessertspoonful—it seemed to increase the nausea, in fact water did. Swallowing caused considerable pain, which she referred to the seat of the wound. She retained the same position throughout the night, her attendants carrying out my instructions admirably.

Sunday, Oct. 25th, 10 a.m.—Pulse 120. Has vomited a little, put her on Tinct. Digitalis m v ter horæ; the irritability of the stomach persists; the edges of the wound look well, somewhat swollen and hot; beef-tea and brandy are continued. Still retains position on her side, which allows of the free escape of sanious fluid from the inferior pocket of the wound. She complains of the position; no inclination to sleep. She had a good night's rest from midnight. Pulse 4 p.m. 120; 9 p.m. 125.

Monday, Oct. 26th, 9.30 a.m.—Pulse 116. Discontinued the Tinct. Digitalis and gave Tinct. Aconit. B. Phar., same dose. Had an excellent night's rest. Contrary to orders, she had sat up in bed to have it partly re-made before I made my morning visit, when she again vomited a bilious-looking fluid. The edges of the wound look very well, less heat of parts. Tongue furred. 4 p.m, pulse 96, diet as before. She dislikes the brandy. Swallowing still causes pain; is cheerful and hopeful. 10 p.m. Pulse 100.

Tuesday, Oct. 27th, 9:30 a.m.—Pulse 96. Slept well. Urinates freely; no motion from bowels. The discharge of pus from the wound is excessive and looks unhealthy. Commenced injecting carbolic lotion, 1 x 60 into wound at its inferior edge or pocket, four or five times a day. The pads and adhesive straps were so arranged that this did not interfere with them. A broad bandage around the neck kept all in situ. Less irritability of the stomach; retains her diet better. Soreness of the neck and pain on swallowing are less. The brandy evidently disagrees; have stopped its use. 4 p.m., pulse 112; 10 p.m. 116.

Wednesday, Oct. 28th, 11 a.m.—Pulse 100. Patient is now allowed to rest on her back. She sleeps well. The carbolic lotion acts like a charm, the discharge is less, and has changed its character; is healthy and sanious in appearance. Less heat of parts, redness is diminishing, also the swelling. She talks of getting up. At noon she vomited, when I was obliged to remove the dressing again, and washed parts in a weak sol. of ferri. perchlor. Its interior, as far as could be seen, looks well and healthy. Vomiting has ceased, due partly to stopping the brandy. 4 p.m., pulse 112. Face of a more natural color. 10 p.m., pulse 120.

Thursday, Oct. 29th, 10 a.m.—Pulse 98, full and regular. She slept all night. Bowels have not moved. Ordered pil. cath. co. j'. Swallowing now causes no pain. She looks a great deal better, and sat up for fifteen minutes in bed. The wound is healing nicely from above downwards. Carbolic lotion is continued regularly. The swelling of the lips of the wound and the heat of parts have lessened rapidly since its use; discharge but slight. 4 p.m., pulse 104. Wound is dressed daily. 10 p.m. pulse 100.

Friday, Oct. 30th, 6:25 a.m.—Pulse 100, full and regular. Has had an excellent night's rest. 4 p.m., pulse 100. Had a large evacuation from bowels; sat up in bed for half an hour. 8:50 p.m., pulse 100; sleeps well at intervals through the day. Discharge free of laudable pus. Pain on swallowing has ceased.

Saturday, Oct. 31st, 12 noon.—Pulse 98. The healing continues nicely from above downwards, gentle pressure removed about two drachms of thick healthy pus. Less œdema of parts and redness of lips of wound. She now takes solid food; sat up

in bed for an hour. 5 p.m.—pulse 98, discharge free. This appeared to come from a little pocket at the lower part of the wound. Gave a second pil. cath. co. 9 p.m.—pulse 98.

Sunday, Nov 1st., 12 noon.—Pulse 98. Discharge free; she eats and sleeps well. On pressure removed a drachm of pus. Have increased strength of carbolic lotion. Had a large and full stool; tongue cleaner. Strapped inferior part of wound closely together. 8.20 p.m., pulse 98. Has slept during the afternoon. Fever is disappearing; swallows with perfect ease. The rapid subsidence of the swelling following the use of the carbolic lotion is very satisfactory.

Monday, Nov. 2nd, 8 a.m.—Pulse 64. Has slept well; eats heartily; sat up in bed for an hour or two; also on Sunday afternoon and evening. Still a considerable discharge of laudable pus. Marked shrinkage of tissues and less swelling. 9.30 p.m., pulse 94, full and regular. Has passed a very comfortable day; no pain; tongue cleaner; eats and sleeps perfectly.

Tuesday, Nov. 3rd, 12 noon.—Pulse 90; sleeps well. Shrinking continuing. Discontinued tinct. aconit. She sits up part of the time; is cheerful. Slight secretion of pus, not more than half a drachm coming away on gentle pressure, it is thick and laudable. Still using the carbolic lotion, it acts so well, and keeps wound fresh and clean.

Wednesday, Nov. 4th, 2 p.m.,—Pulse 88. Has been up knitting. A few drops of pus were removed on pressure; swelling has nearly disappeared. Eats, sleeps and looks well. The wound is entirely healed at its upper part, and looks healthy.

Thursday, Nov. 5th, 4 p.m.—Pulse 84. All going on in a satisfactory manner; got about half a drachm of very thick pus from pocket. Swelling gone. Commenced dressing wound every second day. Still inject the carbolic lotion, and use it externally.

Friday, Nov. 6th, 5 p.m.—Pulse 84. Closing of wound goes on. A few drops of pus discharged. Keep opening free for drainage.

Saturday, Nov. 7th.—Pulse 84. Doing well.

Sunday, Nov. 8th.—Pulse 84. Dressed wound. Bowels regular. Tongue clean. No fever.

Monday, Nov. 9.—Pulse 84.—She had foolishly removed bandages before my visit, to examine wound, and opened it slightly; it looks perfectly healthy, and is healing from above, below, and from the bottom. Continued carbolic lotion.

Tuesday, Nov. 10th.—Aperture below has nearly closed. Pulse 82.

Thursday, Nov. 12th.—Pulse 80. Ceased taking notes; the patient has been up several days. Tongue clean. Bowels regular. She appears to be completely well. I saw the patient at intervals until Dec. 8th. The carbolic lotion was continued as long as the little opening would permit of the use of a small syringe. Everything went on correctly, and on the above date I discharged the patient, when the wound had closed. The cicatrix measures three and three quarter inches.

A word about the Tumor.—Its size was that of a small teacup; oblong, four inches in length, its consistence was hard and dense. A small cyst about the size of a small walnut occupied its upper extremity. It was filled with clear serous fluid, The remainder was fibrous in character. Weight, eight ounces. It has been placed in the Museum of Bishop's College.

Present appearance of Patient.—thirteen months after operation—that of perfect health. She has experienced no inconvenience whatever since the operation, and is delighted with the result.

Remarks.—The vomiting after the chloroform was due to her having eaten a hearty breakfast, contrary to orders, on the morning of the operation.

The brandy in this case was not well tolerated, and I feel confident increased the irritability of the stomach; as soon as it was discontinued the trouble ceased. The broths, &c., were well borne. The sol. ferri. perchlor, when applied to the wound immediately after the operation, when it was necessary to re-open it, and check the venous oozing, acted like a charm. Half an hour after its application the surfaces of the wound were nicely glazed over. The adhesive plaster straps, with pads to keep the lips of the wound together, were ample, as it was thought best not to re-apply the sutures, without the secondary hæmorrhage there was every reason to expect speedy union. The pulse at once fell under the Tinct. Aconiti, B. P.

The carbolic lotion prevented any septic effects from the pus, that otherwise might have led to serious results from septicemmic poisoning, and have caused no end of trouble and anxiety. At first its appearance was green and acrid, but its whole character changed within twenty-four hours. It also had a marked general effect in improving the condition of the wound.

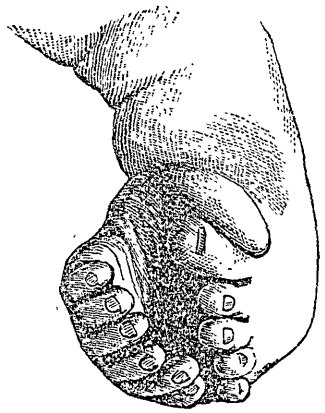
The photographs accompanying explain themselves. The lower left being a full side face, the lower right, a half side face. The upper that of the patient as she is to-day,

1—St. James Place. 199 Canning St., West.

*A case of Bifurcated Foot with eleven toes.** By GEORGE J. BULL, M.D., of Worcester, Mass, U. S. (late of Montreal.)

The following case of congenital malformation of the foot and leg derives additional interest from its extreme rarity. It furnishes an example of the anomaly known in Geoffroy Saint-Hilaire's classification as "bifurcated hand or foot," a deformity not uncommon in the hoofed mammalia, but so rare in man that Saint-Hilaire never found mention of a single well-authenticated case.†

A girl was born in Worcester on the 5th of May, 1875, healthy and apparently well formed, except in the left inferior extremity. Her left foot presents the heretofore unheard-of number of eleven toes, and in its general appearance may be compared to a double or cloven foot. It has only one heel, but in front consists of two parts, which we may call the anterior and posterior feet. The anterior presents the great toe with four smaller toes, naturally placed and of normal proportions, but is twisted downwards and inwards in the position of extreme talipes equino-varus. Several pits or depressions over the tarsus mark the position of interspaces between the bones, and show the extent of the inversion, which is further shown by the fact of the inner border of the foot pressing against the heel. Continuous with the outer edge of the anterior foot, and curving beneath it, is the posterior part, looking not unlike a second foot, and furnished with six well-formed, small toes, situated directly below



the other five. The plantar surfaces of the two sets of digits face each other, and are separated by a groove, which, beginning between the little toe of the anterior foot and the adjoining one of the supernumerary set, grows broader and deeper as it preceeds inwards, and winding around the metatarsal bone of the great toe, is lost in the furrow between the heel and the inner border of the anterior foot. The two feet are thus quite distinct at the phalanges, and their plantar surfaces are more or less free, that of the anterior foot being visible as far back as the first metatarsal bone, while that of the posterior foot is almost all to be seen, and terminates so naturally on the heel that it is difficult to say to which foot the heel more properly belongs. The eleven toes are perfect in form; none of them are webbed. The great toe and four smaller toes of the anterior foot are normally proportioned; the little toe is the exact image of the first toe of the supernumerary set which adjoins it; the second is the longest of the six, but does not at all resemble a great toe; the third and fourth are equal in length, the fifth and sixth are shorter, as are the outermost toes in the normal foot. The six extra toes remain almost without motion when the normal toes are flexed and extended, but they appear to have distinct metatarsal bones, and perhaps two or more bones of their own in the tarsus. Passing upwards we find the left leg and thigh much thicker than the right, but in length the two sides are equal. The difference in size may be seen in the following measurements:—

	Right Side.	Left (abnormal).
The circumference of the upper part of the thigh measures.....	7½ inches.	9½ inches.
The circumference of the thigh just above the knee measures.....	6½ "	7½ "
The circumference of the knee measures.....	5½ "	6½ "
The circumference of the leg immediately below knee measures.....	5¼ "	5½ "

There does not appear to be any unusual development of bone, but there is evident muscular hypertrophy. When the knee is partly flexed a rigid cord or tendon may be felt in the position of the outer hamstring, passing back of the knee, where it stands out prominently beneath the skin, and is continued downwards behind the fibula almost as low as the os calcis. The left labium majus has been twice as large as the right ever since birth. During the mother's pregnancy nothing remarkable happened, nor has anything been discovered to account for this strange malformation. I would, however, briefly call attention to the fact of the occurrence of this double deformity on the left side, the right being normal. Dr. Little* has

*Extract from a paper read before the Worcester District Medical Society, July 14, 1875.

†Histoire des Anomalies, 1832, i. 695.

*Holmes's System of Surgery, 1862, iii. 567.

remarked that congenital club-foot, as well as the deformity occurring after birth from disease of the nervous system, attains oftener a higher grade on the left than on the right side. I have not had an opportunity of verifying this statement, which refers to club-foot only, but I have observed a remarkable tendency in polydactylism to affect the left side more than the right. The malformation is altogether confined to the left side in the case above reported, and in an analogous case of bifurcated or double hand described in the forty-sixth volume of the Medico-Chirurgical Transactions, page 29. We find the same peculiarity in a case* in which the left foot presented nine toes, but no deformity existed in the other. In the *London Medical Gazette*† a supernumerary toe is mentioned as occurring on the left foot of a boy, other members of whose family were deformed in like manner. Mr. Sedgwick reports‡ the case of a girl who had a complete supernumerary finger attached to the outer side of the first phalangeal joint of the left little finger; the child's father, paternal grandmother, and paternal aunt had precisely the same deformity. Another case§ related by Mr. Sedgwick consisted of double last phalanx on the left thumb of a boy whose maternal grandfather's great-nephew had exactly the same deformity. We find mention|| also of a boy presenting six toes on the right foot and seven on the left, his hands being similarly malformed. His mother, sister, maternal uncle, and maternal grandfather had the same number of toes and fingers. In Amsterdam a monster, drowned by its parents, had eight toes on the right foot and nine on the left, besides many other malformations. An extended search among the records has discovered many cases of supernumerary digits similar to those already cited, but only a single case¶ where the digits were more numerous on the right side than on the left. I infer, therefore, that polydactylism generally affects the left side in preference to the right.

Mr. Adams has remarked** that occasionally we observe an excess or deficiency in the number of toes associated with congenital varus. Tamplin* has made a similar remark, and has given an illustration of a case of double talipes varus in which the right foot presented a bud-like projection on the little toe, while the left had six well-developed toes.

We observe the association of congenital varus and supernumerary toes in the case of bifurcated or cloven foot, and we now find a further relationship between these deformities, inasmuch as they each attain oftener a higher grade on the left than on the right side. Whatever may be the true explanation of these facts, they show an especial tendency to deformity on the left side of the body, the side known to be the weaker one in the great majority of men.

A Case of Melano-Sarcoma of the Eye. Read before the Medico-Chirurgical Society of Montreal, Dec. 30th, 1875, by A. PROUDFOOT, M.D., C.M.

Gentlemen :—I venture to read this paper before you this evening, not from any peculiarity in the case itself, or from its great rarity, but from the extreme importance of an early diagnosis in such cases, as they generally endanger, if they do not destroy, the life of the patient. Therefore the more familiar we are with them the more likely we will be to discover them in their earliest stage, and give the patient a chance for life by at once removing the eye.

On December 4th I was consulted by Mrs. C., æt. 45, the wife of a well-to-do farmer from the United States, on account of almost entire loss of vision in the right eye. Mrs. C. was the mother of three children, had usually enjoyed pretty good health, though subject to attacks of sick-headache. About two years ago she first noticed a slight weakness of the right eye, but it was unaccompanied by pain, and therefore gave her but little uneasiness. For the last year she had been losing the sight of the eye. In August she first applied to her family physician for relief: he, diagnosing incipient cataract, put her upon a course of tonics.

The sight, however, gradually decreased, until she came into this city to consult me. In September (3 months ago) she first experienced great pain in the eye. It had lately become so severe that it kept her awake at night, making her at times, to use her own expression, "almost crazy." It was of a shooting character, and extended from the eye across the right side of the head and down into the neck.

---

* Transactions of the Pathological Society of London, ix. 427.

† December 15, 1832, page 361.

‡ British and Foreign Medico-Chirurgical Review, April, 1863, page 463.

§ Op. cit., page 462.

|| London Medical Gazette, April 12, 1834.

¶ Broadhurst on Deformities. 1871, page 57.

** On Club-Foot, page 210.

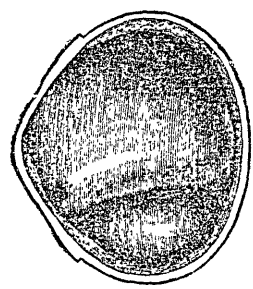
* On Deformities, page 69.

The paroxysms of pain were intermittent, coming on usually every other night; the patient being comparatively comfortable and free from pain during the interval. On examination I found the tension normal in both eyes, the iris in the left eye was of a light blue color and the pupil of natural size, whilst the pupil of the right eye was of unusually small size and extremely sluggish, responding almost imperceptibly to the stimulus of light; the iris was of a dusky gray color excepting at the lower part, from near the margin of the pupil, where it was of a blackish-brown color and pushed forward so as to be in contact with the cornea at its lower and outer edge. Upon dilating the pupil with a strong solution of atropine I had no difficulty in diagnosing a melano-sarcoma of the choroid, as the tumor could be seen occupying the lower third of the eye; although there was an incipient cataract of the lens. The opthalmoscopic appearance of the eye was very beautiful, as the retina could be seen detached from the choroid and stretched tightly over the tumor throughout its extent, its vessels being seen with great distinctness. The fundus and disc were apparently healthy. I advised immediate enucleation of the eye, and the operation being consented to, the patient returned to the hotel, where I placed her under ether, and, assisted by my friend Dr. Hamilton, of Richford, and her husband, I removed the eye in the ordinary manner, great care being taken to divide the nerve as far back as possible. Upon making a horizontal section through the middle of the eye, just below the optic nerve, I found the tumor to occupy its lower third and to consist of two lobes, the larger being about four-fifths of the entire size of the tumor, commencing about four lines below the disc and extending forward to the iris which it pushed into close contact with the cornea, thus obliterating the lower part of the anterior chamber of the eye. The smaller lobe was situated somewhat posteriorly and made up the remaining fifth of the tumor, being partially separated from it by a shallow groove.

The upper two-thirds of the eye were perfectly healthy, the retina and optic nerve not being implicated.

Prognosis.—Knapp relates eight cases of melano-sarcoma of the choroid in his book on intraocular tumors, four of which were cured by enucleation, the remaining four cases died of other diseases. He states that if the tumor is still confined to the eye and the optic nerve unaffected, the chances are rather in favour of a cure (by enucleation), especially if the tumor be composed of the large round or spindle-shaped cells. Holmes also relates cases of complete recovery after enucleation. I am therefore inclined to give a favourable diagnosis in this case.

The patient returned home on the fourth day after the operation, doing well. I am indebted to my friend, Dr. Wm. Osler, for the following description of the minute structure of the tumor and for the beautiful preparations under the microscope.



Histological characters of the tumor.—Portions taken from the superficial region of the tumor and teased in $\frac{3}{4}$ per cent. salt solution, presented a great accumulation of cells, almost all of which were rounded, very variable in size, and characterized by the presence of large vesicular nuclei and small clear nucleoli. With regard to size, three grades could be easily distinguished:—1st, small round cells about the size of the white blood corpuscles or perhaps a little larger, with well defined nuclei, comparatively few of these contained any pigment. 2nd, cells from two to three times the size of the white blood corpuscles, much more uniformly pigmented than the former with very large nuclei and finely granular protoplasm. 3rd, very much larger elements—five or six times the size of the colorless blood corpuscles, containing two or three nuclei and not often pigmented. Compared with the others the latter forms were scarce. Gradations between these varieties were common. Here and there throughout the specimens a somewhat elongated corpuscle was met with, but no characteristic spindle-shaped elements; indeed the tumor must be regarded as a very pure specimen of round celled melano-sarcoma. The distribution of the pigment in the tumor was irregular, confined chiefly to the external portions, and extending into the interior as dark streaks, and according to the region from which the preparation was taken, the prevalent cells would be pigmented or not. Individual elements from the darker portions showed different degrees of coloration, from cells containing only a few pigment granules, up to ones so densely crowded as to obscure the nuclei.

Portions (after hardening in alcohol) taken with the sclerotic from the external region of the tumor and thin sections cut and tinted with hæmatoxylin show very well the structure of the growth and its relation to the surrounding parts.

The sclerotic was nowhere affected, nor did it appear at all atrophied over the region of the growth. In one or two sections a slight increase in the cellular elements along the course of the vessels was observed, but this condition was by no means general. Immediately within this tunic was a layer about half the thickness of the sclerotic, characterized by the presence of numerous long spindle-shaped pigment corpuscles, and others of a more irregular form. A delicate connective tissue, with innumerable blood vessels composed the matrix, so that this may be regarded as the external layer of the choroid very slightly altered. In some sections it would appear that the tumor involved the whole of the outer layer of the choroid, for the round sarcoma cells abutted directly upon the sclerotic.

By a gradual transition we pass to the region of the tumor with abundant round cells closely aggregated together and very irregularly pigmented. At the most external part the fibrous stroma of the choroid is infiltrated to such a degree with cellular elements, that in places quite an alveolar structure is given to the growth. In the deeper portions this is lost, and the cells appear crowded together without any intercellular tissue. Still further towards the centre, a well developed matrix, granular in character, is seen, surrounding each cell. In thin sections many of these cells fall out and leave the connective tissue frame-work as an open net work in which here and there a larger cell is retained. Pigmented cells occur scattered through the sections either singly or collected in small clusters. A few hæmorrhages are seen towards the centre of the growth. The portion of the retina lying upon the tumor was carefully removed, and on examination proved perfectly healthy. Along the course of some of the vessels, minute extravasations were met with and groups of pigment corpuscles were not uncommon. These latter were rather larger than the colorless blood corpuscles, and in one or two localities were observed to contain red blood corpuscles in various stages of transformation into melanin. After removal of the retina a thin dark membrane could be stripped from the surface of the growth, which was found to be the innermost layer of the choroid, consisting of regularly polygonal pigmented cells beneath which the usual stellate pigment corpuscles existed in abundance so that in no point had the tumour perforated the surface of the choroid. Sections taken from the smaller tumour at the point of junction with the healthy tissues are very interesting, showing how the growth has originated from the central and inner region of the choroid, and in its onward growth split it into two layers, one of which, the external, remains in contact with the sclerotic, while the other invests the surface of the tumour. The advancing area of the growth in these sections is represented by a wedge-shaped portion, composed of numerous round cells, and at its periphery several large vessels can be seen.

37 Beaver Hall Terrace,
Montreal, 30th Dec., 1873.

Progress of Medical Science.

LECTURE ON SOFTENING OF THE BRAIN.

By J. Hughlings Jackson, M.D., Physician to the London Hospital and to the Hospital for the Paralyzed and Epileptic.

We very frequently hear the expression "softening of the brain." It is often used by educated patients; for many people who simply suffer slight and often but temporary nervous exhaustion think, always erroneously, that they have "softening," or are going to have it. It is really an expression of pathological application, but just as the symptomatic word "apoplexy" has come to have a pathological meaning (effusion of blood), so the pathological term "softening" has come—so, at least, it appears to me—to be used, even by some medical men, as a name for a certain rude clinical grouping of symptoms in cases in which there really is no softening. This use of the term is to be deprecated. Let me mention the symptoms of cases wrongly called "cases of softening." We see patients who have become excitable, irritable in temper, and desponding; they have found that their attention easily fails, and that they cannot do their accustomed work; they usually sleep badly; they have often what they call headache, but is is mostly not an ordinary headache, either in kind or in position; it is a feeling of pressure, or sometimes of burning, and its seat is the vertex or the back of the head; there is very often, indeed, a disagreeable feeling at the occiput and in the upper parts of the spine, more distressing than pain—an intolerable physical feeling; the queer feeling in the spine is often intermittent, and frequently comes on slowly with great depression of spirits. Altogether there is a strange mixture of "mental" and "physical" symptoms. Recognizing the group of symptoms I have mentioned as a fair clinical entity deserving particularly careful study, I do not see the evidence for the diagnosis that softening of the brain is the

pathological change causing them. Such cases are called by the laity nervous debility, and often by medical men hypochondriasis. The symptoms, I think, indicate nervous exhaustion, beginning often in the sympathetic nervous system, and secondarily affecting the nutrition of the highest centres in the brain. Of course this is only hypothetical, for there is no morbid anatomy of such cases. Every one's conclusion as to their pathology must, therefore, be hypothetical. These symptoms are often produced by excesses, and especially by sexual excesses, and by "fast life" generally; they are sometimes suddenly developed by fright, and may be brought on by misery or overwork, either of the mind or the body, especially when the work is done under responsibility. Of course they occur most often in persons who inherit a weak temperament, who bear trouble badly, who are easily excited and easily depressed. In some of the cases the patients get quite well by simple common-sense care, and the delusion that they have softening vanishes. In the graver, prolonged, and ingravescent cases, I should think there was no softening of the brain, but rather greater firmness of it; atrophy of nerve-cells and fibres, with increase of connective tissue; there is some atrophy of the brain. In saying this I am not making a very strong statement. We often see considerable atrophy of the brain at post-mortem examinations on those who have died of non-cerebral disease, and whose mental condition has attracted no attention. Atrophy of brain is normal in old people; it is often seen in middle-aged drunkards and even in comparatively young people who have been long bedridden by wasting diseases not primarily involving the nervous centres. I mention this, as you may think the statement that there is some atrophy of the brain an extravagant conclusion as to the state of things in a man whose symptoms are those of prolonged and severe hypochondriasis or nervous debility, or whatever the right name or label is.

Be sure there is no softening in these cases. Indeed, I do not see how the diagnosis that there is actual softening of the brain is in any case to be possibly arrived at, *unless the patient has certain local paralytic symptoms, as hemiplegia, or some other symptoms implying a local cerebral lesion, such as affection of speech;* or, again, unless there be signs of cerebral tumour (severe headache, urgent vomiting, and double optic neuritis), or evidence of injury to the head. For, so far as I know, cerebral softening is always local; I know nothing of general or universal softening of the brain. To be warranted in diagnosing softening, you must have symptoms which point to local disease. I do not say that local cerebral softening cannot exist without localizing symptoms. I only say that in their absence you are not warranted in diagnosing its existence. We know that large parts of the brain may be destroyed without any marked local symptoms resulting; these parts may be destroyed by the process of softening without causing marked local symptoms. But in these cases the softening is mostly about tumours or other kinds of adventitious products. It is, however, almost an abuse of language to speak of these as cases of softening. The softening is, I suppose, a result of encephalitis about the tumour. We shall not refer to these cases again. For all practical purposes they belong to a distinct category. The cases which deserve to be called cases of softening are cases in which there is blocking up of cerebral arteries, or, which is infinitely rarer, of cerebral veins. Of these only shall I speak.

It is from the distribution of arteries, it is "for arterial reasons" so to speak, that there are localizing symptoms in softening. The highest part of the motor tract (corpus striatum) and adjacent convolutions are usually the parts of the brain damaged or most damaged in softening, or simply the parts of the brain which often undergo softening. And this is because the artery which supplies these parts is an artery—the middle cerebral—which often gets blocked up, for reasons we shall afterwards state. Hence hemiplegia and affections of speech are the symptoms to be most trusted in the diagnosis of cerebral softening, for they are the symptoms producible by disease of the parts mentioned as being supplied by an artery which often gets blocked up. Curiously, however, unless there be valvular disease of the heart to, as it were, insist on softening by the process of embolism, cerebral softening is frequently not diagnosed in cases of hemiplegia and affection of speech when it often exists. Suppose that perfect hemiplegia comes on in a quarter of an hour without loss of consciousness in a patient past middle age, who has not renal disease, we are practically certain of local cerebral softening. There is in these cases softening by thrombosis—a commoner cause of local softening than embolism. Thus we see that the word "softening" is used by some for cases of nervous exhaustion and cerebral atrophy where there is not that pathological change, and, strangely, those who so use it very often do not diagnose softening in the really simple cases of hemiplegia coming on without loss of consciousness where it does exist. Sometimes, indeed, when the diagnosis is made that hemiplegia has been caused by embolism, because the patient is young and has valvular disease of the heart; there seems to be no clear notion in the mind of the diagnoser that he has before him a case of softening. There are two reasons for these mistakes. First, hemiplegia is too often attributed as a matter of course to cerebral hemorrhage, and softening is not thought of. This is, I think, because clot is oftener seen at post-mortem examinations in cases of hemiplegia, as it is a more speedily fatal lesion. We have more autopsies on patients who die from cerebral hemorrhage, because they die sooner, and therefore under our care. Nevertheless, hemiplegia *coming on without loss of consciousness*, is mostly caused by softening. I except cases of chronic renal disease, for hemiplegia in these cases, as a matter of fact, nearly always depends on effusion of blood, whether there be loss of consciousness at the onset of the paralysis or not. A second reason for the mistake in diagnosis is that there is a widespread impression that general mental

symptoms *must* exist if there be "softening." I shall devote a great part of this lecture to show that this is an error, or at any rate, it is an error to suppose that softening of the brain *necessarily* causes *general* mental symptoms *directly*. Observe, I say directly, because I shall show that softening may be preceded by general mental symptoms, and may be followed by general mental symptoms. But in neither case do these symptoms depend directly on that softening. Observe, too, that I speak of *general* mental symptoms. I admit that softening directly causes special mental symptoms—loss of speech, for example. I deny that it directly causes general mental symptoms, although I admit, as I have said, that it may be preceded and followed by them. It is practically convenient to speak first of *special* mental symptoms *directly* resulting from softening; then of general mental symptoms following it. Although out of chronological order, it is more methodical to consider the mental degradations which may precede an attack of softening after speaking further of arterial changes.

Certainly there is not necessarily any direct connection betwixt cerebral softening and *general* mental symptoms. There need be no such symptoms at the onset. The typical case is that of a middle-aged man who, having gone to bed feeling well bodily and mentally, finds out when he gets up in the morning that he cannot use his left side, but who is as clear in mind as usual; yet that man has local softening, or rather thrombosis of an atheromatous artery supplying a part of the motor tract, which will therefore speedily soften. We are obliged to make some kind of arbitrary limit. We speak of cases commonly met with. But, as I shall tell you later, there may be deep coma from blocking of the trunk of the middle cerebral artery—coma as deep as that producible by large cerebral hemorrhage. A patient may have, however, special mental symptoms, without any insensibility, at the onset of softening, and as a direct result of it. Such cases I now consider.

Special mental symptoms directly resulting from softening.—The parts of the brain which most frequently soften are, as I have just said, the highest divisions of the motor tract; most often the corpus striatum and adjacent convolutions—that is, in other words, the parts supplied by the middle cerebral artery. If a large part supplied by the right middle cerebral artery be softened, there need, after the shock of the onset, be no obvious mental symptom of any kind. If a branch of the *left* middle cerebral artery be blocked there is a mental symptom, but then it is not a general one, but an exceedingly special one—viz., affection of speech (aphasia). Affection of speech *is* a mental symptom. A person who has lost speech has lost a part of his mind. Indeed, if the *trunk* of the middle cerebral artery be blocked there is very extensive softening, and a state very like imbecility as well as loss of speech; the patient's power of expression in all ways, and even the exhibition of states of feeling by smiling, etc., may be gone. Even then the symptom is a special one—loss of language or loss of speech.*

General mental symptoms may follow local softening. We will for convenience speak separately of those following in a few days (these are usually temporary), and then of those following weeks or months after; these are often permanent. Remember the simple case we took for the purpose of illustration. A patient, about fifty, has become hemiplegic without loss of consciousness: This is the symptomatic statement; the pathological statement is that he has local cerebral softening.

General mental symptoms following a few hours or a few days after local softening.—After a short time the hemiplegic patient may begin to "wander," although at first, and usually all through his illness, he can pull himself together, clearing his mind of his fancies, and can reply to ordinary questions correctly. The mental symptoms are of a general character. There is not a loss of one faculty in particular, but a reduction of the whole mind to a more automatic condition. The patient "wanders" about his business, about the persons or places to which he is most accustomed (which are most automatic to him). He imagines that he is doing his work, and he may take strangers for those persons to whom he is most accustomed. I repeat there is not here loss of any one faculty, there is no special mental symptom. The patient is reduced to a more automatic condition of mind. There is Dissolution, using this term as the opposite of Evolution. Then, of course, much depends on the kind of brain the patient had before his illness. Old drunkards will have more absurd delusions, illusions, and hallucinations than persons who have not abused their nervous systems. My own belief is that this state results simply because the hemiplegic patient's brain power is slightly reduced in a universally lowered bodily condition, and that it is not caused by the very local disease of his brain. A local softening, practically an absence of brain (circumscribed) destruction, could not possibly cause such *active* mental symptoms as we have mentioned. These symptoms are, in my opinion, often owing to debility. Let me explain how I think *debility* produces *active* symptoms. Explanation is required, as the expression seems paradoxical, and the expression "debility" wants definition. Probably the hemiplegic patient has, for theoretical reasons, been put on a spare diet, a diet next to nothing, although the

---

*I must insist that loss of speech is a mental symptom. For we speak not only to tell other people what we think; but to tell ourselves what we think; rather a proposition is the ending of a mental operation, and often the beginning of another. The aphasic can still think in some fashion; he remains able to do so, I consider, because, although speechless, he is not wordless; he has remaining the automatic and unconscious use of words in the right undamaged cerebral hemisphere. I believe, too, that there is a similar duality of Perception, or, rather, that the process which ends in perception is double. This process is not affected in cases of aphasia. There is, I think, chiefly from disease of the right posterior lobe, a mental state which I call "Imperception," corresponding to Aphasia in the Word-series. I do not discuss this symptom in the text, for, besides other and better reasons, the topics necessarily to be considered are numerous.

very local damage in his brain has not seriously affected his digestive organs—not obviously affected them at all. The palsy has alarmed and depressed him, and he has not in consequence slept, or has not slept well. Very likely he has had a strong purgative, and perhaps blisters to the back of his neck. These mental symptoms are often due in great part to want of food. Very likely the poor fellow may have every day for years eaten and drunk far too much. Some people eat little during the day, and then "stun" themselves at dinner. If such a man be taken hemiplegic just before his dinner hour he would feel the want of food in the night. We should be cautious how we begin to change a man's habits, even bad habits, very soon after an attack of hemiplegia. If we do not keep up his arterial tension the parts of his brain *the furthest from his heart* will not get plenty of blood. The parts geographically furthest from the heart are the most intellectual; he may therefore become delirious if his arterial tension be much lowered. When I have spoken more about arterial changes, you will see that the brain of a man who suffers softening is often one of which the apparatus for nutritive supply has long been getting slowly defective. He is usually past middle age. There is arterial degeneration, and thus the circulation of distant parts will fail very easily. So far, we have concluded that there is defective blood-supply, and corresponding defect of action of the highest, that is of the most intellectual nervous arrangements. But obviously this negative condition could not account for *active* mental symptoms. Before I speak of the manner in which I believe the active symptoms to result, let me widen the field of observation.

I would earnestly beg you to bear in mind that I declare that such mental symptoms are not characteristic of cerebral softening; they are just as likely to occur with hemiplegia from clot as with hemiplegia from softening; they cannot be due directly to either; they cannot, as I have said, be due to circumscribed "destroying lesion" of any kind. But we can go far beyond this statement—we can say that these symptoms are rarely dependent on *primary* disease of the brain of any kind. In general physicians' practice very active mental symptoms (delirium) are rarely even associated with primary disease of the brain of any sort. Of necessity they imply something wrong in the brain, but the brain is suffering secondarily, "functionally," as the popular and inexact expression is. Such symptoms are common in the medical wards of a hospital. The patients in whom they occur are those whose primary ailment is not a cerebral one: they occur in phthisis, in chronic Bright's disease, in pneumonia, in erysipelas, and in pyæmia—in some cases of these diseases, I mean. As a rule, the more acute the disease, and therefore the more rapidly the brain suffers secondarily, the more active, the more uproarious and constant, the mental symptoms. They occur without a very high temperature oftener than with one. The temperature is often normal. Now we come to the explanation.

Such mental symptoms are on an utterly different platform from all other kinds of nervous symptoms. Remark, they are positive, or, as I said, active symptoms. Negative mental symptoms, such as loss of speech, imbecility, defect or loss of consciousness, are often owing *directly* to disease of the brain, but the most extravagant and most changing positive mental symptoms must in all cases, even where there *is* disease of the brain, be due to the action of parts of the brain which are *not* the seat of a lesion which produces *loss* of function. They are due to the action of parts which, except for over-excitement, are healthy. I am fully convinced that in all cases, from the insanity of slightest delirium to insanity ordinarily so-called, there is, as Dr. Monro says (in accordance with a principle many years ago formulated by Laycock), a negative and a positive condition. There is loss or defect in the highest faculties along with exaltation of those lower and more automatic. It is even so in health; automatic mental action goes on during sleep or reverie. But we shall keep to actually morbid conditions. I wish to impress on you that it is the negative element only which is the *direct* result of disease. Now mark, the delirious patient is symptomatically in a double condition. The negative element is defect or loss of consciousness. Unfortunately such an expression often rouses thoughts about coma; but be sure that there are all degrees, from the slightest and most transient confusion of mind (defect of consciousness) to deepest coma. Now, the defect of consciousness is the condition produced directly by loss of arterial tension leading to failure of the highest centres—those most distant from the centre of the circulation. With regard to the causation of the positive symptoms (the delirious ravings, etc.), we may apply the principle Anstie stated when he said "that the apparent exaltation of faculties is due to removal of controlling influences," or, as Thompson Dickson said of delirium and mania, that "they result from loss of control," or as Rutherford says,* "to diminution of inhibitory power." When a man is delirious his negative state is, I repeat, that his highest nervous arrangements in the cerebrum, the sub-strata of consciousness, are more or less put out of use; he has defect of consciousness. In any general lowering of health the very highest nervous arrangements are the first to fail. (Principle of Dissolution.) The positive or active symptoms, the illusions, delusions, and grotesque actions, are owing to the action of the lower nervous arrangements, which, except for over-excitement *permitted* by the loss of control, are healthy. (Principle of Loss of Control.)

You may reply that the active mental symptoms may be attributed to active disease about the original lesion—about the softening or the clot. This is contrary to the evidence. It is a grave error in any case to put these symptoms down as a matter of course to meningitis, encephalitis, or to any kind of acute primary head affection. It is a deplorable error if it leads to severe purgation, to blistering

* The Lancet, April 29, 1871.

the back of the neck, leeches and low diet. The characteristic symptoms of encephalitis, meningitis, and acute brain disease generally are not mental, but physical. Thus, besides gross motor affections, convulsion, and paralysis, there are alterations of circulation, respiration, temperature, and constipation, vomiting, etc. Do not forget this seemingly paradoxical statement, that the trustworthy symptoms in the diagnosis of acute and primary disease of the organ of mind are physical, and that the untrustworthy symptoms for that diagnosis are mental.

General mental symptoms slowly developing weeks or months after an attack of softening.—These certainly follow at too great an interval to be erroneously attributed to the local damage which caused the hemiplegia. They often develop when the hemiplegia has become chronic. A general mental and bodily failure often follows a severe attack of hemiplegia, the result of local softening. It is not due to that softening nor to any extension of it; it is, I suppose, a result of secondary atrophy of the whole or of a large part of the hemisphere in which the local softening lies. But remark that widespread atrophy of a hemisphere follows on any large cerebral lesion, not on softening in particular; it follows clot, for example, and it may follow tumour, as is evident in some very long-standing cases. I say in some very long-standing cases, for, of course, in most cases of tumour, as we see them post mortem, from the added bulk and from œdema of the brain about the tumour, the convolutions are flattened and the brain looks bigger. Probably here there is concealed atrophy. In cases of autopsy in adults who have been hemiplegic from infancy, we may find, besides the local paralyzing lesion, extreme wasting of one cerebral hemisphere. This is, I think, a consequence of the local damage which caused the hemiplegia. There was at first, I suppose, softening by thrombosis of a branch or of the trunk of the middle cerebral artery. This local softening is afterwards represented by a cyst. The atrophy is consecutive and secondary.

The mental symptoms following late (weeks or months) after an attack of hemiplegia are more slowly developed than those following immediately, hence they are very different. The deterioration shows itself both intellectually and emotionally. There begins to be loss of power of connected thought on difficult, novel, and complex subjects, or, speaking simply, the patient is soon confused; there are also peevishness and selfishness. Both these are highly characteristic of slow mental degradation. This is just what one would expect *a priori*. From a process so uniform as atrophy of the brain you would expect failure to begin slowly, and, on the Principle of Dissolution, that it would affect first the highest and most special of all faculties, or we may say those faculties last acquired both by the race and the individual. These faculties are power of abstract reasoning (intellectual) and sentiment of justice (emotional).* That these two faculties are the most special is seen by the fact that young children and savages have little or none of either. It is said that Australian savages have not even such abstract words as tree, red, justice, etc. Now, inferior people among the civilized are inferior because these faculties are little developed in them. I repeat, these are the two faculties developed latest; they fail first in cerebral disease where the whole brain is slowly implicated. So far for the principle of Dissolution, under which comes the negative condition. Next for the positive symptoms. The process of dissolution which directly causes the negative indirectly causes, or rather permits, the positive.

Patients with general cerebral deterioration, like persons naturally inferior, are easily excited; for by saying that they have defect in their highest processes, we say that they have defect in their controlling or inhibiting processes. To be easily excited is to have little controlling or inhibitory power. Here again comes in the Principle of loss of Control. Every healthy man has all animal passions and instincts, but the properly organized man has them under control of well-developed higher faculties. Thus chastity is not the absence of sexual feeling, but the having it deep under the control of higher feelings. Here you see that the principle of the same explanation holds good as was given of the mental symptoms following soon after local softening. In the production of the class of symptoms just considered, the process of dissolution is very slow, and thus the control is slowly removed. The suddenness and rapidity with which control is removed is of vast importance; the more rapidly it is removed the more activity is there of the centres uncontrolled. Thus, in epileptic maniac (the most furious of all maniacs) the control has been removed very suddenly and with great rapidity.

Defective sense of justice seems too fine a phrase for selfishness, peevishness, and greediness; but it is really a correct statement of them. The feeling of justice is regard for others. Of course the results of disease are as different as are the persons to whose brains disease comes. For example, inferior men who have little sense of justice while in health, are made very irritable by trifles and easily take offence. They would soon, even by a non-cerebral illness, display bad temper, greediness, etc. Then some men have a feeling of justice in excess: generosity is excess of justice; generosity is not simply an easy, soft, careless nature. Such men are less likely to become selfish and greedy when the brain begins to fail. They have a reserve of good faculty. Defective power of abstract reasoning also seems too fine a phrase for the confused mental state of many of our hemiplegic patients. But it is really a correct expression; I don't mean that they have difficulty in reasoning on abstruse subjects. What puzzles them is connected thought about things out of their routine, and which are not simple and actually before them. Persons of congenitally inferior minds are easily confused by anything complex, especially if it be novel.

So, then, when general mental symptoms follow

* See Herbert Spencer's Study of Sociology, chap. xv.

weeks or months after local softening, a sufficient explanation is given, not by the softening, which may not increase in extent as the symptoms develop, but by the slow consecutive atrophy.

To resume. Excluding softening about tumours and softening from gross causes similiarly obvious, I know nothing of softening of the brain except that resulting from blocking of cerebral vessels. This, you will see, is saying, in effect, that softening of the brain is local; there is a softening of some part because a vessel supplying that part is blocked up. I have used in a former part of this lecture the expression "extension of softening." I wish to remark that, excluding softening about tumours, softening from injuries, etc., I know nothing of "extension of softening" except in the very simple sense of its resulting from new blockings up of arteries near those formerly blocked up.

The softening I have to speak of is a partial necrosis of brain mostly in arterial districts. Hence the first and essential thing in the study of softening is the study of the process and results of blocking up of arteries. It is exceedingly important to realize that it *is* a question of *arteries*. See how it bears on hereditary transmission of disease. Hemiplegia from local softening occurring in a person whose family has been subject to nervous disorders is no evidence whatever to show an inheritance of nervous disease, for the simplest possible reason that hemiplegia so caused is not strictly of nervous origin. The same remark applies to hemiplegia from clot, and thus it applies to nearly all cases of hemiplegia, for this form of palsy arises in the vast majority of instances from bad cerebral arteries; they break or get blocked up. Hemiplegia is the common arterio-cerebral symptom partly because an embolus can more easily get into the middle cerebral artery for anatomical causes, and partly because this vessel lies more directly in the way of strain from the heart, and thus is the most diseased and the most easily ruptured. To show how very mechanical, so to speak, the reason is for the predominance of this arterio-cerebral symptom, I mention that Prevost and Cotard found that tobacco-seeds injected into a dog's carotid most often lodged in the animal's middle cerebral artery. In fact, I know of no evidence to prove that any form of hemiplegia is ever of direct nervous origin—*i.e.*, that the pathological changes causing it *begin in nervous tissue*. Hence it is, I think, very inaccurate to speak of a patient who suffers epilepsy as having a *tendency* to nervous diseases because his father or mother had such symptoms as hemiplegia, loss of speech, softening of the brain, etc. Your notions on hereditary transmission of nervous diseases will be confused unless you bear in mind that nearly all "nervous diseases" are really instances in which the pathological changes begin in *non-nervous tissue*. Very many of them begin in the compound tissue (artery), and many of them in the simple tissue (connective). Besides symptoms of arterial origin there are nervous symptoms from intra-cranial tumours (including syphilitic growths), abscesses, hydatid cysts, etc. All these are pathologically extra-nervous. So, in inquiring for evidence as to hereditary tendencies in a patient who had any kind of nervous affection, you try to get evidence as to general states; for what you really want most to know is to what tissue-changes the patient's family is prone. You only inquire about nervous symptoms in other members of the patient's family (paralysis, etc.,) as indirect evidence of this. You inquire, too, for rheumatism, gout, for facts as to renal disease, as well as ask if there be paralysis, insanity, etc. What you most wish to know is, what tendency there is to arterial (including cardiac) changes. My own belief is, that in this direction of inquiry we shall find out the pathology of the neuroses. I do not believe that chorea and epilepsy are nervous diseases in the sense that the pathological changes *begin in* nervous tissue.

In all the cases I have mentioned so far nerve-tissue *suffers*. It is not primarily at fault. As to the neuroses, remark that according to most physicians their pathology is unknown. We cannot say, then, that they are hereditary as *nervous affections* simply because they pervade a family. Hemiplegia, apoplexy from cerebral hemorrhage, softening, etc., may pervade a family, but this is not evidence that that family is predisposed to nervous disease, for the simple reason that all the three so-called *nervous* diseases mentioned are affairs of arteries, not a whit more significant than defect of sight from retinal hemorrhage or epistaxis — arterial affairs too. In these cases it is more important to seek evidence of a tendency to arterial change than to note the occurrence of nervous disease or symptoms in the patient's blood relations.

Mental symptoms preceding cerebral softening.—It is important for another reason to bear in mind that cerebral softening is a question of arteries; for, since local softening is due to blocking up of arteries, it is hard to see how such so-called causes of softening as anxiety and overwork can be said to produce it. Such causes may help to produce the clinical grouping of symptoms, often called softening, of which I spoke at the beginning of my lecture. Fright and anxiety—which latter is only fright spread out thin—are, indeed, potent causes, especially in predisposed persons, of severe, very distressing, and long-continued nervous symptoms, such as sluggishness of mind and body, failure of power of attention, incapacity for sustained exertion, etc.; but I do not see how they can produce that *local* pathological change which is properly called softening. I do not deny that hemiplegia from softening (thrombosis) is often said by patients and their friends to have been preceded by anxiety or overwork—"caused by" such things, they will affirm. I think the most reasonable explanation is that the brain has been slowly getting into a condition in which it is easily excited and easily overworked; for in many such cases (softening from thrombosis) there is widespread degeneration of the cerebral arteries, and thus a worse nutrition throughout the brain, before the actual softening of some part results because one of these bad arteries has become blocked up. In some cases before the hemiplegia,

the patient had manifestly become, as he would say, although not in these words, incapable of connected thought on any unusual matter, forgetful of things slightly out of his routine duties, and we should learn from his friends that he had become irritable and selfish. What I told you on failure of the two highest faculties in consecutive atrophy of the brain applies here. As a rule, the failure of mental power before softening is much slighter, and occurs more slowly; it is often spoken of by the patient's friends as indifference to business, fidgetiness, and "alteration" of disposition. These symptoms are, no doubt, in persons who have degenerated arteries, the result of a uniformly bad state of the vessels of the brain. This prior condition of ill nutrition does not, so far as I know, lead to *general* softening, however slight we may suppose that softening to be.

You will now see that the causes of softening of the brain, properly considered, lead you to consider the state of the arterial system—lead you beyond the nervous elements of the nervous system. I repeat that very few nervous diseases are directly of nervous origin. A great part of our knowledge of the pathology of cerebral softening is in the answer to the question, Why do arteries become diseased, and thus "blockable"? Obviously if the softening of the brain be very limited in extent, and the symptoms therefore slight and transitory, the consideration of the patient's general bodily state is the really urgent matter. It would be a very poor thing to dwell with exaggeration on the hemiplegia, and ignore the state of the patient's heart, arteries, etc. It would be a very unclinical mind which could feel comfortable about a patient who was very "degenerate" simply because he had speedily got rid of hemiplegia. Inquire into degenerations of all systems of tissues, and examine all important organs. Nor must you suppose that you are taking a broad view of a case if you dwell exclusively on important superficial matters—state of digestion, sleep, and occupation. You will have your patient's sympathies in making such investigation, for he can, or he supposes he can, follow your enquiries and understand their bearing. It is best to begin with the paralytic symptoms; then to consider the superficial, but very important, conditions; and, lastly, the deeper lying and most important evidence as to general pathological and pathogenetical states. The patient will wonder what you are at if, first of all, you examine his heart, urine, and arteries, when he comes to you because he cannot use his right arm and leg. Again, do not be illogical when paralytic symptoms are slight and transitory. Suddenly occurring and transitory slight symptoms, such as affections of speech, unilateral numbness, may be owing to little foci of softening (or rather to thrombosis of small arteries, which in due time lead to local softening), just as much as permanent paralysis may be owing to extensive softening. Of course the slighter the symptoms the more need is there practically to consider many possibilities, for slight symptoms are not necessarily so easy of explanation as grave symptoms often are. After carefully considering all the causes I can think of, I feel warranted in attributing in many cases the slight and transitory nervous symptoms I have mentioned to local softening; for vessels of very small size may be blocked up as well as vessels of great size, and in correspondence there are foci of softening from the size of a pea upwards. Simple as this remark sounds, the principle deducible from it is not always borne in mind. Slight and transitory hemiplegia, which we are warranted in putting down to blocking up of very small arteries, is often hastily ascribed to general states of ill-health—for example, to affection of the liver, etc. In so explaining them you would have your patient's sympathies. He can, or he thinks he can, frame some sort of conception of "local congestion," "disorder of the liver," "surpressed gout," "overwork," "anxiety," etc., as causing his slight localized nervous symptoms. At any rate these explanations or these phrases are familiar to him. I think that the existence of any of these states gives no explanation of local and suddenly occurring nervous symptoms. These "explanations" are superficial, not simple. If a man have atheromatous arteries (blockable arteries) of all sizes, why should not slight and transitory symptoms be owing to blocking up of very small arteries? Observe, the question of first importance in diagnosis is not as to the slightness or transitoriness of a symptom, but as to its localness; a local symptom must imply a local lesion of some sort. One reason for the frequent denial that local lesions exist in cases of *transitory* paralysis is that it is not widely known that there is Compensation in nervous organs, so that paralysis will pass off when the damage causing it is not altogether repaired. Thus we exclude such so-called general causes as I have mentioned, and go on to consider special causes. At the same time it is only an inference that such light and transitory paralytic symptoms depend on small foci of softening, for there is no, or practically no, morbid anatomy of such slight symptoms.—*Lancet*, Sept. 4, 1875.

RETAINED PLACENTA.

In reference to some cases of retained placenta that had been treated by forcible removal, which he regards as a dangerous practice, Dr. Linéard, of Caen, calls attention to the fact that many years ago he published a simple procedure, which he has always found as effectual as it is safe and easy, and which is also a very efficacious means for the prevention of after-pains and uterine hemorrhage. It consists in the injection of the umbilical vein with cold-water. A clean section should first be made, so as to bring the vessel plainly into view, and also to shorten the cord, which should not be more than from twenty to thirty centimetres is length. A syringe, containing at least 150 grammes, and having a long fixed canula should be employed. The colder the water used, the less is the quantity that need be injected so that while 150 grammes suffice at the ordinary temperature of winter, twice or thrice as much may be required in summer.—*Gaz. des Hôp.*, February 25.

A NEW METAL.

THE discovery of a new element is an event in the history of chemistry that must not be allowed to pass unchronicled. It is some fifteen years since there was an opportunity of making such an announcement, for new elements are much rarer nowadays than new planets, half a dozen of which are often picked up by astronomers in a single year.

This latest addition to the list of elementary substances is to be credited to M. Lecoq, an amateur chemist of Bois-Baudran, Cognac, and has been named by him *gallium*, " in honor of France, " the the ancient Gallia. In a note presented to the Academy of Science, September 20, he reports that he first found indications of the existence of the new body " between three and four P. M. on the 27th of August, 1875." It has not yet been isolated, and its physical characteristics therefore remain unknown but from the chemical behavior of its compounds it appears to be a metal related to zinc and cadmium, in connection with which it was found in a blende from Pietrafita, Spain. The forms under which it is at present known are those of the chloride and sulphide. While experimenting with the spectroscope on the products of the analysis of the blende just mentioned, M. Lecoq observed a violet line in the spectrum which evidently did not belong to any known element. This line was situated at about 417 on the scale of wave-lengths; and there was also a fainter violet line at 404. Further examination fully satisfied him that these violet rays were indeed the luminous language by which a hitherto undiscoved metal announced itself. Probably it will soon be made to show itself in its simple metallic form, and we shall then know how it looks. Its chemical affinities, as already stated, connect it with zinc.

This is the fifth metal discovered by means of the spectroscope, the others being cæsium, rubidium, thallium, and indium, which were found in 1860 and 1861. But for this wonderfully delicate instrument of analysis, they all would probably have remained unknown, at least in our day and generation. Cæsium and rubidium were found by Bunsen and Circhhoff while analyzing a spring water which contained only two or three grains of the metals to a ton, and by no other method of analysis could their presence in quantities so minute have been detected. Thallium, which was discovered by Crookes, betrays itself in the spectroscope by its characteristic green line if one fifty-millionth part of a grain is volatilized in a flame, an amount far too small to be recognized by any other method known to us.

These metals, with the exception of the new gallium, are all named from the colors of their distinctive spectroscopic lines: cœsium from the Latin *cæsĕius*, sky blue; rubidium from *rubidus*, dark red; thallium from the Greek θαλλός (*thallos*), a young green shoot; and indium (which was discovered by Reich in a specimen of blende from the Freiberg mines) from *indigo*.

Gallium is not the first element discovered in France, though it is the first for nearly half a century. Bromine was detected by Balard in 1826, and iodine by Courtois, a Paris soap-boiler, in 1811. The credit of discovering magnesium is sometimes ascribed to Bussy, who in 1829 or 1830 first obtained it in sufficient quantities to test its properties; but Davy as early as 1808 had satisfied himself that magnesia was the compound of a metal with oxygen. Vauquelin discovered chromium and glucinum (the oxide, at least, for the metal was first isolated in 1828 by Wöhler) in 1797.—*Boston Journal of Chemistry, November*, 1875.

TREATMENT OF SCARLATINAL ALBUMINURIA.

Dr. Vesey, in the *Irish Hospital Gazette*, gives a case treated by turpentine and vinegar, from which is the following extract:—

The anasarca was very much increased all over the body. The urine had been almost totally suppressed. During the previous thirty-six hours not more than ʒ iv. (if so much) had been passed. This was of the color of tawny port wine. The immediate treatment was a hot bath, with mustard followed by hot stupes to loins, a brisk purgative, and a turpentine enema. Turpentine confection was also administered in fifteen grain doses every hour, and vinegar and water (1 to 4) was given *ad lib.* as a drink. The bowels acted freely, and in three hours from the commencement of the treatment there was an improvement; the convulsions were not so severe nor so frequent. Chloroform was also tried, but I did not derive the benefit therefrom that I expected, so did not persevere in its use.

In twelve hours the convulsions ceased, and did not return. The turpentine confection was now given every third hour, and did not produce any strangury. The quantity of water was notably increased—six ounces in twelve hours. He drank freely of the vinegar and water, and was much pleased with it. He had very copious sweating, which continued for several hours.

Dec. 23rd.—To-day patient much better; pale and weak, but otherwise well; plenty of urine secreted, only a trace of albumen; *no blood or casts* could be found. From this date the convalescence was uninterrupted and complete.

I need not enlarge on the condition of the kidneys in this case. It will be sufficient to say that it was regarded as a case of masked scarlatina in the first instance, with the usual renal sequelæ, from exposure to cold. This view is borne out by the appearance of scarlatina in a sister of this boy a few days afterwards.

The reasons for the employment of turpentine are too obvious to be commented on. The vinegar was given with the idea of making the urea-poisoned blood purge itself of the offending matter through the skin. I do not venture to say that the diaphoresis was *propter hoc*, though certainly it was *post hoc*.

In the current number of *St. Bartholomew's Hospital Reports* will be found a very valuable paper by Dr. Reginald Southey, who prescribed sulphurous acid and compound spirit of horse-radish in acute Bright's disease. Of vinegar he says, " I do attribute her improvement very greatly to the large amount of *vinegar* in horse-radish sauce that this

patient took; and oftentimes since, in the persistent sickness of the uræmic state, I have given the dilute acetic acid of the Pharmacopœia, in drachm or half drachm doses, with almost invariable benefit.

MOUNT SINAI HOSPITAL: HYPODERMIC INJECTIONS; CORROSIVE SUBLIMATE IN SYPHILIS.

In this hospital hypodermic injections of corrosive sublimate in the treatment of syphilis have been made continuously, and so far without the formation of an abscess. They are specially found of advantage where the stomach is in an irritable state. The solution is made as follows:

Hydrarg. bichlorid., gr. iij,
Morphia mur., gr. ij,
Aquæ, ℥ j. M.

Of this one-half drachm is used as an injection once a day for fourteen days.—*New York Medical Journ.*

THE CANADA MEDICAL RECORD
A Monthly Journal of Medicine and Surgery.
EDITOR:
FRANCIS W. CAMPBELL, M.A., M.D. L.R.C.P., LOND.
SUBSCRIPTION TWO DOLLARS PER ANNUM.
All communications and Exchanges must be addressed to the Editor, Drawer 56, Post office, Montreal.

MONTREAL, JANUARY, 1876.

MEDICAL BILLS.

It is an old adage that it never rains but it pours, and this would seem to be the case with Medical Bills just now. In our last issue we gave in full a copy of a Bill which had been presented to the College of Physicians and Surgeons of Lower Canada, by a portion of a committee, which, in July 1874, had been appointed by the members of the College, with a view of suggesting some amendments to the present Act. It was attempted to so arrange matters that the Bill would have been brought before the session of the Quebec Parliament which has just closed. The unfairness of such hurried legislation was so obvious, however, that we are glad to say it did not require much pressure to induce the supporters of the measure to allow it to stand over for discussion till the meeting of the College, which takes place in Montreal in May next. The profession, however, had hardly quieted down after the little spurt of activity, which was required to secure this breathing-spell, when they were somewhat puzzled, on reading the proceedings of the Quebec Legislature, to see that the Hon. Mr. Chapleau had introduced "an Act concerning the Medical Profession of the Province of Quebec." It was hardly possible to believe that, after the understanding which had been come to, an attempt was about to be made to press through at once the Bill we have referred to, and yet one could hardly be blamed for taking this view. Investigation, however, into the matter revealed the fact that this was an entirely new Bill, its promoters being a small section of the profession in Montreal, who, tired of what they term the slow movements of the College of Physicians and Surgeons of Lower Canada in the way of improvement, determined to secure a Bill of their own, which had this delicious freshness—we do not say audacity—about it that it wiped out of existence the present College, which, whatever be its faults—some believe it has many—has done much for the profession of this Province, and transferred not only all its privileges—*but all its property*—to the very cumbersome corporation which was, Phœnix-like, to arise from its ashes, as the creation of the half dozen ultra-reform members of the profession in Montreal. We always desire in discussing public questions to do so with calmness, but we confess that we can hardly allude to this bantling of the Hon. Mr. Chapleau, and the action of those who committed it to his charge, and preserve our equanimity. A more audacious attempt to tyrannize by means of legislation it would be difficult to conceive; and we confess our astonishment (if indeed it is possible to be astonished at any legislation which takes place in the Province of Quebec) that the Bill was allowed to reach its second reading before being strangled — as it should have been at its birth. It, however, did not go further than this, being we understand, gently dropped. Our contemporary, the *Canada Medical and Surgical Journal*, published the Bill in full; but, as it would occupy some four or five of our pages, we think we can fill our space better than occupying it with a Bill which, in our opinion, will never become law,—most certainly it never will, if the College of Physicians and Surgeons have the energy to act, and the tact to deal with the Medico-Political situation as it at present stands. We do not feel that, as regards the measure itself, we are called upon to express any very definite opinion. In general terms we may, however, say it is by far too complex, requiring to be read at least half-a-dozen times by a man of ordinary intelligence, before it can be understood, and that many of its details are of such a character as to be utterly impossible of accomplishment. We do, however, need a change in the present Act; and those who feel that such is the case, and we know they are many, should at once, if qualified

to do so, enrol themselves as members of the present College, and through it agitate for the needed reforms. If it should so happen, however, that the College does not shew itself equal to the occasion, it will then be time enough to engage in legislation which is intended to legalize its annihilation, and surround with a halo of parliamentary purity,—those who, being foremost in the fray, will be best entitled to participate in the spoils. Till then we say to our enthusiastic medical dreamers,—"*bide a wee.*"

WHAT IS WHICH?

It is said that the Medical Bill, which was introduced into the Quebec Legislature by the Hon. Mr. Chapleau, and to which we allude elsewhere, was drawn up by a well-known Montreal Lawyer.

We are inclined to believe that such is the case, but, like many legal documents, to plain intellects it is difficult to understand. Perhaps, however, it would require more intellect than is possessed by even eminent lawyers to tell the *true* meaning of the following section.

SECTION COUNCILS AND THEIR OFFICERS.

"The Election of the Section Council shall be made by ballot, the first *Wednesday* of July every year, unless this day be *Sunday*, &c., &c."

How is it possible for any *Wednesday* ever to be a *Sunday?*

HYGIENE AND STATISTICS.

Our Quebec Legislature has many faults, but when credit is due them, it is not only fair but wise to concede it. We are glad, therefore, to state that at the last Session, just closed, it was determined to establish a system of Hygiene and Statistics, also two Bureaus, one at Montreal and another at Quebec, for the collection and distribution of vaccine lymph. We fear, however, that in, the matter of Statistics, the results will not be satisfactory, simply because it is unwise in our opinion to have religious officers perform what *is* a civil duty. Still we are thankful for this much, and live in hope that some day our opinion may prevail.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

MONTREAL, Nov. 19th, 1875.

The regular meeting of the Medico-Chirurgical Society of Montreal was held this evening, and the following gentlemen were present :—Dr. F. W. Campbell in the chair; Drs. Drake, Fenwick, H, Howard, Ross, Alloway, Major, Simpson, Ashe, Roddick, Saunders, Reddy, Finnie and Bell.

The minutes of the last meeting, held on the 5th of November, were read and approved.

Dr. W. H. Burland, of the Montreal General Hospital, was proposed for membership by Dr. Roddick, and the proposition was seconded by Dr. Ross.

Dr. Roddick then proceeded to read a paper on a case of "Pedunculated Fibroid Tumour of the Uterus." The subject of the abnormal growth was a woman 29 years of age, who had been married seven years, and during that time had no children, nor miscarriages. At the time Dr. Roddick saw her she thought she was pregnant, as she had not menstruated for three months. Her general health had been good. At the commencement of her illness, which was on the 15th of July, 1875, she suffered from severe pains in the right inguinal region, that were sudden in their onset. The patient objected to a vaginal examination, but externally a hump the size of a hen's egg could be felt in the right inguinal region, and the uterus was enlarged, but not so much so as it usually is at the fourth month of pregnancy. It occurred to Dr. Roddick that he had a case of extra-uterine, or tubal pregnancy, to treat. A vaginal examination showed that the tumour moved with the uterus. The three days following, the patient became very much worse, with great pain and prostration; and Drs. Drake and Howard were in consultation with Dr. Roddick. The title of the paper was the diagnosis finally adhered to. Leeches, poultices, morphia and champagne did not relieve the pain, vomiting and prostration, and the patient died five days from the commencement of the attack. An autopsy revealed a smooth, fibroid, pedunculated tumour, springing from the anterior cornu of the uterus, with the surrounding peritoneum very much congested, inflamed, and in some parts almost gangrenous.

Dr. Roddick, after entering into the peculiarities in the physiology and pathology of the case, expressed the opinion that the peritonitis was set up by the traction and rupture of adhesions, caused by the enlargement of the uterus; and suggested for discussion the question in treatment: "would the induction of premature labour be justifiable in cases of this kind?"

The paper was listened to with great interest, and a warm discussion followed as to the cause of the symptoms and lesions which presented themselves in this case. Dr. Roddick's proposition as to the justifi-

ability of the induction of premature labour in similar cases was supported by several speakers, and several cases were cited in which the treatment had been successful.

Dr. REDDY introduced the subject of the proposed Amendments to the Medical Act of the Province of Lower Canada. After some discussion of the subject,

Dr. REDDY, seconded by Dr. Ross, proposed that a special meeting be called to discuss the matter.

In a requisition signed by Drs. Ross, Reddy and Fenwick, Dr. Campbell (F. W.) the chairman and 1st Vice-President, called a meeting for Monday, the 22nd of November, and the Secretary was instructed to issue circulars to the members, calling them together on that day. to consider the "Proposed Amendments to the Medical Act." *

JOHN BELL, A.M., M.D.,
Secretary-Treasurer.

TO OUR SUBSCRIBERS.

We earnestly ask our Subscribers to remit the amount they may be due us.

A GROUNDLESS CHARGE.

A villainous attempt to injure the reputation of a worthy and most honorable medical man, Dr. Le Cavallier, of St. Laurent, was made the early part of December, by a woman named Paquin, who accused him of rape. The Doctor was arrested and brought before the Police Magistrate at Montreal, but the moment an investigation was begun, the maliciousness and utter groundlessness of the charge became apparent. We never had any doubt of the issue, from our knowledge of Dr. Le Cavallier, but now that he has been most honorably acquitted, we congratulate him that his character has been so completely vindicated.

---

*This meeting was held, and largely attended. A resolution, condemning any attempt at hasty legislation, and the necessity of submitting to the profession any alterations which might be proposed in the present Act, was passed: As the Society finally came to the conclusion that the contemplated meeting of the College of Physicians and Surgeons of Lower Canada, which had been called for the 24th of November, was illegal, and that the consideration of the proposed Bill would not be entered upon, they determined to simply place it upon record, to be used subsequently if occasion should demand it.—EDITOR RECORD.

AN EXPLANATION.

In our December number we made a few remarks upon the proposed New Medical Bill, which, in May last, was submitted to the College of Physicians and Surgeons of Lower Canada, as the report of a Committee which had been appointed at the previous Tri-annual meeting of the College to suggest amendments to the present Act. We mentioned the names of the Committee, viz., Drs. G. W. Campbell, Jackson, Rottot, and Craik, and said that Dr. G. W. Campbell declined to act upon it as he was retiring from active professional life, *and that Dr. Craik did not act.* It would, of course, be inferred from the latter clause of the previous paragraph that Dr. Craik had also declined to act, indeed such was our impression. In this, however, we are in error; Dr. Craik did not act simply because he never knew he was on any such Committee. He was never notified of his appointment. Had he been informed of the fact, we are assured Dr. Craik would have accepted the duty imposed upon him by the members of the College. We regret exceedingly being the means of conveying a wrong impression.

PERSONAL.

Dr. George W. Campbell, Dean of the Medical Faculty of McGill College, Montreal, sailed from Portland on the 18th of December in the Allan S.S. Sarmatian. We believe he intends being absent from Canada for a considerable time.

Dr. Clarke, of Princeton, Ont., has been appointed Medical Director of the Toronto Lunatic Asylum Although Dr. Clarke has not specially devoted his energies in the direction of mental diseases, he is yet considered to be equal to the position. We hope so.

Dr. Robert Miller, son of Judge Miller, of Galt, has been appointed Surgeon to a detachment of the North-West Mounted Police. He will be stationed at Belle River.

MARRIED.

At Fort Edward, N. Y., on the 23rd December, by the Rev. F. M. Cookson, Dr. M. Jones, of Sherbrooke, Que., to Florence Marion, only daughter of John Osgood, Esq.

DIED.

At Cowansville, Que., on the 16th December, J. P. Cowan, M.D., for many years a resident of Greenock, Scotland, and then of Montreal, aged 70 years.

Dr. Octavius Yates, of Kingston, died very suddenly from congestion of the lungs, in the early part of November last. He was much respected by his colleagues, and his death is severely lamented.

Dr. Ormond Skinner died at Waterdown, Ont., on the 25th November, aged 45 years.