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LECTURE IV.

Inflammation—Blood Letting—Abstinence.

GENTLEMEN:

When medical men hear that I am in the habit of treating all kinds of disease *without* Blood-letting, they generally open their eyes with a stare, and ask me what I do in INFLAMMATION. Inflammation!—who ever saw any part of the body *on fire*, or in FLAMES? for the word, if it means any thing at all, must have something like that signification. To be sure, we have all heard of "spontaneous combustion," but I confess I never saw it, and what is more, nobody that ever did! What, then, is this inflammation—this term which our great modern doctors so dogmatically assure us is the head and front of every corporeal disorder? It is a metaphor merely—a theoretical expression, which, torture it how you please, can only mean a quicker motion and a higher temperature in the moving atoms of a given structure, than are compatible with the healthy organization of that structure. When you find a considerable degree of heat and swelling, with pain and redness in any part, that part in medical language is *inflamed*. Now, what are these phenomena but the signs of approaching structural *decomposition?* During the slighter corporeal changes, the coincident variation of *temperature* is not always very sensibly perceptible; but whenever there is the least tendency to decomposition, this thermal change is sure to be one of the most prominent features. The phenomena of inflammation, then, very closely resemble, if they be not indeed identical with, the chemical phenomena which take place preceding and during the decomposition of inorganic substances. Now, when this kind of action proceeds unchecked, the result in most cases, is a tumour containing *purulent matter*, which matter, being a new *fluid* product, differs entirely in its appearance and consistence from the original tissue, in which it chanced to become developed. This tumour we call *abscess*. And how is it to be cured? In most instances, the matter, after working its way to the surface, escapes by an ulcerated opening of the integument, while in others, an artificial opening must first be made by the knife of the surgeon. In either case, the part in which the abscess was situated, generally recovers its healthy state by the reparative powers of nature. But there is yet another mode in which a cure may be effected, namely, by *Absorption;* that is to say, the matter of the abscess may be again taken up into the system, and by the inscrutable chemistry of life, become once more a part and parcel of the *healthy* fabric of the body!—being thus again reduced to the elements out of which it was originally formed. How analogous all this to the operations of the chemist, who, by means of the galvanic wire, having first reduced *water* into its elemental gases, again converts these, by electrical means, into the water from whose decomposition they proceeded! Such, and many more chemical operations, Nature daily performs in the animal body; and that she does all this through the electric or galvanic medium of the BRAIN and NERVES, cannot possibly admit of dispute, when you come to consider that under the influence of a Passion (the most unquestionable of *cerebral* actions) large abscesses, and even solid tumours, have often disappeared in a single night. Gentlemen, there is not a passion,—Grief, Rage, Terror, or Joy,—which has not as effectually cured abscesses and other tumours, as the most powerful agents in the materia medica. The writings of the older authors abound in instances of this kind. But there are yet other terminations to the inflammatory process. For example, after having proceeded, to a certain extent, in the way of change, but still falling short of actual purulent decomposition, the atoms of the inflamed part, by the renewal of a healthy condition of the body generally, or by the direct application of cold or other agency, may again, with more or less quickness, subside into the degree of motion and temperature characteristic of their natural revolutions. This termination is called *Resolution.* When the inflammatory action is more than usually

rapid, the result may be the complete death of the part implicated,—a black inorganic mass being left in the place of the tissue which it originally composed. This last we term *Mortification* or *Gangrene.*

But, Gentlemen, medical men extend the term inflammation to some other morbid processes, which, under the various names of Gout, Rheumatism, and Erysipelas, we shall in another lecture, have the honour to explain to you. A great many books have been written upon the subject of Inflammation, but I must own I never found myself one whit the wiser after reading any of them. Their writers, in almost every instance, use language which they do not themselves seem to have understood, otherwise they would have confined themselves to one sense, instead of including under the same term, states the most opposite. Were I to tell you that the word "Inflammation" is used by many writers when a part is more than usually *cold*, you would think I was laughing at you; yet there is nothing more true, and I will give you an instance.—A carpenter had his thumb severely bitten by a rattlesnake; and the effects of the venom are thus described by one of the most learned of living medical writers, Mr. Samuel Cooper:—"The consequence was, that in ten or twelve hours, the whole limb, axilla, and shoulder became very *cold* and enormously swollen up to the neck; in fact, the whole surface of the body was *much below* the natural temperature. The swelling, you know, is produced by that kind of INFLAMMATION which is called diffuse *inflammation* of the cellular tissue."—[MR. S. COOPER'S *Lecture in* MED. GAZETTE.] Gentlemen, was there ever such an abuse of words—such an abandonment of common sense as this? The arm was "*very cold*"—"much *below* the natural temperature,"—yet it was *inflamed*—on fire!

Restricted to the sense in which I have already spoken of the term, namely, heat, swelling, and pain, "inflammation," like "fever," or any other abstract word, may be used as a "counter to reckon by," and, like almost every other phonomenon of disease, it is a developement of previous constitutional disturbance I do not speak of immediate local inflammation produced by a chemical or mechanical injury—leaving that to the surgeons to elucidate or mystify, according to their particular inclinations; I talk of inflammation from a general or constitutional cause. Has an individual, for example, exposed himself to a cold draught, or to any other widely injurious influence, he shivers, fevers, and complains of pain, throbbing, and heat in the head, chest, or abdomen, phenomena gradually developed according to the patient's predisposition to organic change in this or that locality. Phrenitis, Pneumonia, Peritonitis, (technical terms for inflammation of the *Brain*, *Lungs*, and *Membranous covering* of the Bowels,) are consequences or features, not *causes* of the constitutional disorder. But are the symptoms of inflammation in such parts equally intermittent with the diseases of which we have already treated? Listen to Lallemand:—"In inflammation of the brain," he tells you, "you have spasmodic symptoms, slow and progressive paralysis the course of the disorder being *intermittent.*" So that inflammation, like almost every other morbid action, is for the most part a feature or developement of intermittent fever. Dr. Conolly, in his Cyclopædia of Medicine, says "diurnal *remissions* are distinguished in EVERY attack of inflammation." Now, if you prefer the evidence of another man's eyes to your own, this statement ought to be more than convincing, for it comes from the enemy's camp. Gentlemen, it is the language of an opponent, the Editor of the British and Foreign Medical Review—the same individual who lately told his readers that the *Unity of Disease* was a silly book. If it was so silly as he says, why was he so silly as to abuse it? But against his authority,—if *authority*, in these days, be still permitted to take the place of *examination*—you have the opinion of Sir Astley Cooper, who, with his usual candour and good feeling, at once pronounced it to be a "valuable work." Now, who in his senses would think of comparing these two men together,—Astley Cooper, the father of English surgery, and John Conolly, the *Mad*-doctor?—"Hyperion to a satyr!" But, Gentlemen, you have no idea what tricks these *medical* Reviewers are in the habit of playing. Some time ago I showed up one of them in a way he will not soon forget. Dr. James Johnson, were he here, would know the person I mean; for *he*, Gentlemen, as I have already told you, reviewed my "Fallacy of the Art of Physic as taught in the Schools, in the Medico-Chirurgical Review." A most unlucky business it turned out for him, for were I to tell you how I replied to his criticism. you never could again hear his name mentioned without laughing. Why has he not, in revenge, "cut up" the Unity of Disease? The editor of the Medical Gazette, not long ago, pretended to Review that work. He did not, however, like Dr. Conolly, call it a silly book;—he admitted, on the contrary, that it had "both pith and point" but he contended that it was only a straw thrown up at a lucky moment when the wind of medical opinion was turning against the "bleeding mania,"—a mania which he said he also reprobated. I wrote to him to ask,

if that were really the case, why he Mr. Editor had never reprobated that mad practice before, and knowing it to be so murderous in its effects, as he said he did, how in common humanity he allowed my strictures upon it to remain so long unnoticed in his pages; while all the years that these strictures had been before him, he had not only continued to fill his journal with cases treated after the sanguinary fashion, but had even held them up to the world as *models* of practice! True, in one or two instances, where the person he quoted was his enemy, he had certainly hinted that the treatment was bad. But these were very sorry exceptions. So far from my book being a straw which showed which way the wind blew, I was the first, (I maintained) who had the courage, alone, and in the face of much opposition, to set *that wind* a-blowing; and I added, that before I died I hoped to raise such a *stormy* one as would purify the medical atmosphere of some of its present corruption and foulness! But of that letter my good friend the Editor took no notice whatever; nor was I surprised at it, for the Medical Gazette, as some of you may know, is a mere organ and supporter of the College of Physicians; and so much the slaves of that body are the booksellers who publish it, that when about two years before, I sent them the MSS. of this very Unity of Disease, they actually refused to bring it out for me on any terms!—the editor of the Gazette can best tell at whose instigation,—for he is, or was then at least, the examiner of all their medical manuscripts, and therefore perfectly acquainted with that particular secret. Like a good servant, doubtless, he had too much regard for his employers to permit them to usher into the world such a terrible exposure of their professional patrons. Before quitting this matter, I may mention, that I am frequently asked why my writings have never been taken up by the *Lancet*, the Lancet which talks so constantly and so grandiloquently of its reforming and liberal politics! I can suggest a reason;—that periodical is now the organ of the Apothecaries. Mr. Wakley, its proprietor, was, in early life, a medical reformer, and much good he certainly at one time did in that character. *Now*—but I shall say nothing more of him on this occasion except *Cave canem!*

To return to inflammation. Whether the particular condition, so called, be termed erysipeloid, gouty, rheumatic, scrofulous, it is still *remittent;* and if you question the patient, he will almost in every case admit that it was preceded or accompanied by cold or hot fits or both. May not inflammation, then, yield to Bark—to Quinine? The late Dr. Wallace of Dublin maintained the affirmative, dwelling more particularly on its good effects in that disorganizing inflammation of the eye, termed *Iritis.* in which disease he preferred it to all the routine measures, which, *on the strength of a theory*, medical men have from time to time recommended as *antiphlogistic.* During an attack of Ague, he tells us, *Iritis* with inflammatory affection of other parts of the eye, occurred in the person of a patient under his care. "For the former complaint, namely, the intermittent fever, he administered Bark; by the exhibition of which, he was surprised at seeing the *inflammatory affection of the Eye*, as well as the fever, *disappear.*" This was the case which first led him to suspect the fallacy of the blood-letting system in inflammation of the Eye. Now I shall tell you what first led me to entertain similar doubts of its efficacy. A medical officer of one of Her Majesty's regiments serving in India, couched a woman for cataract. The next day, the eye having become inflamed, according to received practice he bled the patient; but scarcely had he bound up her arm, when she fell as if she had been shot, and lay to all appearance dead. With the greatest difficulty, he succeeded in recovering her from this state; but it was not until four long hours had passed, that he felt that he could safely leave her with ordinary attendants; for during the greater part of that time, when he ceased to chafe her temples or otherwise call up the attention of the brain by the application of stimulants to the nose, mouth, &c., she relapsed into a death-like swoon. More than once he was even obliged to inflate her lungs to keep her from dying. But, in this case, gentlemen, the blood-letting did NOT cure the inflammation; for the next day the eye was more painful and inflamed than ever, and the poor woman, after all the blood she had lost —and who will say that she was not bled enough?—did not recover her sight. It is now many years since that case came under my observation, and it made an impression on my mind I shall never forget. Had that woman died, would not everybody have said that the gentleman who had bled her had killed her? and very justly too, though he, good man, only conscientiously put in practice what he had been taught to consider his duty. You see, then, that blood-letting *even to the point of death*, is *no cure* for inflammation; and that it cannot *prevent* its developement, I shall furnish you with ample evidence before I finish this lecture. Meantime, I will tell you what can do both —Bark and Opium. These are the remedies to give before an operation, aud they are also the remedies best adapted for the relief of inflammation after it has come on;—and their

beneficial influence will be more generally certain in the latter case, if you first premise an emetic, and wait till its action has ceased before you administer them.

"The Peruvian Bark," says Heberden, "has been more objected to, than any of these medicines (Bitters) in cases of considerable inflammation, or where a free expectoration is of importance; for it is *supposed* to have, beyond any other stomach-medicine, such a strong bracing quality, as to *tighten the fibres* (*!*) still more, which were already too much upon the stretch in inflammation, and its astringency has been judged to be the likely means of checking or putting a stop to expectoration." *All this appeared much more plausible when taught in the* SCHOOLS OF PHYSIC, than probable, when I attended to fact and experience. The unquestionable safety and *acknowledged use* of the Bark, in the *worst stage* of inflammation, when it is tending to a MORTIFICATION, affords a sufficient answer to the first of these objections; and I have several times seen it given plentifully in the confluent small pox, without lessening in any degree the expectoration."

Some time ago, I was called to see a young gentleman, who had a swelling under the arm-pit, extending to the side. The skin was red and hot, and the tumour so painful as to have deprived him of all rest for the three previous nights. Though suppuration appeared to me to have commenced, I at once ordered Quinine, and begged him to poultice the tumour. By these means he was perfectly cured in three days, the swelling having, in that period, completely disappeared. The subject of this case was, in the first instance, attacked with shivering and fever, which had repeatedly recurred, but disappeared under the use of the quinine. Matter, I have no doubt, was absorbed in this instance, but so far from this absorption producing shiverings,—which, according to the doctrine of the schools, it ought to have done,—the very reverse took place.

I shall now give you one of many instances of indubitable and palpable inflammation—if the word have a meaning at all—as a proof of the value of Opium in the treatment of this affection

Case,—An old officer, Major F., 89th foot who had previously lost one eye by acute Ophthalmia, notwithstanding a vigorous *antiplogistic* discipline, had the other attacked in a similar manner with great pain, redness, and throbbing. I found him leaning his head over a chair-back, his face indicative of intense agony. For ten nights, he assured me, he had been unable to tolerate any other position, and it was only towards morning, when overcome by suffering, that he could, at last, obtain any thing like repose. The pain came on at bed-time in an aggravated degree, and remitted principally in the afternoon. Three grains of opium which I directed him to take half an hour *before* the recurrence of the expected paroxysm, procured him a whole night of profound sleep, and his eye, in the morning, to his astonishment, was free from pain, and only slightly vascular. He had been repeatedly bled, leeched, purged, and blistered, without even temporary benefit—indeed, the gentleman who attended him, in the first place, plumed himself upon the activity of his treatment.

But how, you may ask me, can PLEURISY and PNEUMONIA be cured without Blood-letting? What are Pleurisy and Pneumonia? Any rapid tendency to *atomic* change in the substance of the lungs, from the real pain and presumed increase of temperature at the same time developed, is termed Pneumonia—*vulgo* inflammation of the lungs. A similar tendency to change in the *atomic* relations of the membrane (*pleura*) which covers the outer surface of the lungs, or of that portion of it which is continued over the inner surface of the chest, is called the Pleurisy. Now, authors have thought it a fine thing to be able to tell pleurisy from pneumonia, but the thing is impossible; and what is more, if it were possible, so far as the treatment is concerned, it would not be worth the time you spend in doing it. Such distinctions only lead to interminable disputes, without in the least tending to improvement in practice. This much, however, I do know,—both diseases are developements of intermittent fever, and both may often co-exist at one and the same time. And in the Medical Gazette there is an excelleut case of the kind, which, as it in a great measure illustrates the chrono-thermal doctrine and treatment in both, I shall give to you in the words of its narrator. "The patient's symptoms were difficult respiration, dry cough with stringy expectoration pulse full. The disease commenced with an intense *fit of shivering*, followed by *heat* and a severe cough. Every day at noon there was an *exacerbation* of all the symptoms, commencing with very great shivering, cough, and *intolerable pain in the chest*, a fit of *suffocation*, and finally *perspiration*;—at the end of an hour the paroxysm terminated. Ammoniacal mixture was first given, then two grains of *Quinine* every two hours. The very next day the fit was scarcely perceptible; the day after, there was no fit at all. An observation worthy of remark is, that the symptoms of PLEURO-PNEUMONIA,—which continued throughout in a very slight degree, it is true, in the intervals of the paroxysms—disappeared completely, and in a very short

time, by the effect of the sulphate of quinine."

Who are the persons most subjected to inflammatory disease of the chest? Medical *theorists* answer, "strong healthy labourers, and people much exposed to the air." How these gentlemen deceive themselves! If I know any thing at all upon any subject, I know that the fact in this case is just the reverse. The subjects of chest-disease in my experience have been almost all persons of a delicate habit, many of them confined to badly ventilated rooms, and the greater number broken down by starvation, blood-letting, or previous disease. Some of you may have heard of M. Louis, of Paris, a physician, who for many years has made chest-disease his study. Speaking of his consumptive patients, who became the subjects of *inflammatory* disease, he has this observation: "As we have already remarked in speaking of *Pneumonia*, the invasion of *Pleurisy* coincides in a large proportion of our patients with *the period of extreme weakness and emaciation.*"—Dr. Cowan's translation of Louis.

Now, what is the usual treatment of Pleurisy and Pneumonia? Does it not almost entirely consist in blood-letting, starving and purging—with blisters and mercury sometimes? But what are the results?—relapse or repetition of the paroxysm from time to time,—long illness,—weakness ever after, and death too often. Even in these cases of extreme emaciation, M. Louis applies leeches! Contrast the case I have just given you from the Medical Gazette, with the case and treatment of an individual, whose omnipotent power of setting a theatre in a roar may be still fresh in the recollection of many of you—the celebrated Joe Grimaldi. The very name excites your smile!—but upon the occasion to which I refer, the poor clown, instead of being in a vein to move your laughter, very much wanted your sympathy. "Monday, the 9th of October," says Mr. Charles Dickens, "was the day fixed for his benefit, but on the preceding Saturday, he was suddenly seized with severe illness, originating in a most distressing impediment in his breathing. Medical assistance was immediately called in, and he was bled until nigh FAINTING. This slightly relieved him, but shortly after he had a relapse, [return of the paroxysm?] and four weeks passed before he recovered sufficiently to leave the house. There is no doubt, (continues Mr. Dickens) but that some radical change had occurred in his constitution, for previously he had never been visited with a single day's illness, while after its recurrence, he never had a single day of perfect health." If you reflect that medical relief was *immediately* called in, you may be inclined, like myself, to ascribe poor Grimaldi's damaged constitution, not so much to the effect of the original disorder, as to the sanguinary treatment adopted in his case. Whether or not he had the additional medical *advantage* of being starved at the same time I do not know; but lest it might be inferred that this continued illness was owing to the neglect of this very excellent part of *antiphlogistic* practice, I may just hint that there have been such things as inflammation of the lungs *brought on* by starvation. Witness the verdict of a coroner's jury, in the case of a pauper, who died not long ago in the White Chapel Work-House. "That the decease died from *inflammation* of the lungs, produced by exposure and *want*." The verdict in question was only in accordance with the evidence of the surgeon of the work-house.

In acute disease of the chest—whether involving the *pleura* simply, the interstitial substance of the lungs, or the *mucous* or *muscular* apparatus of the air-tubes, your first duty is to premise an emetic. So far from acting exclusively on the stomach, medicines of this class have an influence primarily *cerebral*, and they therefore act powerfully upon every member and matter of the body. By emetics you may change the existing relations of the whole corporeal atoms more rapidly and effectually, than by any other agency of equal safety in the Materia Medica. Every kind of chest-disease being a mere feature or developement of fever, whatever will relieve the latter will equally relieve the former. The value of emetics in the simpler forms of fever, few will be sufficiently bold to deny; and the quickness with which the same medicines can alter the state of the inflamed part may be actually *seen* by their effects on the eye, in the inflammatory affections of that organ. You have only to *try* them in chest-disease to be satisfied of their inestimable value in cases of this kind. Instead, therefore, of talking of the temporary good you have occasionally seen done by the lancet in inflammation of the chest, call to mind the many deaths you have witnessed where it had been most freely used—to say nothing of the long illnesses which have been the lot of such as have escaped the united bad effects of a chest-disease and loss of blood. Whatever salutary influence, as a *present means of relief*, blood-letting may produce, it is infinitely inferior to what you may obtain by emetics—a class of remedies which possess the additional advantage of giving that relief, without depriving the patient of the material of healthy constitutional power. Their influence, moreover, as a *pre-*

ventive against return of the paroxysm, is very considerable,* while blood-letting, so far as my experience goes, has only, on the contrary, appeared to render the patient more liable to a recurrence.

Lord Bacon tells us in his Works, that if disciples only knew their own strength, they would soon find out the weakness of their masters. What led him to this conclusion? What but the fact that, with all his ability, even Lord Bacon himself had been duped by his teachers?—and why did Des Cartes say, that no man could possibly pretend to the name of philosopher who had not at least once in his life doubted all he had been previously *taught*? He too had been hoodwinked by his pretended masters in philosophy. But *you*, perhaps, will say all this took place in old times—the world is quite changed since then; professors are now the most enlightened and respectable men alive; they go to church, where they are examples of piety; they never were *found out* in a lie; are not subject to the passions of other men; have no motives of interest or ambition,—in fact, they are all but angels. Now, I only wish you knew the manner in which most of these very respectable persons get their chairs—the tricks, the party work, the subserviency, meanness, and hypocrisy practised by them for that and other ends—and you would not so tamely submit your judgment to their theoretical dreams and delusions. Young men, be MEN,—and instead of taking for gospel the incoherent and inconsistent doctrines of the fallible puppets whom interest or intrigue has stuck up in Academic Halls,—use your own eyes, and exercise your own reason! Here, then, I give you a test by which you may know the best practice in inflammatory diseases of the chest—a test that cannot possibly deceive you. Take a certain number of pleuritic and pneumonic patients—bleed, blister, and physic these after the most orthodox fashion, so that you shall not be able to tell, whether the continued disease be the effect of the primary cause, or the heroic measures by which your patients have been worried during their illness. Take another equal number similarly afflicted, and treat them chrono-thermally,—that is to say premise an emetic, and when, by means of this, you have obtained a remission of the symptoms, endeavour to prolong such period of immunity, by quinine, opium, or hydrocyanic acid, and then compare the results of both modes of practice. If you do not find an immense saving of suffering and mortality by the latter mode of treatment, I will consent to be stigmatised by you as an impostor and deceiver—a cheat—a quack—a person, in a word, who would rather teach error than vindicate truth. Remember, however, before you begin, that the Chrono-Thermal System professes, as its chief feature of superiority over every other, to make *short work* with disease,—a circumstance not likely to recommend it to those whose emolument, from the manner in which things are now ordered, arises principally from long sickness and much physic!

I am often asked how I treat *Enteritis*,—Inflammation of the Bowels—without the Lancet? Before I give my answer, I generally ask—Can medical men boast of any particular success from depletion in this disease? If so, why have they been always so solicitous to get the system under the influence of calomel,—or why do they prescribe Turpentine in its treatment? Is it not because the nature of the relief afforded by the lancet has either been temporary or delusive, or, what I have myself found it to be, absolutely hurtful in the majority of cases? "The symptoms of Enteritis," says Dr. Parr, "are a *shivering*, with an uneasiness in the bowels, soon increasing to a violent pain,—occasionally at first *remitting*, but soon becoming continual. Generally the whole abdomen is affected at the same time with spasmodic pains, which extend to the loins, apparently owing to flatulency. The pulse is small, frequent, generally soft, but sometimes hard, and at last irregular and intermittent—the extremities are cold—the strength sinks rapidly." "Perhaps," he adds, "bleeding is *more seldom necessary*. in this disease than in any other inflammation; for it rapidly tends to mortification, and should it not at once relieve, it soon proves fatal." In a letter which I received from staff-surgeon Hume, he says: "I am satisfied that Pneumonia and *Enteritis*, diseases which are at present the bugbears of the faculty, are indebted for their chief existence to the remedies employed in ordinary ailments, namely, bleeding, and unnecessary purging, I never saw a case of either, (and I have seen many) of which the subject had not been the inmate of an hospital previously, where he had undergone the usual *antiphlogistic* regimen,—or had been otherwise debilitated, as in the case of long residence in a warm climate." Now, Gentlemen this is the language of an experienced Medical Officer of the Army, one who, having no interested end to serve, and who would not take private practice if offered to him, is at least as worthy of belief as those whose daily bread

* This statement, when I first published it, was denied by Physicians, but it has been since confirmed by Dr. Seymour, of St. George's Hospital, who recently made some remarks upon the power of Emetics in "altering the *Periodicity* of Disease."

depends upon the extent and *duration* of disease around them. My own practice in Enteritis I will illustrate by a case. I was one evening requested by the Dowager Duchess of Roxburgh to see her butler; I found him with severe pain of abdomen, which would not brook the touch, furred tongue, hard pulse, and hot skin; he told me he had *shivered* repeatedly, that the pain was at first *intermittent*, but at last constant. He had been seen in the morning by a gentleman, who had ordered him Turpentine and Calomel —a proof that he also considered the case as one of inflammation of the bowels. The patient having obtained no relief, I was called in. I gave him an emetic, and went up stairs to await the result. In about twenty minutes I again saw him. The vomit had acted powerfully, and with such relief that he could then turn himself in bed with ease, which he could not before do. I then prescribed prussic acid and quinine. In a few days he was as well as ever. Instead of bringing *theoretic* objections to this method of treating inflammation of the bowels, let practitioners only *put it to the proof*. Is it possible that they can be less successful with the new practice than with the old, under which, when they save a patient in this disease, they are fain to boast of it as a wonder!

I shall now enter at some length upon the subject of

Blood-Letting.

While with one class of practitioners, Medicine is reduced to the mere art of purgation, with another class it consists in the systematic abstraction of blood; every means being resorted to in the mode of doing this, from venesection, arteritomy, and cupping, to the basest application of the leech. In the remarks, Gentlemen, which I am now about to make on the subject, instead of discussing the preferrable mode of taking blood away, I shall bring before you some facts and arguments that may convince you of the perfect possibility of dispensing with the practice altogether.

"The imputation of novelty," says Locke, "is a terrible charge amongst those who judge of men's heads as they do of their perukes, by *the fashion*—and can allow none to be right but the received doctrine." Yet, in the words of the same acute writer:—"An error is not the better for being common, nor truth the worse for having lain neglected; and if it were put to the vote any where in the world, I doubt, as *things are managed*, whether Truth would have the majority; at least while the *authority of men*, and *not* the *examination of things*, must be its measure." In the same spirit Lord Byron asks:

"What from this barren being do we reap?
Our senses narrow, and our reason frail,
Life short, and TRUTH a gem that loves the deep,
And all things weighed in *Custom's* falsest scale.
Opinion an omnipotence—whose veil
Mantles the earth with *darkness*—until right
And wrong are accidents—and men grow pale
Lest their own judgments should become too bright,
And their free thoughts be crimes, and earth have too much light.

The operation of blood-letting is so associated in the minds of most men, with the practice of physic, that when a very sensible German physician, some time ago, petitioned the King of Prussia to make the employment of the lancet *penal*, he was laughed at from one end of Europe to the other. This you will not wonder at, if you consider that the multitude always think "whatever *is* is right;" but a little reflection will teach you that there must have been a period in the world's history, when the lancet was unknown as a remedy; and that many centuries necessarily elapsed before it could even be imagined that loss of blood might alleviate or cure disease. Nations, nevertheless, grew and prospered. To what daring innovator the practice of physic owes the *Curse* of the lancet, the annals of the art leave us in ignorance; but this we know, that its introduction could only have been done during the infancy of Medicine; when remedial means were yet few, and the mode of action of remedies totally unknown. It was the invention of an unenlightened, possibly, a sanguinary age; and its continued use says but little for the after-discoveries of ages, or for the boasted progress of medical science. Like every other lucrative branch of human knowledge, the Practice of Medicine at one time was entirely in the hands of the priesthood. Might not blood-letting have been first introduced as a sacrifice or expiation on the part of the patient for his supposed sins against an offended deity?—for that till very lately was the *ecclesiastical* cause of all disease. I am the rather inclined to this idea, from the fact that when one of the kings of Spain made his peace with the Inquisition, after a bitter quarrel with that body, they condemned him as a penance to lose a pound of his blood, which was afterwards burnt in public by the common hangman!

Of what is the body composed? Is it not of Blood, and Blood only? What fills up the excavation of an ulcer or an abscess? What reproduces the bone of the leg or thigh,

after it has been thrown off dead, in nearly all its length? What but the *Living* BLOOD, under the electrical influence of the brain and nerves! How does the slaughtered animal die? Of loss of blood solely. Is not the blood then, in the impressive language of scripture, "the life of the flesh?" How remarkable, that while the value of the blood to the animal economy should be thus so distinctly and emphatically acknowledged, Blood-letting is not even once alluded to, among the various modes of *cure* mentioned in the sacred volume. We have "balms," "balsams," "baths," "charms," "physic," "poultices," even,—but loss of blood never! Had it been practised by the Jews, why this omission? Will the men who now so lavishly pour out the Blood, dispute its importance in the animal economy?—will they deny that it forms the basis of the solids,—that when the body has been wasted by long disease, it is by the blood only it can recover its healthy volume and appearance? Has not nature done every thing to preserve to animals of every kind,

"The electric Blood with which their arteries run!" BYRON.

She has provided it with strong resilient vessels—vessels which slip from the touch, and never permit their contents to escape, except where their coats have been injured by accident or disease. Misguided by theory, man, presumptuous man, has dared to divide what God, as a part of creation, united; to open what the Eternal, in the wisdom of his omniscience made entire! See then what an *extreme* measure is this! It is on the very face of it a most unnatural proceeding. Yet what proceeding so common, or what so readily submitted to, under the influence of authority and custom? If, in the language of the Chemist Liebig, the blood be indeed "the SUM of ALL THE ORGANS that are being formed," how can you withdraw it from one organ without depriving every other of the material of its *healthy* state? Yet enter the crowded hospitals of England—of Europe—and see how mercilessly the lancet, the leech, and the cupping-glass, are employed in the diseases of the poor. Look at the pale and ghastly faces of the inmates. What a contrast to the eager pupils and attendants thronging around their beds—those attendants with bandage and basin, ready at a moment's notice to take from the poor creatures whatever quantity of *life-blood*, solemn Pedantry may prescribe as the infallible means of relieving their sufferings. Do that, I say, and refrain, if you can, from exclaiming with Bulwer, "when Poverty is sick, the doctors mangle it!" What are the causes of the disorders of this class of people? In the majority of cases, defective food, and impure air. By these has their blood been deteriorated—and for what does the (so termed) man of science abstract it? To make room for better? No!—goaded on by the twin-goblins, "congestion" and "inflammation," to deteriorate it still further by starvation and confinement. Gentlemen, these terms play in physic much the same thing as others, equally senselessly misused, play in the common affairs of the world—

Religion, freedom, vengeance, what you will,
A word's enough to raise mankind to *kill*,
Some *party*-phrase by *cunning* caught and spread,
That GUILT may reign, and WOLVES and worms be fed. BYRON.

The first resource of the surgeon is the lancet,—the first thing he thinks of, when called to an accident, is how he can most quickly open the floodgates of the heart, to pour out the stream of an already enfeebled existence. Does a man fall from his horse or a height, is he not instantly bled?—has he been stunned by a blow, is not the lancet in requisition? Nay, has an individual fainted from over-exertion, or exhaustion, is it not a case of FIT—and what so proper as venesection!

You cannot have forgotten the fate of Malibran—the inimitable Malibran—she who so often, by her varied and admirable performances, moved you to tears and smiles by turns. She was playing her part upon the stage—she entered into it with her whole soul, rivetting the audience to the spot by the very intensity of her acting. Just as she had taxed the powers of her too delicate frame to the uttermost—at the very moment she was about to be rewarded by a simultaneous burst of acclamation, she fainted and fell—fell from very weakness. Instantly a medical man leapt upon the stage—to administer a cordial? No—to bleed her—to bleed a weak, worn, and exhausted woman! And the result?—she never rallied from that unfortunate hour. But, Gentlemen, Malibran was not the only intellectual person of the thousands and tens of thousands who have prematurely perished by the lancet. Byron and Scott—those master-spirits of their age—those great men who, like Ariosto and Shakspeare, not only excited the admiration of cotemporary millions, but whose genius must continue, for generations yet unborn, to delight the land that produced them—they too fell victims to the lancet—they too were destroyed by hands which, however friendly and well-intentioned, most undoubtedly dealt them their death-blows. Is not this a sub-

ject for deep reflection? To the cases of these great men we shall recur in the course of this lecture; but for the present, we must turn to other matters—to events that have just passed before our eyes. The affair of Newport, in Wales, is still the topic of the hour. You must therefore remember it to its minutest detail—the attack by the rioters upon the town—the gallant and successful stand made by Captain Gray and his little detachment of the 45th regiment—the prisoners captured, and the investigation which afterwards took place In the course of that inquiry a prisoner, when under examination, fainted. What was done with him? He was carried out of court and immediately bled! On his return the newspapers tell us, an extraordinary change had come over his countenance. From being a man of robust appearance, he had become so wan and haggard, so altered in every lineament, the spectators could scarcely recognize him as the same prisoner. Yet, strange to say, not one of the many journals that reported this case, introduced a single word in condemnation of the utterly uncalled for measure, which brought the man to such a state;—so much has Custom blunted the sense of the public to this the most dangerous of all medical appliances!

Gentlemen, a coroner's inquest was held upon a person who died suddenly. I shall read to you what followed from the Times newspaper, of the 20rh December, 1839, suppressing, for obvious reasons, the name of the witness. "Mr. ———, surgeon, stated that he was called upon to attend deceased, and found him at the point of death. He attempted to BLEED him, but ineffectually, and in less than a minute from witness's arrival, deceased expired. Witness not being able to give any opinion as to the cause of death from the symptoms that then exhibited themselves, he afterwards, with the assistance of Dr. Ridge, 37 Cavendish Square, made a post-mortem examination, and found that a large cavity attached to the large vessel of the heart, containing blood, had burst, and that that was the cause of death." So that while the man was actually dying of inanition from internal bleeding, the surgeon, utterly ignorant, according to his own confession, of the nature of the symptoms, deliberately proceeded to open a vein!—How happens it that the lancet should be so invariably the first resort of IGNORANCE!

In every case of stun or faint, the employment of this instrument must be a superadded injury;—in all, there is a positive enfeeblement of the whole frame, evidenced by the cold surface and weak or imperceptible pulse; there is an exhaustion, which loss of blood, so far from relieving, too often converts into a state of utter and hopeless prostration. True, men recover though treated in this manner, but these are not *cures*,—they are *escapes*.

How few the diseases which loss of blood may not of itself produce. If it cannot cause the eruptions of small-pox, nor the glandular swellings of plague, it has given rise to disorders more frequently and more immediately fatal than either. What think you of cholera asphyxia—Asiatic cholera? Gentlemen, the symptoms of that disease are the identical symptoms of a person bleeding *slowly* away from life! The vomiting, the cramps, the sighing, the long gasp for breath —the leaden and livid countenance which the painter gives to the dying in his battle-pieces —these are equally the symptoms of cholera and loss of blood! Among the numerous diseases which it can produce, Darwin says —"a paroxysm of gout is liable to recur on bleeding." John Hunter mentions "lock-jaw and dropsy," among its injurious effects, —Travers, "blindness," and "Pa'sy,"—Marshall Hall, "Mania,"—Blundell, "dysentery,"—Broussais, "FEVER and convulsions!" "When an animal looses a considerable quantity of blood," says John Hunter, "the heart increases in it frequency of strokes as also in its violence." Yet these are the indication for which professors tell you to bleed! You must bleed in every inflammation, they tell you. Yet is not inflammation a daily effect of loss of blood! Magendie mentions "pneumonia" as having been produced by it,—completely confirming the evidence of Mr. Hume upon that point. He further tells us that he has witnessed among its effects "the entire train of what people are pleased to call inflammatory phenomena;—and mark," he says, "the extraordinary fact that this inflammation will have been produced by the very agent which is daily used to combat it." What a long dream of false security have mankind been dreaming!—they have laid themselves down on the laps of their medical mentors,—they have slept a long sleep;—while these, like the fabled vampire of the poets, taking advantage of a dark night of barbarism and ignorance, have thought it no sin to rob them of their life's blood during the profoundness of their slumber!

Gentlemen, the long shiver of the severest ague, the burning fever, the fatal lock jaw, the vomiting, cramps, and asphyxia of cholera, the spasm of asthma and epilepsy, the pains of rheumatism, the palpitating and tumultuous heart the most settled melancholy and madness, dysentery, consumption, every species of palsy, the faint that became death, these—all these—have *I* traced to loss of blood. Could arsenic, could prussic acid, in

their deadliest and most concentrated doses do more? Yet I have heard men object to use the minutest portions of these agents, medicinally,—men who would open a vein, and let the life-blood flow until the patient fell like an ox for the slaughter, death-like, and all but dead, upon the floor! Do these practitioners know the nature of the terrible power they thus fearlessly call to their aid? Can they explain its manner of action even in those cases where they have supposed it to be beneficial? The only information I have been able to extract from them upon this point, has been utterly vague and valueless. Their reasoning, if it could be called reasoning, has been based on a dread of "inflammation" or "congestion." From the manner in which they discuss the subject, you might believe there was no remedy for either but the lancet. Ask them why they bleed in ague—in syncope—in exhaustion or collapse?—they tell you it is to relieve congestion. After a stun or fall?—it is to prevent inflammation.—Bleeding, in all my experience, I have already stated to you, never either relieved the one, or prevented the other! Gentlemen, did you never see inflammation of a vein AFTER bleeding—inflammation caused by the very act! I have known such inflammation end fatally. Did you never know the wounds made by leech-bites become inflamed, AFTER these reptiles had exhausted the blood of the part to which they were applied! And how came that about? Simply because, however perfectly you exhaust any part of its blood, you do not thereby prevent that part from being again filled with it—or rather, you make it more liable to be so, by weakening the coats of the containing vessels! Hundreds thousands have recovered from every kind of disease, who never were bled in any manner; and many, too many have died, for whom the operation, in all its modes, had been most scientifically practised! Have I not proved that every remedial agent possesses but one kind of influence, namely, the power of changing temperature? Let the schoolman show me that the lancet possesses any superiority in this respect—any specific influence more advantageous than other less questionable measures; and I shall be the last to repudiate its aid in the practice of my profession The beneficial influence of blood-letting, where it has been beneficial in disease, relates solely to temperature To this complexion it comes at last, and to nothing more—the equalization and moderation of temperature In the congestive and non-congestive stages of fever—the cold—the hot—the sweating—the lancet has had its advocates. Blood-letting, under each of these circumstances, has changed existing temperature. Why, then, object to its use? For this best of reasons. that we have remedies without number, possessing each an influence equally rapid, and an agency equally curative, without being, like blood-letting, attended with the insuperable disadvantage of abstracting the material of healthy organization. I deny not its power as a remedy in certain cases; but I question its claim to precedence, even in these. Out of upwards of TWELVE THOUSAND CASES of disease that have, within the last few years, been under my treatment, I have not been compelled to use it once. Resorted to, under the most favovrable circumstances, its success is any thing but sure, and and its failure involves consequences which the untoward administration of other means may not so certainly produce. Have we not seen that all diseases have remissions, and exacerbations—that mania, asthma, apoplexy and inflammation, are all remittent disorders? From the agony or intensity of each of these developements of fever, you may obtain a temporary relief by the use of the lancet; but what has it availed in averting the recurrence of the paroxysm? How often do you find the patient you have bled in the morning ere night with every symptom in aggravation. Again you resort to bleeding, but the relief is as transitory as before. True, you may repeat the operation, and re-repeat it. until you bleed both the blood and the life away. Venesection, then, in some cases, may be a temporary though delusive relief. The general result is depression of vital energy, with diminution of corporeal force!

Dr. Southwood Smith, physician to the London Fever Hospital, has published a book purposely to show the advantages of bleeding in fever. One of his cases is so curiously illustrative of his position, that I shall take the liberty of transcribing it from the Medical Gazette, with a running commentary by the Editor of that periodical:—"The case of Dr. Dill demands our most serious attention, and deserves that of our readers. It is adduced as an example of severe cerebral affection, in which case, Dr. S. affirms, 'the bleeding must be large and early as it is copious.' 'I saw him,' says Dr. Smith, 'before there was any pain in the head, or even in the back, while he was yet only feeble and chilly. The aspect of his countenance, the state of his pulse, which was slow and labouring, and the answer he returned to two or three questions, satisfied me of the inordinate, I may say the ferocious attack that was at hand—p. 398'

"Whatever may be the opinion of our readers, as to the above signs indicating a ferocious cerebral attack, they will one and all agree with us, that the ferocious attack

was met with a ferocious treatment; for an emetic was given without delay, and 'blood was taken from the arm, to the extent of twenty ounces.' This blood was NOT inflamed. Severe pains in the limbs and loins, and intense pain in the head, came on during the night—and early in the morning blood was again drawn to the extent of sixteen ounces 'with great diminution, but not entire removal of the pain.' Towards the afternoon he was again bled to sixteen ounces. 'The pain was now quite gone—the blood from both these bleedings intensely inflamed.' [*Inflamed*, according to Dr. Smith's notions—but mark, in his own words—the *first* blood drawn was "NOT inflamed." Were the lancet a preventive of inflammation, how came the blood to be inflamed AFTER so many bleedings?]

"During the night the pain returned, and in the morning, notwithstanding the eyes were dull and beginning to be suffused, the face blanched, (no wonder!) and the pulse slow and intermittent, and weak, twelve leeches were applied to the temples—and as these did not entirely remove the pain, more blood, to the extent of sixteen ounces, was taken by cupping. The operation afforded great relief—but the following morning, the pain returned, and again was blood abstracted to sixteen ounces. 'Immediate relief followed this second operation; but *unfortunately*, the pain returned with great violence, towards evening; and it was now impossible to carry the bleeding any further.' Typhoid symptoms now began to show themselves; 'the fur on the tongue was becoming brown, and there was already a slight tremor in the hands.' What was to be done? Ice, and evaporating lotions were of no avail;—but happily for Dr. Dill, the affusion of cold water on the head, 'the cold dash,' was thought of and employed—and this being effectually applied, the relief was 'instantaneous and most complete.' So that this case, announced as a severe cerebral affection, and treated in anticipation, by copious blood-letting, BEFORE there was any pain in the head while the patient was yet only feeble and chilly, which grew worse and worse as the blood letting was repeated, until, after the abstraction of NINETY OUNCES of blood, the patient had become in a 'state of intense suffering,' and 'imminent danger,' and was relieved at last by the cold dash—this case, we say, is brought forward as a specimen of the extent to which copious blood-letting may sometimes be REQUIRED!! Most sincerely do we congratulate Dr. Dill on his escape, not from a dangerous disease, but from a DANGEROUS REMEDY."—*Medical Gazette.*

Could any case more forcibly exemplify the utter inefficiency of blood-letting, in almost all its forms, either as a certain remedy, or a preventive of fever? Yet such is the force of custom, prejudice, education, that this case,—and, I have no doubt, thousands like it, so far from opening the eyes of the physician to the London Fever Hospital, only served to confirm him in his error. He had his *methodus medendi*, and he pursued it; and notwithstanding the total inefficiency of his vaunted remedy, he gives the case at length, as a perfect specimen of the most perfect practice—Mark the result of that practice!—but for the "cold dash," the patient must have perished. It is even now a question whether he ever recovered from those repeated blood-lettings,—for he died not many months after. Happy would it have been for mankind, that we had never heard of an Anatomical or "Pathological School,"—happier for Dr. Dill, for to that school, and its pervading error of imputing effect for cause, may we fairly attribute all this sanguinary practice

Lord Byron called medicine "the *destructive* art of healing." How truly it proved to be so in his own person, you will see, when I give you the details of his last illness:—"Of all his prejudices," says Mr Moore, "he declared the strongest was that against Bleeding. His mother had obtained from him a promise, never to consent to be bled, and, whatever argument might be produced, his aversion, he said, was stronger than reason. 'Besides, is it not,' he asked, 'asserted by Dr. Reid, in his Essays, that less slaughter is effected by the lance, than *the lancet*—that minute instrument of mighty mischief!" On Mr. Millengen observing that this remark related to the treatment of nervous but not of inflammatory complaints he joined, in an angry tone, 'Who is nervous, if I am not?—and do not those other words of his, apply to my case, where he says, that drawing blood from a nervous patient, is like loosening the cords of a musical instrument, whose tones already fail, for want of a sufficient tension! Even before this illness, you yourself know how weak and irritable I had become; and bleeding, by increasing this state, will inevitably kill me. Do with me what else you like, but bleed me you shall not. I have had several inflammatory fevers in my life, and at an age when more robust and plethoric; yet I got through them without bleeding. This time, also, will I take my chance.'" After much reasoning, and repeated entreaties, Mr. Millengen at length succeeded in obtaining from him a promise, that should he feel his fever increase at night, he would allow Dr. Bruno to bleed him. "On revisiting the patient

early next morning, Mr. Millengen learned from him that having passed, as he thought, on the whole, a better night, he had not considered it necessary to ask Dr. Bruno to bleed him. What followed, I shall, in justice to Mr. Millengen, give in his own words:—"I thought it my duty now to put aside all consideration of his feelings, and to declare solemnly to him how deeply I lamented to see him trifle thus with his life, and show so little resolution. His pertinacious refusal had already, I said, caused much precious time to be lost; but few hours of hope now remained, and unless he submitted immediately to be bled, we could not answer for the consequences. It was true, he cared not for life, but who could assure him that unless he changed his resolution, the uncontrolled disease might not operate such disorganization in his system, as utterly and forever to deprive him of reason! I had now hit at last upon the sensible chord; and partly annoyed by our importunities, partly persuaded, he cast at us both, the fiercest glance of vexation, and throwing out his arm, said, in the angriest tone, 'There you are, I see, a d—d set of butchers,—take away as much blood as you like, but have done with it!' We seized the moment, (adds Mr. Millengen,) and drew about twenty ounces. On coagulating, the blood presented a strong buffy coat; yet the relief obtained did NOT correspond to the hopes we had formed; and during the night the fever became stronger *than it had been hitherto*, the restlessness and agitation increased, and the patient spoke several times in an incoherent manner.'" Surely this was sufficient to convince the most school-bound of the worse than inoperative nature of the measure. Far from it. "On the following morning, the 17th April, the bleeding was repeated *twice*, and it was thought right also to apply blisters to the soles of his feet!" Well might Mr. Moore exclaim: "It is painful to dwell on such details." For our present purpose, it will be sufficient to state, that although the "rheumatic symptoms had been completely removed," it was at the expense of the patient's life; his death took place upon the 19th, that is, three days after he was first bled—[*Moore's Life of Byron.*] Now I ask you, what might have been the termination of this case, had an emetic been substituted for the lancet, and had the remission been prolonged by quinine, opium, or arsenic! I solemnly believe Lord Byron would be alive at this moment; nay, not only is it possible, but probable, that a successful result might have ensued, without any treatment at all. When describing the effects of a former fever, Lord Byron himself says: "After a week of half delirium, burning skin, thirst, hot headache, horrible pulsation, and no sleep, by the blessings of barley water, and *refusing to see my physician*, I recovered." Facts, like these, are indeed, stubborn things!

I have preferred to give these two instances of what I conceive to be decided malpractice, to any of the numerous cases which have come under my own observation, as the first named gentleman was well known to many of the medical profession, while the death-scene of the noble poet, will arrest the attention of all who take an interest in his genius.

In the generality of cases of disease, gentlemen, it matters little what may have been the primary Cause. The disease or effect, under every circumstance, not only involves change of temperature, but produces more or less interruption to the two vital processes Digestion and Respiration. In other words, it impedes *sanguification*, or the necessary reproduction of that Living fluid, which, throughout all the changes of life, is constantly maintaining expenditure. This being in the nature of things one of the first effects of disorder, let us beware how we employ a remedy, which, if it succeed not in restoring healthy temperature, must inevitably hasten the fatal catastrophe—or, in default of that, produce those low chronic fevers, which, under the names of dyspepsia, hypochondria, hysteria, mania, &c., the best devised means too often fail to alleviate, far less to cure. With the free admission, then, that the lancet is capable of giving *temporary* relief to local fulness to blood, and to some of the attendant symptoms, I reject it generally, upon this simple and rational ground that it cannot prevent such fulness from returning—while it requires no ghost from the grave to tell us that its influence upon the general constitution, must, in every such case, be prejudicial. If the source of a man's income is suddenly cut off, and he still continue to spend as before, surely his capital must, as a matter of course, diminish.—Beware then, how under the exact same circumstances of body, you allow a doctor to take away the little capital of blood you possess when disease comes upon you,—remember there is then no income—all is expenditure. And I care not whether you take inflammation of any considerable internal organ,—the Brain, Liver, or Heart, for example,—or of any external part, such as the knee, or ankle joint—with the lancet, you can seldom ever do more than give a delusive relief, at the expense of the powers of the constitution. The man of routine, who has not heard my previous lectures, giving up Fever, perhaps, and a few other disorders, which the occasional obstinacy of a refracto-

ry patient, contrary to "received doctrine," has taught him, may yield to other means than blood-letting—will ask me what I should do without the lancet in apoplexy? Here the patient having no will of his own, and the prejudices of his friends being all in favour of blood-letting, the school-bound member of the profession has seldom an opportunity of opening his eyes. Mine were opened by observing the want of success attending the sanguinary treatment; in other words, the number of deaths that took place, either in consequence, or in spite of it! Was not that a reason for change of practice? Having in my Military Hospital no prejudices to combat; and observing the flushed and hot state of the patient's forehead and face. I determined to try the cold dash. The result was beyond my best expectations. The first patient was laid out all his length, and cold water poured on his head from a height. After a few ablutions, he staggered to his feet, stared wildly round him, and then walked to the hospital, where a smart purgative com pleted his cure. While in the army, I had a sufficiently extensive field for my experiments; and I seldom afterwards lost an apoplectic patient.

But, Gentlemen, since I embarked in private practice, I have improved upon my Army plan. With the purgative given after the cold dash, I have generally combined quinine or arsenic—and I have also, upon some occasions, at once prescribed hydrocyanic acid without any purgative at all. This practice I have found highly successful. That Quinine may prevent the apoplectic fit, I have proved to you, by the case given by Dr. Graves. The value of Arsenic in apoplexy has also been acknowledged, even by members of the profession; but whether they have been acquainted with the true principle of its mode of action, in such cases, is another thing. Dr. A. T. Thomson recommends it "in threatened apoplexy, after Cuppings and Purgings, when the strength is diminished and the complexion pale;" that is, you must first break down the whole frame by depletion—you must still further weaken the already weak vessels of the brain, before you take measures to give their coats the degree of strength and stability, necessary to their healthy containing power! Upon what principle would *you*, Gentlemen, prescribe arsenic in threatened apoplexy? Surely, upon the same principle that you would prescribe it during the remission in ague—to prolong the period of immunity—to avert the paroxysm. Long after the Bark came into fashion for the cure of Ague, practitioners still continued to treat that distemper, in the first instance, by depletion, till the complexion became pale. Do they treat it so now?—No; they have become wiser!—why then do they go on from day to day, bleeding in threatened apoplexy? In the case given by Dr. Graves, depletion—repeated depletion, did not prevent the recurrence of the apoplectic fit—but quinine was at once successful. Sir Walter Scott had a series of fits of apoplexy. What did the bleeding and starving system avail in his case? It gave him, perhaps, a temporary relief, to leave him at last in a state of irrecoverable prostration. Mr. Lockhart, his biographer, tells us how weak the bleeding always made him. But how could it be otherwise, seeing that I have proved to all but mathematical demonstration, that whatever debilitates the whole body, must still further confirm the original weakly condition of the coats of the blood-vessels, which constitutes the tendency to apoplexy. Had the cold dash been resorted to during the fit, and had quinine, arsenic, or hydrocyanic acid been given during the period of immunity, who knows but the Author of Waverly might still be delighting the world with the wonderful productions of his pen!

Shall I be told there are cases of apoplexy, where the face is pale, and the temperature cold? My answer is—these are not apoplexy, but *faint!*—cases which the cold dash or a cordial might recover, but which the lancet, in too many instances, has perpetuated to fatality! If the practitioner tells me that the cold dash by no possibility can cure an apoplexy, where a vessel is ruptured with much *effusion* of blood on the brain; my reply is, that in such a case he may bleed all the blood from the body, with the same unsuccessful result! In the case of effusion of blood in an *external* part, from a bruise, for instance, could any repetition of venesection make the *effused blood* re-enter the vessel from which it had escaped? No more could it do so in the brain, or any other part. Why, then, resort to it in this case? If it be said, to stop bleeding, I answer that it has no such power. Who will doubt that Cold has? Surely, if the mere application of a cold key to the back very often stops bleeding from the nose, you can be at no loss to conceive how the far greater shock of the cold dash may stop a bleeding in the brain? When, on the contrary, there is no vascular rupture, but only a tendency to it, the cold dash will not only contract and strengthen the vascular coats so as to prevent them from giving way; but will moreover rouse the patient from his stupor, by the simple shock of its application. But from theory and hypothesis, I appeal to indubitable and demonstrative fact.

Let the older members of the profession seriously reflect upon the ultimate injury

which may accrue to their own interests, by opposing their school-follies and school-prejudices to palpable and demonstrative truth. So long as colleges and schools could mystify Disease and its nature, any treatment that these proposed—no matter how cruel or atrocious—would be submitted to in silence; but, when people find out that every kind of disorder, inflammation included, may be conquered, not only by external, but by internal means, they will pause before they allow themselves to be depleted to death, or all but death, by the lancet of either surgeon or physician. The world will not now be deluded by the opposition of men, who stick to their opinion not so much because they have long supported it, as that it supports them—men who, in the words of Lord Bacon would dispute with you whether two and two make four, if they found the admission to interfere with their interests.

Will any practitioner be so bold as to tell me that inflammation of any organ in the body is beyond the control of internal remedies? For what, then, I ask, do we prescribe mercury for inflammation of the liver and bowels? Why do we give colchicum for the inflamed joints termed gout and rheumatism? Do not these remedies, in numerous instances lessen the temperature, pain, and morbid volume of these inflammations, more surely and safely than the application of leech or lancet? If, for such inflammations, then, we have influential internal remedies, why may we not have medicines equally available for diseases of the lungs? Have I not shown you the value of prussic acid in such cases? But I shall be told of the danger of such a remedy in any but skilful hands. In the hands of the ignorant and injudicious, what remedial means, let me ask, have not proved, not only dangerous, but deadly?—has not mercury done so?—Are purgatives guiltless? How many have fallen victims to the lancet! With prussic acid properly diluted and combined, I have saved the infant at the breast from the threatened suffocation of croup; and I have known it in the briefest space of time relieve so called inflammation of the lungs, where the previous pain and difficulty of breathing were hourly expected to terminate in death. True, like every other remedy, it may fail—but have we no other means or combination of means for such cases? With emetics and quinine I have seldom been at a loss; and with mercury and turpentine I have cured pneumonia.

But will the inflamed heart yield to anything but blood-letting! Fearlessly I answer, yes! and with much more certainty. With emetics, prussic acid, mercury, colchicum, silver, &c., I have conquered cases that were theoretically called inflammations of the heart and which the abstraction of half the blood in the body could not have cured. So also has Dr. Fosbroke, physician to the Ross Dispensary, a gentlemen who had the felicity to be associated with Dr. Jenner in his labours, and one in whose success and fortunes that illustrious man took the warmest interest. [See Baron's life of Jenner.] In some of the numbers of the lancet Dr. Fosbroke has given several cases of Heart-Disease, which he treated successfully without blood-letting, and, with a rare candour, he admits that a lecture of mine on the heart and circulation had no small influence in leading him to dismiss blood-letting in the treatment of them.

The human mind does not easily turn from errors with which, by early education, it has been long embued: and men, grey with years and practice, seldom question a custom, that, fortunately for them at least, has fallen in with the prejudices of their times. For myself, it was only step by step, and that slowly that I came to abandon the lancet altogether in the treatment of disease. My principal substitutes have been the various remedies which, from time to time, I have had occasion to mention; but in a future lecture I shall again enter more fully into their manner of action. That none of them are without danger in the hands of the unskilful, I admit;—nay, that some of them, mercury and purgatives, for example, have, from their abuse, sent many more to the grave, than they have ever saved from it, is allowed by every candid and sensible practitioner. But that was not the fault of the medicines, but of the men, who, having prescribed them without properly understanding the principles of their action, in the language of Dr Johnson, "put bodies of which they knew little, into bodies of which they knew less!"

Gentlemen, I have not always had this horror of blood-letting. In many instances have I formerly used the lancet, where a cure, in my present state of knowledge, could have been effected without; but this was in my noviciate, influenced by others, and without sufficient or correct data to think for myself. In the Army Hospitals, I had an opportunity of studying disease, both at home and abroad. There I saw the fine tall soldier, on his first admission, bled to relief of a symptom, or to fainting. And what is *fainting?* A loss of every organic perception—a death-like state, which only differs from *death*, by the possibility of a recall. Prolong it to permanency and it *is* death! Primary symptoms were, of course, got over by such measures—but once having entered the hospital walls, I found that soldier's face become familiar to

me. Seldom did his pale countenance recover its former healthy character. He became the victim of consumption, dysentery, or dropsy; his constitution was broken by the first depletory measures to which he had been subjected.

Such instances, too numerous to escape my observation, naturally led me to ask—Can this be the proper practice? It was assuredly the practice of others—of all. Could all be wrong? Reflection taught me that men seldom act for themselves; but take, for the most part, a tone or bias from some individual master.

By education most have been misled;
So they believe, because they were so bred.

But, Gentlemen, I had the resolution to think for myself—aye, and to act, and my conviction gained, from much and extensive experience, is, that ALL diseases may not only be successfully treated without loss of blood, but that blood-letting, however put in practice, even where it gives a temporary relief, almost invariably injures the general health of the patient. Englishmen! you have traversed seas, and dared the most dangerous climes to put down the traffic in blood;—are you sure that in your own homes there is no such traffic carried on—no GUINEA TRADE?

In connection with Blood-letting in the treatment of inflammation, we generally find

ABSTINENCE OR STARVATION

recommended. Beware of carrying this too far!—for "Abstinence engenders maladies." So Shakspeare said, and so nature will tell you, in the teeth of all the doctors in Europe! Abstinence, Gentlemen, may produce almost every form of disease which has entered into the consideration of the physician; another proof of the unity of morbid action, whatever be its cause. You remember what I told you of the prisoners of the Penitentiary; but I may as well restate the facts at this lecture. In the words of Dr. Latham, then, "An ox's head, which weighed eight pounds, was made into soup for one hundred people; which allows one ounce and a quarter of meat to each person. After they had been living on this food for some time they lost their colour, flesh, and strength, and could not do as much work as formerly. At length this simple debility of constitution was succeeded by various forms of disease. They had scurvy, diarrhœa, *low Fever*, and lastly, diseases of the brain and nervous system.

"The affections," Dr. Latham coutinues, "which came on during this faded, wasted, weakened state of body, were headache, vertigo, delirium, convulsions, APOPLEXY, and even mania. When blood-letting was tried (why was it tried?) the patients fainted, after losing five, four, or even fewer ounces of blood. On examination, after death, there was found *increased vascularity* of the brain, and sometimes fluid between its membranes and its ventricles." Is not this a proof of what I stated to you in my last lecture, that the tendency to hemorrhagic developement does not so much depend upon fulness of blood, as upon weakness of the coats of the containing vessels?—starvation, you see, actually producing this disease--in the Brain at least.

Every tribe of animals conveys its food to its mouth in its own way—but in all the higher animals, man included, the substances composing the food are converted into blood in precisely the same manner. Crushing and comminuting it by their teeth, they all reduce it by the aid of their saliva to a *pulp*, and by the action of their tongue and other muscles convey it in that state to the gullet,—the *Epiglottis*, or valve of the wind-pipe, shutting simultaneously, so as to prevent all intrusion in that quarter—though some of you, when attempting to speak and eat at the same time, may have had the misfortune to let a particle enter the "wrong throat:"—I need say nothing of the misery of that. When the food reaches the stomach, into which it is pushed by the muscular apparatus of the gullet, a new action commences. Pooh, pooh! I hear you say, all this we know already—but, Gentlemen, what *you* know may be news to somebody, and as I see strangers listening with apparent attention, I will proceed as I have begun. Well, then, to continue. Once in the stomach the food becomes mixed with the gastric juice, a secretion peculiar to that organ, and this secretion works so great an alteration upon it, that it is no more the same thing. It is now what medical men term Chyme—but this is not the only change it has to undergo; for scarcely has the chyme left this great receptacle of gluttony, and entered the small intestines, when it receives a supply of another juice from a gland called the Pancreas—and yet another from the ducts of the Liver, a still larger gland; and this under the mysterious name of Bile, some of you may possibly have heard of before! By this last juice it is turned of a white colour, and from Chyme its name becomes Chyle,—why, upon my word, I forget. But as nothing in nature will go on constantly the same without change, the chyle, for very good reasons of its own, must needs separate into two parts—one nutritious, the other the reverse—one portion enters into the formation of every part of the body—the other is excrementitious, and must be expelled from it. For the nutritious portion a million of mouths are ready—ready, like sharks, to make the most of it These belong to a system of vessels, called from the milky ap-

pearance of their contents, Lacteals—and they pervade the greater part of the entire alimentary canal. A great receptacle, (the Thoracic duct) receives them all, for it is their common point of re-union; and this again under a new name, (the receptaculum Chyli) passing upwards along the front of the spinal column, quietly drops its contents, pulp, chyme, chyle, what you please, into the left subclavian vein, a large blood-vessel leading under the left collar bone to the heart. Here the chyle is no longer chyle—meeting and mixing with the blood, it becomes Blood in fact, to be sent first by the right chamber of the heart through the lungs, and then by the left chamber circulated to all parts of the body. In that now *living* state it successively takes the shape of every organ and atom of the body; again in the shape of the excrementitious secretions, to pass in due time to the earth from which its elements were first derived.

The food of animals supports them only in so far as it offers elements for *assimilation* to the matter of the various organs and tissues composing their frames. While a single secretion still continues to be given *off* from the body—while the kidneys or bowels, for example, continue to perform their office, however imperfectly,—it must be manifest to you, that without some corresponding dietetic *increment*, elemental atoms of the animal organism must sooner or later be so far *expended* as to leave it in a state incompatible with life. How, then, let me ask, can you reconcile Healthy organization with Starvation-practice? How can you expect to find even the appearance of health after having practised the still more barbarous and unnatural proceeding of withdrawing by bloodletting a certain portion of the *sum* of all the organs that are being formed? The *quantity* of food which animals take, diminishes or increases in the same proportion as it contains more or less of the substance which chemists term *azote* or *nitrogen*. This, as you well know, is most abundant in animal food, but all vegetables possess more or less of it. Rice perhaps contains less than any other grain, and that is the reason why the Asiatics can devour such quantities of it at a time, as they are in the habit of doing. You would be quite surprised to see the natives of India at meal-time. Sitting cross-legged on their mats, a great basin of rice before them, with mouth open and head thrown back, they cram down handful after handful, till you wonder how their stomachs can possibly contain the quantity they make disappear so quickly.

The most cursory examination of the human teeth, stripped of every other consideration, should convince every body with the least pretension to brains, that the food of man was never intended to be *restricted* to vegetables exclusively. True, he can subsist upon bread and water, for a time, without dying, as the records of our prisons and penitentiaries can testify; but that he can maintain a state of health under such circumstances, is as utterly and physically impossible as that the lion and the panther should subsist on the restricted vegetable diet of the elephant. The dental organization of man partakes of the nature of the teeth of both graminivorous and carnivorous animals—his food should, therefore, be a mixture of the elements of the food of both, and with this mixed nourishment, the experience of centuries tells us, he supports life longest. How wretched, on the contrary, is the person doomed, however briefly, to an exclusive diet. Sir Walter Scott thus describes the effect of what he terms "a severe vegetable diet," upon himself. "I was affected," he says, "while under its influence, with a *nervousness* which I never felt before nor since —a disposition to start upon slight alarms; a want of decision in feeling and acting, which has not usually been my failing; an acute sensibiliiy to trifling inconveniences, and an unnecessary apprehension of contingent misfortunes, rise to my memory as connected with vegetable diet." How can a dietetic system, which so shakes the entire frame, by any possiblility give strength and stability to the weaker parts of the body,—those parts whose atomic attractions are so feeble, that every breath that blows upon the whole organism, shakes them to pieces? Must it not, in the very nature of things, make the man predisposed to consumption more certainly consumptive,—and so on, throughout the whole catalogue of hereditary disease? That abstinence is proper, in the commencement of most *acute* disorders, nobody will doubt. The fact is proved by the inability of the patient to take his accustomed meal; his stomach then is as unfit to digest or assimilate nutriment, as his limbs are inadequate to locomotion. Both equally require rest. But to starve a patient who is able and willing to eat is downright madness. No animal in existence can preserve its health, when fed on one kind or food exclu ively. The dog, when restricted to sugar alone, seldom survives the sixth week,—and the horse, if kept entirely upon potatoes, would waste away day by day, though you were to give him as much of that particular diet as he could devour;—he would die of a slow starvation. How many persons, even in the upper walks of life, are every day starved to death. The apothecary has only with a mysterious shrug to whisper the word "inflammation," and it is quite astonishing to what miserable fare

people of all conditions will submit. Instead of an exclusive vegetable diet being a cure for all complaints, as your medical wiseacres assure you, I know no complaint except small-pox and the other contagious diseases, that it has not of itself produced. The only thing it is good for, in my view of the matter is to keep the patient to his chamber, and the doctor's carriage at the door. You see what a profitable practice it must be for the apothecary,—and I'll bet you my life the physician who first brought it into fashion made his fortune by it. Not a nurse or nostrum-vender in the kingdom, but would be sure to cry him up to the skies! Not an apothecary from Gretna Green to Land's-End, but could tell you of some miracle worked by him; and the world hearing the same thing eternally rung in its ears, how could it possibly doubt the greatness of "Diana of the Ephesians!"

I am every day asked by my patients what diet they should take. I have the same answer for all—whatever they like best themselves, if they do not find it disagree. Their own experience of what agrees and disagrees with their own particular constitutions, is far better than any theory of yours or mine. Why, bless my life! in many chronic diseases the diet which a patient can take to-day would be rejected with disgust to-morrow; under such circumstances, would you still, according to common medical practice, tell a sick man to go on taking what he himself found worried him to death? Gentlemen, I hope better things of you.

The only general caution you need give your patients on the subject of diet, is moderation; moderation in using the things which they find agree with themselves best You may direct them to take their food in small quantities at a time, at short intervals, intervals of two on three hours for example, and tell them to take the trouble to masticate it properly before they swallow it, so as not to give a weak stomach, the double work of mastication and digestion,—these processes being, even in health, essentially distinct. Unless properly communicated and mixed with saliva, how can you expect the food to be any thing but a source of inconvenience to persons whom the smallest trifle will frequently discompose? I remember having read an anecdote of the late Mr. Abernethy, which is so apropos to what I have just been telling you, that I do not know that I can better finish what I have to say upon the subject of diet, then by letting you hear it. even at the risk of its proving to some of you a twice-told tale:—An American captain, on being one morning shown into his consulting room, immediately, in Yankee fashion, emptied the contents of his mouth upon the floor. The man of medicine stated, keeping his hands in his pockets, according to his custom, until the patient should explain. "What shall I do for my dyspepsy?" asked the American captain. "Pay me your fee and I will tell you," replied the doctor.—The money was produced and this advice given, "instead of squirting your saliva over my carpet, keep it to masticiate your food with." Now, upon my word, he could not have given him better advice.

Gentlemen, I shall conclude this lecture by reading to you a few of my communications I have received from medical men of repute, since I first published my doctrines in 1836. Dr. Fosbroke, of Ross began his medical career as the associate of the immortal Jenner; he lived in his honse, and materially assisted to propagate his great doctrine of Vaccination. You will therefore fully appreciate the evidence of a gentleman so distinguished in the history of medicine. From a letter which I received from him in January 1840; I shall read to you a passage or two:—

"In April 1835, our acquaintance and free communication commenced; and though I pricked up my ears, like one thunderstruck, at your wholesale denunciation of blood-letting, and your repeated asseverations, that in a practice embracing the treatment of several thousands of patients per annum, you never employed a lancet or a leach,—your assertions made an impression, though it was slowly and reluctantly received." That it strengthened by time, Gentlemen, you will see by the next extract.—"Nothing can be more striking than the great disparity between the proportion of persons who were bled in the two first years of my Ross practice, 1834 and 1835, (in which latter year I first became acquinted with your views,) and the three following years, 1836, 1837 and 1838. In the former two years, I bled one in seven, in the fourth only one in twenty-eight—and in the fifth year I bled NONE! The year 1839 is now concluded, and again in all that time I have NOT bled a single individual!"

"Your crime is, that you are before the age in which you live. If you had done nothing else but put a bridle upon Blood-letting, you would deserve the eternal gratitude of your race, instead of the calumny and oppression of the two-legged fools—the Yahoos, who persecute their greatest benefactors. But how can you expect to be more fortunate than your predecessors in this respect? The health of Sir Humphrey Davy was affected by the ingratitude of his country. 'A mind,' said he, 'of much sensibility might be disgusted, and one might be induced to say—why should I labor for public ob-

jects only to meet abuse? I am irritated more than I ought to be, but I am getting wiser every day,—recollecting Galileo and the times when philosophers and public benefactors were burnt for their services.'—Whence is all this? Pride, poverty, disappointment, difficulty and envy—and 'envy,' said Janner to me in his last days, 'is the curse of this country.' These are kept up by the canker of party and the taint of corruption.

"One of the greatest obstacles to reform of blood-letting and blistering, will be the prospective loss of guineas, half-guineas, five shillings and half-crowns. I saw a farmer last summer come into a druggist's shop.—Some one had told him 'he must be cupped,' so he drove a bargain, and stepped into a back room. 'That fool,' said I, 'does not want cupping.' 'He does not look as if he did,' said the druggist, 'but we can't afford to let him go without.'"

Gentlemen, the next two communications are from an army medical officer, Staff-surgeon Hume, a gentleman who, from the nature of his duties, has the very best opportunity of testing any particular practice—and one who, were he to give a false report, must be at once contradicted by regimental records. His statements may therefore be relied upon with somewhat greater confidence than the reports which annually emanate from the Medical Officers of Civil Hospitals and Dispensaries throughout England. From the tables of Mr. Farr, we learn, that these officers make the deaths at their institutions infinitely less than the average number of deaths of sick and well throughout the country! so that, if their reports be correct, sickness would appear to be actually a protection against death! Mr. Hume first writes from Dover, 6th December, 1838, "My object in writing is to congratulate you on the moral courage you have evinced in your last two works. I have been now nearly thirteen years in the service—mostly in charge of an hospital, and it will be gratifying to you to know that an old fellow-student adopts and carries out your principles in his daily practice. I have NOT used the lancet these last TWO YEARS. My cases yield readily to warm baths, cold effusions, emetics and quinine. You may ask me where I have been? Four years in Jamaica, the rest in North America and Home Service. If you had seen Marshall's Digest of the Annual Reports of the Army Medical Officers since 1817, you might have quoted it as a proof of your startling fact—the Unity of Disease. The more I read your book, the more I am convinced it is based on truth, and consistent equally with common sense and nature's laws. However little this age may appreciate your labors and the persecution you are likely to suffer from a certain class of doctors, every liberal mind must do justice to your unwearied zeal. Your holding up to ridicule the most fatal of all medical errors—bleeding a patient into a temporary calm and incurable weakness, ought to stamp you as the benefactor of mankind."

The same gentleman again writes to me from Naas Barricks, Ireland, 5th December, 1839. "It is now twelve months since I wrote to you, saying that I had not used the lancet for the two previous years;—and I am now more convinced than ever of its utter inutility in the treatment of disease. Every day's experience confirms me in the truth of your doctrines. During the last year, I have neither bled, leeched, nor cupped in any case—and I have not had a single death of man, woman, or child. The depot was never more healthy, and I attribute this principally to my abstaining, during the last THREE years, from every kind of depletion in the treatment of disease. I am satisfied that Pneumonia and Enteritis. (inflammation of the lungs and bowels) which are at present the bug-bears of the faculty, are indebted for their chief existence to the remedies used for ordinary ailments—namely, bleeding, starvation, and unnecesnsary purging I never saw a case of either (and I have seen many) in which the patient had not been the inmate of an hospital previously, where he had undergone the usual antiphlogistic regimen, or had been otherwise debilitated—as in the case of long residence in a warm climate. I am not surprised at the opposition you meet with. It has ever been the lot of those who have done good to humanity to be offered up as sacrifices at the altars of ignorance, prejudice and obstinacy. It is a fact related by Harvey. he could not get a physician above the age of forty to believe in the Circulation of that Blood whose VALUE in the economy you have so forcibly proved. Although I yield to you, as your just due, the origin of the improved principle of treating disease, I take credit to myself for being one of the first to carry it into effect, and I am doubtful whether a person in private practice could ever so far overcome prejudice as to use the cold bath with the confidence I do in every kind of fever. Its power, together with a warm one, is truly wonderful in equalizing the temperature of the body. When I compare the success of my treatment during the last few years, with that of my previous experience, I feel inclined to curse the professor who first taught me to open the vein with a lancet. Yours most truly,

T. D. HUME.

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ARTICLE I.

Definition of Insanity—Nature of the Disease.

By Insanity is generally understood some disorder of the faculties of the mind. This is a correct statement, so far as it goes; but it does not define the disease with sufficient accuracy, as it is applicable to the delirium of fever, inflammation of the brain, and other diseases which are distinct from insanity.

Insanity, says Webster's Dictionary, is "derangement of the intellect." This is not merely too limited a definition, but an incorrect one, for in some varieties of insanity, as Prichard remarks, "the intellectual faculties appear to have sustained little or no injury, while the disorder is manifested principally or alone, in the state of the feelings, temper or habits."

We consider insanity, *a chronic disease of the brain, producing either derangement of the intellectual faculties, or prolonged change of the feelings, affections, and habits of an individual.*

In all cases it is a disease of the brain, though the disease of this organ may be secondary, and the consequence of a primary disease of the stomach, liver, or some other part of the body: or it may arise from too great exertion and excitement of the mental powers or feelings; but still insanity never results unless the brain itself becomes affected.

In former times, insanity was attributed to the agency of the devil, and the insane were supposed to be *possessed* by demons.—Something of this opinion is still prevalent, and it appears to have been embraced by our Pilgrim Fathers.

Cotton Mather, in his life of William Thompson, thus remarks:—"*Satan,* who had been after an extraordinary manner irritated by the evangelic labors of this holy man, obtained the liberty to *sift* him; and hence, after this worthy man had served the Lord Jesus Christ, in the church of our New English *Braintree,* he fell into that *Balneum diaboli,* a black *melancholy,* which for divers years almost wholly disabled him for the exercise of his ministry."

Still we find this learned and good man saw the connection between the diseased mind and bodily disease, as he thus observes: "There is no experienced minister of the gospel, who hath not in the cases of *tempted souls,* often had this experience that the ill cases of their distempered bodies are the frequent occasion and original of their *temptations.* There are many men, who in the very constitution of their *bodies,* do afford a bed, wherein busy and bloody devils, have a sort of lodging provided for them. The mass of blood in them, is disordered with some fiery acid, and their brains or bowels have some juices or ferments, or vapors about them, which are most unhappy engines for devils to work upon their souls withal. The vitiated humors, in many persons, yield the steams, whereunto Satan does insinuate himself, till he has gained a sort of possession in them, or at least, an opportunity to shoot into the mind, as many fiery darts, as may cause a sad life unto them; yea 'tis well if self-murder be not the sad end, into which these hurried people are thus precipitated. New England, a country where splenetic maladies are prevailing and pernicious, perhaps above any other hath afforded numberless instances of even pious people, who have contracted those melancholy indispositions, which have unhinged them from all service or comfort; yea, not a few persons have been hurried thereby to lay violent hands upon themselves at the last. These are among the unsearchable judgments of God?"

We believe, however, that such opinions are no longer embraced by intelligent persons, who have paid much attention to insanity. By such, insanity is regarded as a disease of the body, and few at the present time, suppose the mind itself is ever diseased. The immaterial and immortal mind is of itself, incapable of disease and decay.—To say otherwise, is to advocate the doctrine of the materialists, that the mind, like our bodily powers, is material, and can change, decay, and die. On this subject, the truth appears to be, that the brain is the instrument which the mind uses in this life, to manifest itself, and like all other parts of our bodies, is liable to disease, and when diseased, is often incapable of manifesting harmoniously and perfectly the powers of the mind.

Insanity then, is the result of diseased brain just as dyspepsia or indigestion is the result of disordered stomach; but it is only one of the results or consequences of a disease of this organ. The brain may be diseased without causing insanity; for although we say, and say truly, that the brain is the organ of the mind, yet certain portions of the brain are not directly concerned in the manifestation of the mental powers, but have other duties to perform. Certain parts of the brain confer on us the pow-

er of voluntary motion, but these portions are distinct from those connected with the mental faculties. Hence we sometimes see though rarely I admit, individuals paralytic, and unable to move, from disease of the brain, whose minds are not at all, or but very little disturbed. In such cases there is some disease of the brain, but of a part not concerned in the manifestation of the mental powers. We recently saw an aged gentleman, who had been for several weeks, paralytic on one side, whose mind was not obviously affected. He died, and on examining his brain, a portion of the interior of one half of the brain was found much diseased, while the outer part was apparently in a healthy state.

From such cases, and numerous other observations, we are quite sure that the outer part of the brain is connected with the mental powers, and the inner portion with voluntary motion. These parts of the brain differ in color and structure. The outer is a greyish red color, and different from every other part of the system, while the inner part is beautifully white and resembles the nerves.

Again the brain appears to be a double organ, or it is divided into halves, or hemispheres of like form and function, and therefore, though one side or one half of the brain may be affected, the powers of the mind may still be manifested by the other.

We may say then, that insanity is an effect of a disease of only a part of the brain —the outer or grey part. In most cases, insanity is the consequence of very slight disease, of a small part of the brain. If it was not so, the disease would soon terminate in death—for severe and extensive disease of the brain soon terminates in death. We see however, numerous instances of insane persons, living many years, and apparently enjoying good health. We have seen several persons who have been deranged 40 and even 50 years, during which time they enjoyed in other respects, good health. On examining the brain after death, in such old cases of insanity, but little disease of this organ is often found, though a little, we believe may always be found; sometimes only an unusual hardness of the outer portion, but in so delicate an organ as the brain this is sufficient to derange its functions, just as a little disorder of the eye or ear, though not sufficient to affect the health, will disorder hearing and vision.

It is as if, in some very complicated and delicate instrument, as a watch for instance, some slight alteration of its machinery, should disturb, but not stop its action.

Thus we occasionally find that violent mental emotions—a great trial of the affections—suddenly to derange the action of the brain, and cause insanity for life, without materially affecting the system in other respects. Esquirol relates the case of a young lady, who for several years expected to marry a person to whom she was engaged, and much attached. He finally deserted her and married another, on hearing of which she immediately became deranged, and for years remained in this condition, rejecting the attention of all other men, and constantly talking of her former lover, whom she still loved.

In this Asylum is an interesting patient, who became deranged suddenly, three years since, in consequence of the murder of her son. Her whole time and thoughts since that period, have been engrossed in searching and calling for her son, whom she believes to be concealed in the building, or beneath the furniture. Thus she lives in hopes of soon seeing him.

Garrick used to say that he owed his success in acting King Lear, from having seen the case of a worthy man in London, who, when playing with his only child at a window, accidentally let it fall upon the pavement beneath. The poor father remained at the window, screaming with agony, until the neighbors delivered the child to him dead.—He instantly became insane, and from that moment never recovered his understanding, but passed the remainder of his days in going to the window, and there playing in fancy with his child, then dropping it and bursting into tears, and for awhile filling the house with his shrieks, when he would become calm, sit down in a pensive mood, with his eyes fixed for a long time on one object. Garrick was often present at this scene of misery, and "thus it was," he said, "I learned to imitate madness."

Sometimes, however, a severe trial of the feelings and affections produces death.

This is not merely the assertion of poets and novelists. Esquirol mentions the case of a young lady of Lyons, in France, who was engaged to be married to a young man of the same place. Circumstances suddenly occured which determined the parents to prevent their marriage, and the young man was sent away. Immediately on learning this she became deranged. After five days spent in vain efforts to relieve her, the parents, to prevent her death, had the young man recalled, but it was too late—she died in his arms.

In such cases, and we could cite many, death does not occur from apoplexy, nor from the exhaustion following long-continued and great excitement, but from the want

of sleep; the grief is too overwhelming for "poppy or mandragora, or all the drowsy syrups of the world," to medicine to repose.

Such was the sudden insanity and death of Haidee, described by Byron, and so true to nature and so beautifully, that we transcribe it.

"The last sight which she saw was Juan's gore,
And he himself o'ermaster'd and cut down;
His blood was running on the very floor
Where late he trod her beautiful, her own;
Thus much she view'd an instant, and no more,—
Her struggles ceased with one convulsive groan.

Days lay she in that state unchanged, though chill,
With nothing livid, still her lips were red;
She had no pulse, but death seem'd absent still;
No hideous sign proclaimed her surely dead.

At last a slave bethought her of a harp;
The harper came, and tuned his instrument;
At the first notes, irregular and sharp,
On him her flashing eyes a moment bent,
Then to the wall she turned, as if to warp
Her thoughts from sorrow through her heart re-sent,
And he began a long, low island song
Of ancient days, ere tyranny grew strong.

Anon her thin, wan fingers beat the wall
In time to his old tune; he changed the theme,
And sung of love—the fierce name struck through all
Her recollection; on her flashed the dream
Of what she was, and is, if ye could call
To be so being; in a gushing stream
The tears rush'd forth from her o'erclouded brain,
Like mountain mists at length dissolved in rain.

Short solace, vain relief!—thought came too quick,
And whirl'd her brain to madness; she arose
As one who ne'er had dwelt among the sick,
And flew at all she met, as on her foes;
But no one ever heard her speak or shriek,
Although her paroxysm drew towards its close.
Hers was a frenzy which disdained to rave,
Even when they smote her, in the hope to save.

Food she refused, and raiment; no pretence
Avail'd for either; neither change of place,
Nor time, nor skill, nor remedy, *could give her*
Senses to sleep—the power seemed gone forever.

Twelve days and nights she wither'd thus; at last,
Without a groan, or sigh, or glance, to show
A parting pang, the spirit from her pass'd."

A little injury of the brain—a slight blow on the head, has often caused insanity, and changed the whole moral characer—usually for the worse, sometimes for the better. We have known a most exemplary and pious lady—a most excellent wife and mother, whose mind had been highly cultivated—transformed by a little injury of the head, into one of the most violent and vulgar beings we ever saw, and yet the intellectual powers were not very much disturbed. For a considerable time she continued to take good care of her family, so far as related to household duties, but her love of reading, of attending church, and all affection for her family and neighbors was gone, and she became so violent that her friends were obliged to place her in a Lunatic Asylum. The celebrated Dr. Parry refers to a case in which, to use his own words, "an accidental blow on the head perverted all the best principles of the human mind, and changed a pious Christian to a drunken and abandoned felon"

Such cases teach us to be cautious and tolerant in instances where change of character and misconduct are connected as to time, with injury or disease of the head, or even with general ill health.

Now and then an injury of the head seems to improve the intellect, and even the moral character. Instances of the former are not very uncommon. The disease or injury of the brain appears to give more energy and activity to some of the mental faculties. This we often see in the delirium of fever. The following very curious case was related to Mr. Tuke, of the Retreat for the Insane near York, England:

"A young woman, who was employed as a domestic servant by the father of the relater, when he was a boy, became insane, and at length sunk into a state of perfect idiocy. In this condition she remained for many years, when she was attacked by a typhus fever; and my friend, having then practiced some time, attended her. He was surprised to observe, as the fever advanced, a development of the mental powers. During that period of the fever, when others were delirious, this patient was entirely rational. She recognized, in the face of her medical attendant, the son of her old master, whom she had known so many years before; and she related many circumstances respecting this family, and others, which had happened to herself in earlier days. But, alas! it was only the gleam of reason; as the fever abated, clouds again enveloped the mind; she sunk into her former deplorable state, and remained in it until her death, which happened a few years afterwards."

Numerous cases are on record where a blow on the head by depressing a portion of the skull has caused the loss of speech, memory, and of all the mental faculties for many months; but which were restored on trephining and raising the depressed bone.

As we have said, sometimes the moral character is improved by injury or disease of the head. Dr. Cox, in his *Practical Observations on Insanity*, relates such cases. We sometimes see the same results from severe illness. Most experienced physicians must have noticed striking and permanent changes of character produced by disease. The insanity of some persons consists merely in a little exaltation of some one or more of the mental faculties of self-esteem, love of approbation, cautiousness, benevolence, &c.

A man received a severe wound on the upper part of his head, after which his mind became some affected, especially as related

to his benevolent feelings, which were perpetually active towards man and beast. He was disposed to give away all that he had, and finally was placed in a Lunatic Asylum, in consequence of the trouble which he made in his endeavors to benefit others and relieve suffering. Whenever he saw any cattle in a poor pasture, he would invariably remove them to a better; and whenever he heard of a destructive fire or shipwreck, he would hasten even to a great distance to endeavor to afford relief.

Among the insane in Lunatic Asylums, we sometimes see not only exhibitions of strength, mechanical and musical skill, powers of language, &c., far superior to what the same individuals ever exhibited when sane, but also a remarkable increase and energy of some of the best feelings and impulses of our nature, prompting them to deeds of self-sacrifice and benevolence, which remind us of the somewhat insane but ever memorable act of Grace Darling—

"Whose deeds will live
A theme for angels, when they celebrate
The high-souled virtue which forgetful earth
Hath witnessed."

In such instances, fear and every selfish feeling appears to be lost or overcome by the intensity of the benevolent impulse.

From the preceding remarks we see that insanity is often but an effect of a slight injury or disease of a part of the brain, and in many instances only a few of the faculties of the mind are disordered. From this we infer that the brain is not a single organ, but a congeries of organs, as maintained by the illustrious Gall and his celebrated successors Spurzheim and Combe. Thus each mental faculty has an especial organ, and therefore certain faculties may be disordered by disease of the brain, while others are not affected; a fact every day observed in Lunatic Asylums, but which we know not how to explain if we believe the brain to be a single organ.

We very rarely find the whole mind destroyed or disordered in insanity, except in cases of long continuance, or of unusual severity. A majority of patients in Lunatic Asylums have considerable mind left undisturbed, and some of them conduct with propriety, and converse rationally most of the time, and on all but a few subjects.

We have seen an individual who believed that he directed the planets and caused the sun to shine and the rain to descend when he chose, yet he was a man of much intelligence and conversed rationally on other subjects, and was remarkable for gentleness of manner and amiability of disposition.

We could cite very many cases nearly similar, and to those who have frequently visited this Asylum, we can appeal for the verification of the statement—that patients decidedly insane on one or more subjects, still manifest acute and vigorous minds, and appear to be sane on others.

Having seen that insanity consists in the derangement of one or more of the faculties of the mind, produced by disease of only a part of the brain, we conclude there is no one faculty of the human mind but may become disordered. If, therefore, we actually knew what mental faculties mankind possess, we might then know all the various forms of insanity, all the varieties of mental aberration to which these faculties are liable. But we do not know. Philosophers have ever disagreed as to the number of the faculties of the human mind, and even as to what constitues a faculty.

We shall not however particularise their views, but briefly allude to the constitution of the human mind, appealing to common observation for the correctness of what we assert on this subject.

In contemplating the phenomena of mind, we can not fail to perceive the variety of its faculties, and that there is an obvious general division of them into intellectual and moral, the latter comprehending the propensities and impulses.

These faculties, both the intellectual and moral, are originally possessed by all, and are alike dependant upon a healthy state of the brain for their proper manifestation. In some they are far more active and energetic than in others, owing in most cases we believe to original formation of the brain, and in others to education. That the intellectual faculties can be greatly improved by cultivation, every one knows, and by many, too many we fear, this is regarded the most important and sole object of education,—as if the moral powers, the propensities, and impulses, were not a part of the mind, and not capable of improvement.

But however important the cultivation of the intellect may be, it certainly is not more so than the cultivation and improvement of the moral powers. We do not wish to undervalue the intellect, or discourage efforts for its improvement, but we wish that all might realise the superiority of our moral nature over intellect itself.

The intellectual faculties are but a part of our mental powers, and contribute but little in fact towards forming what we call the *character* of an individual. We call to mind our acquaintances and notice that their characters are very different, but this difference does not arise from the difference in their in-

tellectual faculties, but in their moral powers. That one man knows more of the Greek language or mathematics, or has more knowledge of commercial or political affairs or of some mechanical art, or has the ability to acquire knowledge of many subjects faster than another, does not cause the difference we perceive in what we denominate the character. The character is determined by the moral faculties or propensities, by the affections, benevolence, love, selfishness, avarice, &c. The difference in the activity and energy of these, create the differences we see in the characters of men; these constitute the man himself, or the *soul* of man, while the intellectual faculties are but instruments to administer to the wants and demands of the propensities.

Without these propensities or moral faculties, the intellectual powers would not be exerted at all, or but feebly. The stimulus or urgency of the impulses of our moral nature, of benevolence, love, avarice, &c., impel men to action—to gratify these the human race have forever toiled.

Now it is to these important faculties, the propensities of our moral nature, that we wish to call particular attention. Not merely to the importance of their early cultivation and improvement, but to the fact that they as often become deranged as the intellectual. They as truly use the brain for manifesting themselves; consequently when certain parts of the brain become diseased, they become deranged, and not unfrequently without the intellectual powers being noticeably disturbed. A man's natural benevolence or propensity to acquire, or to love, may become deranged from disease of the brain as truly as his powers of comparing, reasoning, &c.

Yet evident as this is from Physiology and Pathology, and from daily observation in Lunatic Hospitals, it is a fact, and an alarming fact, that when disease causes derangement of the moral faculties, and changes the character and conduct of an individual, he is not deemed insane, provided the intellectual powers are not obviously disordered.

It may be said that such a person has reason still left to guide him, as is evidenced by his ability to converse rationally on many subjects, and even to reason well against the very crime that he commits. All this may be true, and yet the person may not be accountable, for although reason is given to prevent us from doing evil, it cannot be expected to resist a diseased and excited impulse.

Let not this be applied to crimes committed during voluntary intoxication, for though when thus intoxicated a man may be momentarily insane, yet it is voluntary insanity produced by gross misconduct, of which no one can avail himself to escape the legal consequences of crime. Still in such cases the crime must be the immediate result of intoxication, and while it lasts, to make a man accountable, as has been decided by Judge Story and other legal authorities. If committed afterwards during delirium tremens induced by intoxication, he must be acquitted on the ground of insanity, as he can not be held accountable for the immorality of the cause of his insanity, a disease which he can not succesfully feign or voluntarily induce.

The disbelief in a kind of insanity that does not disturb the intellect, arises perhaps from the common phraseology, that the affections, passions, and moral qualities, have their seat in the heart and not in the brain, and therefore are not likely to be disordered by disease of the latter organ. But in fact, the orderly manifestation of our moral faculties, our affections, and intellectual powers, are alike dependant on the healthy state of the brain. The heart has nothing to do with either.

We wish to repeat, that there is no faculty of the mind but may become deranged by disease of the brain. Disease of one part of this organ may cause the derangement of some of the intellectual faculties, while disease in another part may not disturb the intellect, but derange the moral powers or propensities. Thus we see blows on the head and wounds of the brain, sometimes destroy only one or two of the intellectual faculties such as the memory of words, or the memory of places, and at other times to effect an entire change of the moral character.

But while the injury that affects the intellect is acknowledged to cause insanity, the injury that changes the moral character is not supposed to have this effect. The subject of the former is considered an object of concern and pity, while the latter is considered a depraved and wicked being deserving of punishment. Numerous cases have fallen under our observation, where a great change in the moral character occurred and lasted a year or two, and then the intellect became affected. This change of character was noticed and lamented, but those thus affected were not considered insane until the intellect itself became involved; while in fact they were insane from the first.

We wish all to be assured that a sudden and great change of character, of the temper and disposition, following disease or injury of the head, although the intellect is not disturbed, is an alarming symptom; it is

often the precursor of intellectual derangement, and if not early attended to, is apt to terminate in incurable madness.

Within a few days we have seen two cases of insanity, both said to be quite recent, but on inquiring particularly of their friends we found that they had noticed a striking change of character for several months before they thought of insanity. In one the change was from being naturally very generous and benevolent, to the opposite extreme of selfishness, and as they expressed it, of stinginess. In the other, the change was from great mildness and amiability of disposition, to that of extreme irrascibility and moroseness. Now these persons were not deemed insane until their intellects were disturbed; but we regard the previous change of character as truly the consequence of disease of the brain as the disturbance of the intellect, and this is now the opinion of their friends.

Derangement of the intellectual faculties seldom occasions much dispute—every one easily recognizes it—but not so with derangement of the moral powers. Most persons have seen individuals who are crazy, and consider themselves qualified to judge whether a person is deranged or not, yet on inquiry we find that nearly all expect irrational and incoherent talk from those that are deranged, or wild and unnatural looks, or raving and violent conduct. Their opinions respecting insanity are derived from having seen raving maniacs, and not from observation in Lunatic Asylums; for in the latter may be found many whose insanity consists in derangement of the affections and moral powers, and not in disturbance of the intellect.

Owing to such limited and erroneous views respecting insanity, many persons are not disposed to believe in a kind of mental disorder that may impel men to commit crimes, unless such individuals exhibit derangement of the intellect, or conduct in a manner that they have been accustomed to see deranged persons conduct.

But notwithstanding this common opinion regarding insanity, it is a well established truth, that there is a form of insanity, now called by many *moral* insanity, arising from disease of the brain, which may impel men to commit great crimes, while the intellect is not deranged, but overwhelmed and silenced by the domination of a disordered impulse.

Sometimes insanity seems to arise from some defect of the organs of sense, from change in the nerves of sensation. It is said that in those who are troubled with hallucinations of sight or of hearing, some disease of the nerves of the eye or ear is found. Still, in such cases there must be in addition some defect in the power of comparison, or insanity would not result. Comparison is one of the most important of the faculties of the mind, and the one most liable to be affected in insanity, or in any disease of the brain, as in headache for instance.

Disorder of the nerves of sensation may also lead to insane ideas and conduct. Some have believed themselves converted into inanimate substances. One man thought himself changed into a teapot, another into a barrel which was rolled along the street, and another into a town-pump to which no rest was given day nor night.

Mr. Connolly, in his work on Insanity, tells of a respectable merchant in London who fancied himself metamorphosed into a seven shilling piece, and who took the precaution of going round to those with whom he had dealings, requesting of them as a particular favor that if his wife should present him in payment they would not give change for him.

In all these cases—for they all admit we think, of one explanation—there was some affection of the nerves of sensation, and also some disorder of the faculty of comparison.

In some cases of mental disorder, there seems to be almost complete annihilation of sensation. This is the case with those who believe themselves dead; they feel not, and fully believe that they have ceased to exist, yet such persons will often talk rationally on other subjects. Most of their mental faculties are in perfect condition, and sometimes by exciting some of the most predominating impulses or passions, such persons are cured.

One of the Princes of the Bourbon family of France, imagined himself dead, and refused to eat. To prevent his dying of starvation, two persons were introduced to him, in the character of illustrious dead like himself and they invited him after some conversation respecting the world of shades to dine with another distinguished but deceased person the Marshal Turenne.

The Prince accepted this very polite invitation, and made a very hearty dinner; and every day, while the delusion continued, in order to induce him to eat, it was necessary to invite him to the table of some ghost of high rank and reputation.

Dr. Mead relates, that an *old bell ringer* at Oxford University, imagined himself dead, and ordered the bell to be rung, as was usual on the occurrence of a death at that place. The bell *was* rung, but in a most awkward and unusual manner; the old ringer could not bear this, and leaped from his bed, and hastened to the belfry to show how it should

be rung; he then returned to his room that he might die in a proper way, but the exercise and passion proved so beneficial that his delusion was broken up, and he soon recovered.

As I have already mentioned, some persons decidedly insane on some subjects, exhibit greater intellectual power on others during their mental derangement, than when they are sane. The following is an instance.

A general in the French army, who had the entire confidence of Napoleon, and who had been directed by him to superintend some immense military preparations at Boulogne, became much fatigued by his duties, which exposed him most of the day to the hot sun. Suddenly he quitted the work, and accompanied by one of his aids, set off for Paris, announcing on his way that he was the bearer of a treaty of peace with England. He traveled with great rapidity, not allowing himself time to eat, and paid postillions largely to hasten his speed. Arriving at Paris, the public funds rose from this news of the treaty. Not finding Napoleon at the Palace of the Tuilleries, he hastened to St. Cloud, and, in disordered dress, penetrated to the apartment of the Emperor, and announced to him what he alone, of all whom the general had met, knew to be incorrect. In fact, Napoleon was the first to discover his insanity, and committed him immediately to the care of physicians.

The insanity of the general continued through the summer, during which time he wrote comedies and plays which were much admired, and he also conceived or invented an improvement in firearms, and begged to have permission to visit a founder in order to have a model made from drawings he had himself prepared. His physician reluctantly yielded to his request, on his giving his word of honor that he would not go elsewhere. He went and returned, and eight days afterwards went again and found the model completed, and then gave orders for 50,000 models to be made. This order for 50,000 models was the only symptom of insanity that he exhibited during the whole affair. He soon however became worse, then paralytic, and died insane.—But the efforts of his diseased mind have survived him; his writings are still read and admired, and his invention was soon found to be quite an improvement, and has since been adopted in the French armies.

In some cases of insanity, the faculties of the mind are so acute, that it is exceedingly difficult for a stranger to detect the mental aberration. The late Lord Erksine, in his speech in defence of Hadfield, for shooting at the King at Drury Lane Theatre, in order to demonstrate how cunning and acute in reasoning insane persons frequently are, and consequently how difficult it sometimes is to discover their insanity, referred to the following cases, which we quote in his own words:

"I well remember (indeed I never can forget it,) that since the noble and learned judge has presided in this Court, I examined for the greater part of a day, in this very place, an unfortunate gentleman who had indicted a most affectionate brother, together with the keeper of a mad-house at Hoxton, for having imprisoned him as a lunatic, whilst, according to his evidence, he was in perfect senses. I was, unfortunately, not instructed in what his lunacy consisted, although my instructions left me no doubt of the fact; but, not having the clue, he completely foiled me in every attempt to expose his infirmity. You may believe that I left no means unemployed which long experience dictated, but without the smallest effect. The day was wasted, and the prosecutor, by the most affecting history of unmerited suffering, appeared to the judge and jury, and to a humane English audience, as the victim of the most wanton and barbarous oppression.—At last Dr. Sims came into Court, who had been prevented by business, from an earlier attendance, and whose name, by the bye, I observe to-day in the list of the witnesses for the crown. From Dr. Sims I soon learned that the very man whom I had been above an hour examining, and with every possible effort which counsel are so much in the habit of exerting, believed himself to be the Lord and Saviour of mankind, not merely at the time of his confinement, which was alone necessary for my defence, but during the whole time that he had been triumphing over every attempt to surprise him in the concealment of his disease. I then affected to lament the indecency of my ignorant examination, when he expressed his forgiveness, and said with the utmost gravity and emphasis, in the face of the whole Court, "I AM THE CHRIST," and so the cause ended. Gentlemen, this is not the only instance of the power of concealing this malady; I could consume the day if I were to enumerate them; but there is one so extremely remarkable, that I cannot help stating it.

"Being engaged to attend the assizes at Chester, upon a question of lunacy, and having been told that there had been a memorable case tried before Lord Mansfield in this place, I was anxious to procure a report of it, and from that great man himself (who within these walls, will ever be

reverenced, being then retired in his extreme old age, to his seat near London, in my own neighborhood) I obtained the following account of it. 'A man of the name of Wood,' said Lord Mansfield, 'had indicted Dr. Monro, for keeping him as a prisoner (I believe in the same mad-house at Hoxton) when he was sane. He underwent the most severe examination by the defendant's counsel without exposing his complaint; but Dr. Battye, having come upon the bench by me and having desired me to ask him what was become of the Princess whom he had corresponded with in cherry-juice, he showed in a moment what he was. He answered that there was nothing at all in that, because having been (as every body knew) imprisoned in a high tower, and being debarred the use of ink, he had no other means of correspondence but by writing his letters in cherry-juice, and throwing them into a river which surrounded the tower, where the Princess received them in a boat. There existed, of course, no tower, no imprisonment, no writing in cherry-juice, no river, no boat; but the whole the inveterate phantom of a morbid imagination. I immediately, continued Lord Mansfield, 'directed Dr. Monro to be acquitted; but this man, Wood, being a merchant, in Philpot Lane, and having been carried through the city in his way to the mad-house, he indicted Dr. Monro over again, for the trespass and imprisonment in London, knowing that he had lost his cause by speaking of the Princess at Westminister; and such,' said Lord Mansfield, 'is the extraordinary subtlety and cunning of madmen, that when he was cross-examined on the trial in London, as he had successfully been before, in order to expose his madness, all the ingenuity of the bar, and all the authority of the Court, could not make him say a single syllable upon that topic which had put an end to the indictment before, although he still had the same indelible impression upon his mind, as he signified to those who were near him; but conscious that the delusion had occasioned his defeat at Westminster, he obstinately persisted in holding it back. This evidence at Westminster was then proved against him by the short-hand writer.'"

In a future number we shall resume the subject of this article, and we beg our readers to keep in view the statements advanced in this, as we purpose to refer to them in connection with the Medical Jurisprudence of Insanity, and an explanation of some cases of moral insanity that have much embarrassed both physicians and jurists.

Dr. STEVENS' ADDRESS,

At the opening of the Annual Session of the New-York Medical College: Crosby street.

It is to be regretted that a full and accurate report of this remarkable production has not been laid before the profession and the public. The notices of it which have appeared in the city journals, have been confessedly mere "meagre outlines" of a really rich and elaborate performance. It is, therefore, to the private reports of judicious and intelligent medical gentlemen who heard it delivered, rather than to any other source, that we are indebted for the information which we have received concerning it, and on which we chiefly found our reflections and remarks.

All reports concur in representing that the object and tendency of this Sessional Address, beyond the immediate and temporary occasion which called it forth, were to check the present liberal and humane efforts of many enlightened men to rescue medical knowledge from its inveterate prejudices and trammels, and thus enable it to keep pace with the general intelligence of the age.

Accordingly, the Address proceeded, in the true snuff-colored, old fashioned style, first to claim for medical science, as it now stands, a dignity and maturity rivaling any other; and secondly to deprecate free investigation and progress, under the venerable scare-crow jealousy of "dangerous experiments." The gentleman proceeded to show, says a published report, "that medicine was as much a science as any other known, although not based on fixed principles." How far he succeeded in establishing this amusingly contradictory proposition, we are not publicly informed, but it must evidently have been as difficult an operation as he ever attempted in the whole course of his practice. This done, however, he advanced to his second position, which, according to the same report, was to show that "those who were given to experiments never raised themselves in the profession and were injurious to their patients." And in these two points we have the whole scope, design and intellect of this famous Annual Address.

It becomes, therefore, an important question as to whether the sincerely zealous and talented young men who now throng our medical schools, from all parts of the Union, should be thus misled and retarded in their noble aspirations for true eminence and usefulness in the arduous profession which they have chosen, and in which so awful an amount of responsibility and so vast a field of human interest are necessarily involved. None but bigots will hesitate to admit, that the tendency of such instruction as we have above quoted, is to keep the next generation of medical men at least as ignorant, conceited and mischievous as the present and the past: mere petrifactions in the stream of time, while the students of almost every other department of knowledge display a living and athletic career of advancement and renown.

That medicine is not, as Dr. Stevens affirmed, "as much a science as any other known," has been frankly admitted by many men, as distinguished, to say the least, in that profession as himself. Let the ingenious student listen to the opinion of another instructor, the truly eminent Dr. Evans of Edinburgh:—

"How much have we yet to learn, how little do we really know, of the nature and rational treatment, not only of the diseases of the cerebro-spinal system, but of diseases in general! Assuredly, the uncertain and most unsatisfactory art that we call medical science, is no science at all, but a jumble of inconsistent opinions; of conclusions hastily drawn; of facts badly arranged; of observations made with carelessness; of comparisons instituted which are not analogical; of hypotheses which are foolish: and of theories which, if not useless, are dangerous.—This is the reason why we have our homœopathists, and our hydropathists; our mesmerists and our celestialists!"

And as a timely counterpoise to Dr. Stevens' nervous horror of "experiments," injurious at once to practitioner and patient, we would submit the following remarks of the able and honest Dr. G. B. Childs of London.

"The whole science of healing is built upon fortuitous and chance discoveries. Like the alchemists of old, we have discovered a thousand valuable things, where we never thought of looking for them; and while uselessly seeking for talismanic gold, we have lighted on a pearl of great price. Every thing in fact, is presented to us as the result of *experiment*; and, in the treatment of disease, the most valuable remedy can boast of no higher origin than its more humble neighbor.

Dr. Knighton who was at the head of his profession, and physician to George IV—said

"It is somewhat strange that, though in many arts and sciences improvement has advanced in a step of regular progression from the first, in others it has kept no pace with time; and we look back to ancient excellence with wonder not unmixed with awe. Medicine seems to be one of those ill-fated *arts* whose improvement bears no proportion to its antiquity. This is lamentably true, although Anatomy has been better illustrated, the Materia Medica enlarged, and Chemistry better understood."

It would be easy to add the testimony of a great number of distinguished men to the same effect, but it would be useless to do so as the truth of the statements of those we have quoted, is known to every well informed physician. Dr. Stevens, however, steps forth and breasts the whole tide of testimony, and while he admits that medicine is not founded, like all other sciences, upon fixed principles, still obstinately insists that it is "as much a science as any other." Fixed principles being thus unnecessary to medical science, it seems perfectly consonant that he should denounce those "experiments" by which alone fixed principles ever can be, or ever have been established.—We strongly suspect, however, that the Doctor may have other motives of hostility to "experiments" than those which he assigns, for we could, ourselves, refer to some "experiments," of a very singular character which have proved as beneficial to his patients as they may possibly have been injurious to his practice. And there is much less of paradox in this, than in the notion of a science without principles. We have, indeed, no doubt that the "experiments" of

which the following are a few of the results, are among the most objectionable which the Doctor could adduce :—

Many cases of confirmed tubercular consumption, long under the best treatment, known to the anti-experiment, (or anti-injurious-to-patients !) school, and then avowedly abandoned as utterly hopeless, *cured*, within a few months after the "experiments" were tried, directly under anti-experimental observation !

2. Many cases of white-swelling, tubercular disease of the joints—treated and abandoned by science without principles, and rapidly cured by experiments injurious to patients, as above.

3. Violent inflammations of the organs, uniformly reduced in from three to fifteen minutes.

4. The most severe paroxysms of Bilious Fever, with violent pain in the head, back, stomach and intestines, &c., uniformly reduced in from five to ten minutes.

5. Sick head-ache uniformly reduced in from one to ten seconds ; and Nervous head-ache in from one to five minutes.

6. Tooth-ache in from one to fifteen seconds.

7. Tic-Douloureux, of the most intolerable severity, in from one to five seconds.

8. Luxation of the hip joint, of four years standing, reduced by three applications of the Rotary Magnetic Machine.

9. *Cum multis aliis.* And we mean by this Latin that Dr. Stevens can have as many more, in plain English, as he could lecture against from this time to the next Annual Session.

MARY DENT AND JOHN GARLAND.

SIR JAMES GRAHAM'S "SURGERY."

In a recent number of The Lancet, (July 27, p. 562,) we published a short account, extracted from the Times, of a most extraordinary trial which had taken place on the Norfolk Circuit, that of John Garland, surgeon, accused of feloniously killing Mary Dent. The appeal which we then made to our friends residing in that part of the country, for further particulars, has been responded to, and we are now able to lay a full and authentic account of this strange affair before our readers. In addition to a medical narrative of the case by Mr. Henry Mitchell, of Addenbrook's Hospital, Cambridge, one of the surgeons who performed the post mortem examination, we also publish a letter, which has since appeared in the "Provincial Medical and Surgical Journal," from Mr. Jones, the surgeon who was first called in by Mr. Garland.

Mr. Henry Mitchell's History of the Case.

The name of the unfortunate patient was Mary Dent, wife of John Dent, of Littleport, in the Isle of Ely, labourer; she was twenty-three years of age, of good health, and robust appearance ; she had borne five children and had miscarried once ; she was married at a very early age, and became a mother when between sixteen and seventeen years old.

On the 22d day of May last, Mary Dent complained of feeling very unwell ; she felt great pain, and vomited occasionally, and being apprehensive of miscarriage, sent off, about eleven o'clock at night, for Mr. John Garland, a person of middle age, who has practised as a surgeon and accoucher, at Littleport, ever since 1816.

It appears that on the day in question, the patient had occasion to lift or drag a sack of flour, containing fourteen stone ; it also appears that according to her own account, she was at this time about three months advanced in pregnancy, having menstruated for the last time on the 14th of February.

Upon his arrival, Mr. Garland proceeded to examine the patient by passing his hand and arm into the vagina, intending as he himself expressed it, to "bring the child." He shortly afterwards made a second examination, whereupon the patient entreated of him to desist, "for he was pulling her entrails out;" and presently Ann Banyan, the nurse, saw hanging out in the bed "a large quantity of entrails, as many as could lie on a large plate." (I quote her own words as taken down by the coroner.)

When matters had arrived at this crisis, Mr. Garland appeared most anxious for further advice and assistance, and, at his urgent request, a messenger was despatched to Ely, who returned, bringing with him Mr. Jones, of Ely, surgeon.

Upon turning down the bed-clothes, Mr. Jones discovered in the bed a something, which he at first mistook for the umbilical cord, but a more careful examination, convinced him that the protruding mass was small intestine, depending from the vagina.

Upon a minute inspection, he ascertained that the intestine was completely detached from the mesentery, throughout its whole length and that it was extensively lacerated; the *distal* portion being torn completely across, that is, its whole diameter being completely divided, whilst the *proximal* portion was lacerated, so as to be very nearly divided. Under these unfortunate and perplexing circumstances, Mr. Jones was of opinion that any attempt to save the intestine would prove useless; he therefore passed a ligature around the intestine, above the *proximal* laceration, and close to the vagina, and cut off all the intestine below the ligature; the intestine, so cut off, measured nineteen feet six inches. Mr Jones then took his departure stating his belief that the patient could not survive many hours.

All this occurred between four and seven o'clock on the morning of the 23d of May. Shortly after the departure of Messrs. Jones and Garland, the fœtus was found in the bed; it appeared a fœtus of about three months. About twelve hours after the application of the ligature, the bowel above the ligature became very distended, and ultimately burst. Subsequently, the nurse, Anne Banyard, removed about half-a-yard more of intestine, without any medical man being present; she cut it off, and she did so, "because it became very black and was very offensive."

The poor woman lingered seventeen days, and expired suddenly and at once, whilst attempting to raise herself up in bed, on the 8th day of June. During this period she did not suffer so acutely as might have been imagined; for three or four days the stomach rejected every thing, but latterly it became much less irritable; her skin was cool, her pulse rarely above eighty, her countenance natural, and she complained of no pain, neither was there any appearance of hæmorrhage. She took a little simple sesqui-carbonate of soda as medicine, and weak gruel or chicken-broth as diet.

I was instructed to make a post-mortem examination about forty-eight hours after death. The following is the result of the examination :—

A very marked flatness and depression was observable between the two ilia; over the whole abdomen the bodies of the vertebræ could be more distinctly felt than naturally they should be; the external parts of generation and the perinæum were very much excoriated. There was nothing else worthy of note about the trunk.

Upon opening the abdomen, the liver was ascertained to be healthy, as also the stomach. The omentum was offensive, black, gangrenous, and adherent to the arch of the colon, and to the small intestines generally; this adhesion was more marked from the symphysis-pubis to the right than to the left iliac region.

The colon appeared shrunken and contrated, and was so adherent to the omentum throughout the extent of the ascending and transverse portions, that the omentum and colon might be turned back together; the whole of the ascending portion of the colon was in a state of complete gangrene; over the region of the cæcum a small and circumscribed collection of matter was found, and it appeared as if, in this situation, the small intestines had been separated from the large; the descending portion of the colon and the rectum were not in so diseased a condition.

About *two yards* only of small intestines remained in the abdomen, these, towards the lower portion were very gangrenous, and upon tracing them downwards it was discovered that they were very adherent in the right iliac region, and that in this situation they dipped downwards and inwards to the right of the uterus, and became attached, by their lower margin, to the borders of an opening found in the right side of the vagina; the small intestines appeared to terminate *in* the vagina, for they could not be traced onwards to the large.

The mesentery was gangrenous, and had been torn in two or three places.

In the vagina was found in the upper part and on the right side, a laceration sufficiently large to admit two or three of my fingers; this laceration was found to communicate with, and to lead into, the above-mentioned depending portion of small intestine, so that the fingers could readily be passed from the vagina into the small intestine; the vagina on the *left* side was healthy and unruptured.

The uterus was normal in size and appearance, and what perhaps is rather singular, did not exhibit any traces of recent impregnation.

The bladder was healthy, so were the lungs, and so was the heart.

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Defence by Mr. Garland's Counsel.

Mr. O'Malley addressed the jury on behalf of the prisoner in a speech of geeat eloquence and power. He began by adverting to the spirit in which the prosecution had been got up, which he characterized as one of professional jealousy and revenge. An unfortunate interpolation in the evidence of Mr. Stevens, to the effect that he had generally found the prisoner an ignorant man, he denounced in terms of severest and most indignant reprehension. He analyzed with much acumen the evidence of Mr. Jones, and was not less severe upon him than he

had been upon Mr. Stevens. Talk of rashness, forsooth! Why, here was a man who, with three minutes consideration, performed an operation which he confessed destroyed every possible chance of life. Whatever might have been the result before the cutting off the protruding intestine, at any rate, according to the witness's own showing, there was no hope—no chance whatever after that operation. And who was to say what was the state of things when Mr. Jones first examined the woman? He confessed that he knew not what the extraneous substance was when first he saw it; he thought it was the umbilical cord; might not his handling of it have produced the holes and lacerations spoken of? The learned gentleman argued that most likely the rupture in the vagina had been occasioned by the lifting of the flour—that the prisoner, like Mr. Jones, had mistaken the intestine protruding from the aperture for the umbilical cord—and that at best he had been guilty of an error, and that medical men were liable to errors every day of their lives. Hundreds, nay thousands, were annually killed by the errors of medical men, it was impossible it could be otherwise; but they were not to be indicted for manslaughter for mere errors. Mr. O'Malley made a most forcible appeal to the feelings of the jury.

The jury found Mr. Garland GUILTY, and he was sentenced to one month's imprisonment.

Academie de Medecine, Paris.—*July.*

CASE OF SUS-PUBIC LITHOTOMY, (HIGH OPERATION.)

M. Segalas presented to the academy two vesical calculi which he had recently extracted from two old men, by the high operation. One of them was of the form of a kidney, of extreme hardness, and weighed 135 grammes (4 oz. 4 dr.;) its circumference was nineteen centimetres in one direction and fifteen in the other. The patient who bore it was a priest, residing in the department of the Loire. Its presence had been overlooked by an hospital surgeon who first examined him, but was subsequently discovered by another practitioner, when he was sent to Paris, to M. Segalas. On examining his patient, M. Segalas easily discovered a very hard and voluminous calculus. He has already several times found stones of this description in country priests on whom he has operated, a fact to which he attributes to their being far from surgical assistance, and allowing the stone to acquire a large size before they leave their homes for advice. At the urgent request of the patient, M. Segalas made three attempts at lithotrity, but not succeeding in breaking the stone, the pains becoming very violent, and fever setting in, he proposed an operation, which was accepted with resignation, supported with courage, and followed by complete success. The cure was obtained without the slightest accident. After the extraction of the stone, which was easily accomplished, although the patient was very corpulent, a siphon-sound was established, and under its influence the urine escaped nearly always by the ordinary channel.—The wound was completely cicatrised in a month.

The other calculus was not so large, and only weighed 68 grammes. (2 oz. 2 dr.) Its form was that of a full wheel. The patient was an old man, sixty-five years of age, a shoemaker. The sus-pubic operation was also performed, and the stone easily extracted. Lithotrity had previously been tried once. The siphon-sound was introduced, but occasioned so much irritation that it was withdrawn on the fifth day. Nevertheless, urine only issued from the wound on the twelfth day. The patient was then sounded every two hours; he subsequently sounded himself when he felt the desire, and the cure was completed on the 20th day.

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EXCISION OF THE SPLEEN.

M. Berthet, of Gray, related a case of excision of the spleen. An individual received, in a quarrel, a cut with a knife in the left side. Eight days after the accident, M. Berthet, on being called in, found a considerable tumour formed by the spleen, which exhaled a strong smell of putrefaction. He excised the tumour, the surface was methodically dressed for some time and healed. The patient lived more than thirteen years afterwards, and his digestions were always accomplished with ease, which seems to prove that the spleen is not more necessary to life in man than in the animals from which it has been excised of late by vivesectors. This individual died of pneumonia. Only a very small portion of the spleen, as large as a nut, was found; it was applied on the external parietes of the stomach.

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Academy of Sciences, Paris.—*July.*

PSEUDO-MEMERANOUS INFLAMMATION OF THE BLADDER PRODUCED BY BLISTERS.

M. Morel-Lavallee stated that although, generally speaking, cantharides applied to the skin exercise no influence over the bladder, they sometimes develop in that organ, owing to individual peculiarity, an inflammation similar to that produced on the skin, and accompanied by the formation of false membranes. The size of the blister appears to

have a considerable influence over the occurrence of these accidents. In the three cases which M. Morel Lavallee gave, the blisters were very large. One had been applied near the bladder on the hypogastric region; the others had been applied at a considerable distance on the head and the chest. The false membranes are sometimes small, thin, with an irregular festooned margin, whilst sometimes they are as large as half a playing card. In the first instance they are of a greyish-red colour, striated with streaks of blood; in the other they are of a dull-white colour on the non-adherent side, rosy on the adherent one. In one case in which M. Fidal de Cassis was able to examine the bladder after death, its internal surface was red and swollen, like the conjunctive in blennorrhagic ophthalmia. The symptoms are those of ordinary crystitis. It is worthy of remark that in the cases obversed by M. Morel-Lavallee, the blister had been powdered with camphor. In the treatment of these cases M. Morel advises vesical injections of emollient fluids, along with poultices refreshing drinks, &c., at the same time be takes off the blister.

PATHOLOGY.

A CASE OF ACUTE TUBERCULOSIS OF THE MEMBRANES OF THE BRAIN, THE LUNGS, AND LYMPHATIC GLANDS.

Observed by Dr. BRAZIC, Assistant Physician to Dr. SKODA, of Vienna.

From the British Journal of Homœopathy.

[We give the full details of this cure, of a pure and very interesting disease, and would wish to direct the attention of practitioners to it; for, from the difficulty of the diagnosis, it is not improbable that it is often confounded with other diseases, which it not unfrequently simulates. At the Homœopathic Hospital of Vienna, we had an opportunity of observing a case of acute tuberculosis, which so closely resembled the typhus fever of the Continent, that it was impossible to distinguish the difference. Even the most celebrated diagnosticians admit their incompetency to the task. A notice of the disease will be found in a paper on "The Pathology of Typhus," at p. 342 of the Edinburgh Monthly Journal of Medical Science for 1842.]

B. A., aged 28 years, by trade a gunsmith, a native of Hungary, of a muscular and robust frame, a pale complexion, and described to have been previously healthy. For six weeks, the patient complained of severe and constant headache, particularly over the region of the eyebrow, and the forehead, which deprived him altogether of rest, and rendered him quite unfit for any hard work. Until now he had not sought any medical aid, and on his entering the "General Hospital" here, upon the 2d of October of this year, the symptoms he presented were as follows: The only morbid symptom whiah the patient complains of, is severe pressive pain in the forehead and in both eyebrows, which is not increased by any amount of pressure on the part, and never varies in degree. There is nothing else of a morbid character discernible; the forehead does not feel unnaturally hot, and nothing abnormal can be detected in the eyes, ears, or face. From the mouth there comes a most offensive smell, the origin of which cannot be discovered; the tongue is covered with a very thick; white, adherent coat; there is loss of appetite and thirst; the chest is normal; the abdomen, in its whole extent, sensitive on strong pressure. The stools present nothing unnatural; the temperature of the skin is not raised; the pulse is slow and regular. The patient feels not so much exhausted as giddy, especially on rising. An acidulated drink was ordered, and no diagnosis was pronounced.

The 4th.—the pain remains the same in every respect; the countenance is somewhat flushed; there have been two stools; the patient feels weak.

The 5th.—No change. A blister was applied behind the ear.

The 9th.—The pain is still terrible; the smell from the mouth continues; there is no appetite. Neither the mental powers, nor the power of voluntary motion are at all affected. Cold embrocations were applied to the brows.

The 11th.—Tne weakness has increased; the patient cannot sit up in bed. The headache is still most severe, especially in the supraorbital region; there is a slight cough, with a little mucous expectoration.

The 12th.—Still dreadful headache, constipation, dysuria: the pulse more rapid than natural. The patient has several times vomited small quantities of thin greenish-yellow fluid. There is unnatural sensibility of the abdomen; no alvine evacuation, nor any passage of urine.

The 13th.—No more vomiting; the patient lies with his eyes constantly closed; no consciousness of any thing; pressure on the eyebrows and forehead excites no pain. He cannot swallow; and there have been no evacuations.

The 14th.—Hydrocephalic symptoms have developed themselves; the right eyelid perfectly paralyzed, its pupil manifestly dilated; consciousness, sensibility and power of voluntary motion entirely suspended; the mouth is open at its right side; the breathing is

molliusculam, tenuem vidi et modice quasi slow, stentorious, and difficult; no cough. The temperature of the skin fallen; the pulse very rapid; no stool, nor any urine passed. Death ensued on the night of the 14th of October.

Dissection.—The body was of strong osseous build, and very muscular; the pupil of the right eye dilated; the neck and the limbs rigid; the thorax arched; the skull compact; some coagulated fibride in the sinuses. The arachnoid vascular; the *pia mater* on the left side, especially along the sinus, and to a much larger extent on the right side, in the temporal region, was permeated (durchwept) by an exudation, partly hæmorrhagic, but more yellow, granulated, tuberculous, around which it was soaked by a greenish yellow serum. The substance of the brain was soft; in the ventricles there was half an ounce of grey turbid serum; the choroid plexus was pale; the *dura mater*, at the base of the skull, was irregularly infiltrated with serum, especially around the decussation and infundibulum.

The neurilema of the optic nerve and of the *motor oculi* was vascular, that of the *motor oculi was injected, of a dark red colour, at the part between where it leaves the brain, and where it penetrates the skull.* The left lung was free, the right one was firmly united at the top to the parietes of the chest; the substance of both did not collapse. Pale, with little blood; at the top of the right upper lobe, there were calcareous tubercles, surrounded by condensed tissue of the lung; at the lower part, as well as at the top of the left upper lobe, groups of grey fresh tubercles, the size of a millet or a hemp seed. The liver was pale, with little blood; at its inferior margin an old acephalocyst, the size of an egg. The mesenteric glands around the pancreas were converted into a cheesy mass, the size of an egg. The spleen and kidneys firm; the bladder distended, and containing more than two pounds of urine.

Oster. Med. Wochenschrift, No 46.

The tuberculous character of this case, could have been determined in a moment by the magnetic symptoms, like every other case of typhus fever.—*Editor.*

The Researches of M. Jobert (De Delamballe) on the Structure of the Uterus.

Mr. Jobert, surgeon to the Hospital St. Louis, is an enlightened and conscientious observer, whose labors seldom fail to throw light on the subject which he studies. We extract the subjoined account (condensed) of his researches of the anatomy of the uterus from M. Malgaigne's "Journal de Chirugie," one of the best conducted French periodicals of the day,

The uterus is generally considered to be formed of proper tissue, of two membranes, of numerous vessels, and of cellular tissue uniting these elements.

The existence of subperitoneal cellular tissue uniting the abdominal serous membrane to the uterine tissue, is generally admitted. This cellular tissue which is said to entirely surround the uterus, is considered by some authors to present the physical characters of yellow fibrous tissue, and by others to be susceptible of muscular transformation during pregnancy. My researches, says M. Jobert, have shown me that there is no cellular tissue or yellow fibrous tissue underneath the peritoneal covering of the uterus. Cellular tissue, on the contrary, is evident, at all periods of life, round the Fallopian tubes, the round ligaments, the ovaries, and a part of the uterine neck. The peritoneal serous surface is elsewhere joined to the entire extent of the uterine substance by muscular fibres, so adherent that it is difficult, except near the neck, to separate it from them without bringing some of them away. When this separation is affected on the posterior surface of the uterus, the torn fibres present a longitudinal disposition. On the anterior surface, on the contrary, the fibres appear transversal and oblique. At the fundus of the organ their direction varies, and cannot be always ascertained. This union of the peritoneum and of the body of the uterus is also evident in the female of the monkey, in the sow, the ewe, and the mare; in these animals the cellular tissue is abundant round the vagina, and in the large ligaments. The adhesion between the peritoneum and the cornea of the uterus is also effected by muscular fibres.

I think, therefore, that we may establish as a law that the peritoneum is connected with the proper tissue of the uterus, in woman and in animals, by muscular fibres, never by cellular tissue or by yellow fibrous tissue, and that cellular tissue, in the entire animal series, is the means of union between the peritoneum and the neck of the uterus, the vagina, and the large ligaments. I have never found any trace of cellular tissue in the proper substance of the uterus.

Is there a mucous membrane on the internal surface of the uterine cavity? Most of those who have submitted its existence have done so more on the strength of analogy than from anatomical evidence. Rœderer is the only author who really appears to have anatomically seen it. He says "I have seen an internal membrane, rather soft, thin and apparently villous (membranam internam,

villosam.") But the most celebrated modern anatomists have sought in vain for it, and if they admit its existence at the end of pregnancy, it is as a newly formed membrane. The numerous experiments which I have performed appear to me to demonstrate its existence The principal obstacle to its anatomical demonstration is the absence of cellular tissue between the mucous membrane and the proper tissue of the uterus, whence results, as it were, the fusion of the two parts. Nevertheless, a longitudinal or transversal section of the uterus shows a very thin layer, distinct from the proper tissue, the surface of which is remarkable from its polish and its coating of mucous. Maceration renders the presence of this layer still more evident. If the opened uterus is placed in very pure water the villosities of its surface become evident, but disappear after a lengthened maceration. At this period flakes may be raised belonging to the mucous membranes underneath which there appears a rugous uneven surface. In the female of the monkey I have found the uterine mucous membrane still more evident, and by boiling I have been enabled to raise a thin pellicle which appeared to me a delicate epidermis. This membrane contained follicles both in the neck and in the body.

The lacunæ, which are few in number on the internal surface of the body of the uterus, and which are rendered visible by maceration become more numerous on the internal surface of the neck, and there form a series of cavities, the extent, direction, number, and diameter of which vary at different periods of life, according to whether the woman has had children, or has suffered from uterine disease. These cavities are, as it were, the rudiments of follicles, and constitute another proof of the existence of the mucous membrane. The younger the subject is, the more numerous are the lacunæ. There are scarcely any to be found in women who have had children; these women present uneven prominences which appear to be constituted by the reunion of several of these lacunæ, or by the cicatrices which follow their rupture. The lacunæ situated near the external orifice of the uterine neck approximate more to the character of sebaceous follicles. They form a small sac, provided with a neck and an orifice which pours out the secreted mucous. When these follicles become obliterated the mucous collecting forms real cysts.

The structure of the substance of the uterus is still a debated point. Some look upon the uterine tissue as a special tissue, without analogy in the economy, others as a tissue of muscular nature, others maintain that it contains fibrine, and can be transformed into a muscle, but that it belongs to the yellow tissue. The possibility of the transformation of fibrous yellow tissue into muscular tissue is denied by M. Blainville and many others; moreover chemistry shows us that fibrous yellow tissue never contains fibrin, whereas fibrin is always found in the uterus at all periods of life. This fact alone proves the muscular nature of the uterus. M. Caventon, at my request, analyzed the uterus of a young girl of seven or eight years of age, and found it completely fibrinous, and absolutely free from gelatin. I, therefore, think I am warranted in stating that the uterus is formed by muscular tissue at every epoch of life, and that the uterine muscular fibres merely become more evident during pregnancy. The diversity of opinion which has hitherto existed is to be attributed to the arrangement of the fibres, to their extreme tenuity, and principally to their intimate connection with each other owing to the complete absence of cellular tissue. As regards the arrangement of the fibres, the greatest anatomists have failed to determine it with precision. Vesalius and Malpighi gave up the attempt. Ruysch describes an orbicular muscle, Hunter, layers crossing each other. Madm. Boivin recognized an anterior and posterior longitudinal layer, passing from the fundus to the neck; anteriorly and posteriorly three layers of transversal fibres, which lose themselves in the Fallopian tubes, the ligaments of the ovaries, and the round ligaments; two circular layers deeply situated, the centre of which correspond with the orifice of the Fallopian tubes; lastly, a thin laryer near the internal surface.

I have examined the uterus in the entire animal series with the greatest possible care, and think I am able to assert that it is formed of *one muscle*, the fibres of which, arranged in layers, present the following direction :—

The longitudinal superficial fibres, which may be called median from their position, are seldom seen on the anterior surface, but are constantly met with on the posterior, where they constitute two thin superincumbent layers.

1. Posteriorly, they begin at the fundus of the uterus, and end at the uterine extremity of the vagina, to which they become attached, with the exception of some few that terminate on the neck, above the opening of the vulvo-uterine canal. They adhere by one surface to the peritoneum, by the other to the oblique fibres.

2. The anterior superficial fibres do not pass along the entire extent of the uterine parietes, but cross each other before they arrive at the round ligament of the opposite

side. Some contribute to form it, whereas others pass behind and terminate on the lateral regions, where they cross also those of the posterior region.

3. There are other superficial fibres, only evident during pregnancy, which are destined to the Fallopian tubes and to the ovarian ligaments. Some originate at the fundus of the uterus, unite to those which contribute to form the Fallopian tubes, and pass on to the anterior part of the ovarian ligament. Others, more numerous, originate from the posterior surface of the fundus of the uterus, and pass on to the same ligament. Lastly, a few transversal fibres from the posterior surface form its inferior part. The numerous fibres which pass on to the Fallopian tubes originate at the fundus of the uterus and form a thick fasciculus, which divides into two secondary fasciculi destined one to the ovarian ligament, the other, more voluminous, to the Fallopian tube. Some fibres separate from the common fasciculus, and lose themselves, in the cellular tissue which separates the Fallopian tubes from the round ligament.

The deep fibres are very visible when the uterus has undergone rather lengthened boiling. They all evidently present a semi-circular direction, are rather oblique, and only differ from those above described by their smallness, and by their belonging exclusively to the body and to the neck of the uterus. They cross each other on the median line anteriorly and posteriorly, as also on the sides, so as to produce a kind of net-work. Their thickness varies as they approximate the internal surface of the uterus, where they appear to describe circles exterior to the internal membrane. There are annular fibres along the Fallopian tubes, which do not entirely encircle it, and are deep seated. Lastly, the blood-vessels are encircled by fibres, similar to the deep muscular layer which surrounds the intestinal canal.

The uterine neck is formed by fibres which constitute semicircles, and decussate without mingling. This semi-circular arrangement is more evident in women who have had children than in others. Do the fibres of the neck mingle with those of the superior portion of the vagina? It has appeared to me that the vagina attaches itself to the proper substance where the mucous membrane passes from the neck itself to the os tincæ. This insertion terminates abruptly anteriorly; posteriorly, on the contrary, it is continuous in every case with the longitudinal fasciculus. From the above data we may draw the following inferences:—

1. The proper tissue of the uterus is not fibrous yellow tissue, but muscular tissue, and that at all periods of life, and in all animals.

2. In pregnancy the uterus is merely in a state of muscular hypertrophy.

The uterus is formed by one muscle and not by several.

4. There exists an uterine mucous membrane, but without epithelium.

5. The direction of the uterine fibres shows how they act in freeing the uterus from its contents. The longitudinal layer of fibres, which originates at the fundus, and is inserted into the neck and vagina, tends to diminish the length of the uterus; while the semi-circular fibres by their action diminish its cavity in every sense. The longitudinal and annular fibres of the Fallopian tube explain the mode of progression of the product of conception, and those which surround the uterine vessels appear to diminish, by their contraction, the rapidity of the circulation, and to prevent hæmorrhage during parturition.

Camphor a Preservative of Ergot of Rye.

To the Editor of The Lancet.

Sir,—I was not a little surprised to read some remarks by Mr. Rawle, stating that he had discovered camphor to be a preservative of ergot of rye. I can only say that I have been in the habit of using it for the last nine or ten years, but not exactly in the manner described by him. I order the camphor to be *mixed* with the powdered ergot in the proportion of a grain in every scruple. By this means I think the camphor is more intimately diffused throughout the whole than can possibly take place by the plan proposed by Mr. Rawle. I do not give this either as a new, or, indeed, my own discovery; for I adopted the method by having seen it in the practice of Mr. Spurgin, an old practitioner, also at Saffron Walden, and from whom I have every reason to believe that your correspondent also obtained the same information, he having been engaged in the same gentleman's practice.

If you think the above worthy of notice you will oblige, Sir, yours respectfully,

John M. Simpson, M.R.C.S. &c

Staines, August 28, 1844.

The Effects of Tartar Emetic on Young Subjects

Mr. Wilton, of Gloucester, records in the *Provincial Journal*, four cases in which extreme prostration and collapse followed the administration of the ordinary doses of tartar emetic to young persons. Two of them were fatal. We alluded, on a former occasion, to several similar instances of the pernicious effects of this remedy, recorded by Mr. Noble, of Manchester. The recollection of those facts is sufficient to place practitioners on their guard when the use of this remedy is required in the cases of infants or young children.

PRACTICAL OBSERVATIONS:

*Affections of the Spinal Marrow: employment of Ranunculus Bulbosus.**

By Francis Black, M. D.

A. R., aged 20, of a bilious temperament, enjoyed good health until he was 16, when he first complained of weakness in the back. About this time, after bathing, he suffered from pain in his back which set in with a slow fever; but he was unable to go about his occupations until the end of 1840. In January 1841, he observed, while bathing his feet in hot water, that he had no sensation in them; at this time the pain in the back had disappeared, and the only thing complained of was loss of sensation; this gradually extended, the weakness increased, and, at last, he was scarcely able to walk.

March 16, the actual cautery was applied for about 9 inches along the spinal column, and after this time he was affected with complete paralysis of the lower extremities. From this period, bleeding, dry cupping, sinapisms, &c. were used, but without benefit.

I saw him first on the 15th February, 1842; he had then been confined to bed for six months. The following was his state:—Paralysis of the lower extremities, hardly any emaciation of the limbs; the flesh seems tolerably firm, the skin is slightly sensible. He is able to flex the left leg a very little, but with great difficulty, and attended with quivering of the muscles. He can scarcely move the right lower extremity.

There is no tender spot along the course of the spine, but there is slight lateral curvature, with acute projection of one of the spines of the dorsal vertebræ; here there is no pain, even upon pressure, but the skin over this place is slightly red.

Bowels costive, requiring constantly aperients. Urine passed freely and easily, although occasionally there is little pain.

Sleeps sound, but dreams a great deal; disposition cheerful.

Cocc. 18-4. ii., [4] m. et. n. ℥.* Up to February 28th, two such doses were administered; the bowels acted four times; no change, except that he feels as if the limbs were beaten, as if after a long walk; sulph. 30-4. ii., [] m. et n. 3. In this way cocculus 18., sil., 18., nux v., 15., and rhus., 6., were given until May, and on the 9th of May there was no change, when he got sil., 18-4. pulv. ii., [6] m. et n. 3.

May 17.—A day after the first powder, suffered from pain in the back, in the part where there is projection of the vertebral spine; it lasted for twenty-four hours, and was not increased by pressure upon the part. From this time there was a gradual increase of motion and sensation, Rept. June 1st.—Considerable improvement; he is able now to put one leg over the other, and with his feet to push off the bed clothes; sil., 6-4 [4] m. et n. . From June 8th to 20th he received, for other symptoms which had shewn themselves, calc., 18·, bell., 6., and sulph., 6. June 25th.—Continued improvement; sulph. On July 3d, the silex was again resumed, and continued until Septem. 23d, with, however, frequent intervals, during which no medicine was given.

September 23d.—Has now for a month been able to move about; walks pretty well. From this time he continued steadily to improve, but, as a precaution, moved about the room in a machine such as children are sometimes put into on first learning to walk. This he soon laid aside, and completely recovered under the daily use of occasional doses of sulph., calc., nux v., sil., and the administration of cold sponging, and latterly the shower bath. Some six months after this, he was again troubled with pain along the spine, and weakness of the limbs, but this soon yielded to the administration of silex. There now remains an acute projection of one of the dorsal spines.

The above case we believe to have been an affection of one or more of the bodies of the dorsal vertebræ of a scrofulous character, and that the paralysis arose either from inflammation or irritation, extending to the spinal column. We believe that the use of the actual cautery added to the already existing evils, by increasing the irritation, and thus rendering the paralysis of the limbs more complete.

The case is interesting, as shewing the beneficial influence of silex in a disease which, according to one of our best surgical authorities, "proves extremely obstinate or rather always incurable, at least with such few exceptions as hardly deserve to be mentioned." We cannot suppose that the successful termination was attributable to rest, and the horizontal position. *First*, Because these means had been previously tried for a considerable time without any benefit. *Second*, Because the improvement became apparent only after the aggravation caused by the silex; and during the treatment we observed much more evident effects from the silex than from any of the other remedies.—*Third*, Because we have, in several instances, seen similar good effects follow the administration of silex in affections of the spinal cord. We recollect, at present, two cases of children, where the benefit was very marked. The one, a child aged 2 years, of a strumous diathesis, was unable to stand

* Bulbous Crowfoot.

or walk, the lower extremities were thin and flabby, hanging down as if powerless; no loss of sensation; appetite pretty good, and the evacuations natural and regular.

Silex 18, was administered in solution, at various intervals, for a month; towards the end of the month, the muscles of the lower extremities became firmer, and the child could stand a little; the sil. was continued. In six weeks the child could stand well, and walk a little; and before three months had elapsed, the child could walk perfectly. In the other case, the inability to stand or walk was not so great; this child also perfectly recovered under the use of silex.*

Paralysis, principally of the lower extremities.

M., a middle-aged healthy person, of temperate habits, has suffered for twelve years, from palsy. He attributes it to a fall when hunting, but at no time suffered from pain in the region of the spine; the disease came on gradually, and notwithstanding that every possible measure has been tried, the palsy has not diminished. The following was his state when seen by me in December 10th, 1842:—The patient is well made, and of a healthy appearance; he complains of weakness, especially of the lower extremities, from the hips downwards. Stands with the greatest difficulty, and only by leaning the weight of the body upon the arms. Is able, when setting, to move the legs about but cannot place them firmly upon any thing; for example, if placed upou the fender, he cannot retain them there, they immediately drop down. The lower extremities are colder than other parts of the body, and deficient in sensation. Has complete control over the upper extremities, but deficient sensation in the fingers; feels, on grasping any thing smooth, as if its surface were rough. Bowels kept regular by a lavement of simple water. Urine passed easily.

Very liable to spasms in various parts, especially in the lower extremities.

Has amaurosis of the right eye.

Cocc. 6-4. pul. ii., [4] m. et n, 3.

December 22d. — The sensation is more perfect; feels more power in the lower extremities; suffered a good deal from shooting pains in parts where he had not previously felt them. Cont.

January 7th. — Continued improvement; is able to place his feet upon the fender, and retain them there. Until the 30th, he received two more doses of cocc.; but on the 31st, he retrograded considerably; rhus. [ ] was then administered, but with little good. On the 6th February he got silex [ ], this was continued until the end of the month, and under its use he was in the same state as on January 30th. During the month of March he received alternate doses of sil. [ ] and cocc, [ ]: by the end of this month he had considerably improved; the gritty feeling had left his fingers, the sensation had returned to his legs; going between two rows of chairs, he could walk backwards and forwards for a distance of 18 yards. *He could see well* with the right eye; the cramps had almost ceased. During April he received sil., and cocc., but principally the latter, and continued daily to gain ground. May the 2d, has been out, and with assistance, and sitting down, has been able to walk a quarter of a mile; and by the end of the month he could walk half a mile, though with difficulty; and always supported, and mount to the top of a flight of long stairs. To the end of June he received nux v., sil., and cocc. [ ] alternately, and continued steadily to improve. In July, however, he lost ground, and though the same remedies were used, as also rhus, oleander, agaricus, and sulphur, he from day to day became worse, without any assignable cause, and by the month of September was nearly in the same state as when I first saw him. The patient then became dispirited, and gave up the treatment.

This liability to relapse we recollect to have observed in two cases, both of them in elderly men, who suffered from palsy, not depending however upon spinal disease, as in the case above detailed, but following an apoplectic attack. Under the use of coccu-lus, which at first produced sharp shooting pains in various parts of the body where palsied, and where the patient had not suffered previously, they improved considerably in two months, and gave great promise of being cured: but before four months had elapsed, they gradually got worse; the one we lost sight of, the other resisted all the other means employed.*

Diseases of the spine, when affecting a great portion of the spinal marrow, are extremely unmanageable. We have not, and we have treated several, seen a single case, where the disease had so far advanced as to cause *great general disorder* and *partial palsy*, yield to treatment.

Nor does the first case we have given form an exception; for, in it, the palsy evidently depended upon the irritation of a diseased vertebra, but the cases, the prognosis of which we state to be unfavorable, are those in which there has been at first acute or chronic inflammation, which has probably

*These were all cases of tubercular disease of the spine.—Editor.

*This was a case of tubercular disease of the brain and not of the spine as the Dr. *guessed*.—Editor.

led either to rammollisement or some other structural change.

This obstinacy is what we might almost have been led to expect, when we consider that Homœopathic practitioners are rarely at present consulted until the poor patient has been bed-ridden for years, and undergone the most violent treatment. The prognosis is also more confirmed when we know, that, though the affection may not have commenced in some organic change, the long-continued disease and *treatment* will produce it. But, though hitherto unsuccessful, we do not despair of succeeding in recent cases of this disease: and our hopes are principally founded upon the great benefit which follows the administration of our remedies in similar cases, but confined to a smaller portion of the spinal marrow or its coverings. For example, we have seen great good follow the administration of ars., nux v., and lach., in cases of dyspnœa, cough, pain in the chest and palpitation, which were distinctly referable to irritation in the upper dorsal portion of the spine; spasms, pain in the bowels, and gastrodynia depending upon the same cause, relieved by nux., v., cocc., and veratr.

The alternate use of the above medicines, together with sil., sulph., calc., and bell., are frequently attended with great relief to the patient. Even in advanced cases, the pains in various parts of the body, the disorder of the stomach, and costiveness, which is a frequent symptom, are frequently relieved by these remedies. The subject of costiveness reminds us of a case of a yonng lady who had been unable to walk for a long time, owing to a spinal affection; when we saw her she had recovered so as to be able to walk across the room; but it was especially for the excessive costiveness that the aid of Homœopathy was asked. She was in the habit of taking every 4th day, two or three colocynth pills; nothing weaker would act; about an hour after taking these, she became always sick; this increased; and before long she was seized with cramp in the abdomen, and vomiting; towards the morning this lessened, and she had an evacuation; all aperient medicine produced the same symptom; and even strong enemata had no effect. Under the use of nux. v. i. the costiveness was much improved, so that the bowels, with the aid of an enema of simple tepid water, were moved every 4th day. We at first tried the higher dilutions of nux, and then various other medicines, sulph., lach., sil., puls., bry.; but without any effect; but, after nux v. 1. g^{tt} [1], there was almost regularly an evacuation. She improved in strength: but of late has discharged from the bowels a peculiar white tape-like substance, which we at first supposed to be tape-worm. A more minute examination shewed it to be an exudation from the intestines. This exudation has continued for nearly eight months; but Homœopathic treatment was only steadily pursued for about six weeks; the medicines given were sulph., nit., ac., nux v. and merc., but with the exception of the nux, which relieved the costiveness, their administration was attended by no improvement. The patient is again under treatment.*

Diseases of the Spine producing various Neuralgic Affections.

C., aged sixty.—Has since the age of twenty-one suffered from affection of the head and spine—for many years she complained of fatigue and weakness, with tendency to syncope. In an acute affection of the head she lost her sight and smell. After this the eyes inflamed very much, and since then she has been constantly liable to attacks of shooting pain in them. She has great lateral and also antero-posterior curvature. There is a very tender spot over the lower cervical vertebræ, which, upon being pressed, causes violent shooting pains down the scapulæ, chest, and arms. Complains of spasmodic sharp pains round the waist and in the abdomen, and also similar pains in the lower extremities, especially at the ankles. The least motion increases the pain—pain worst at night; is unable to walk, and raised with difficulty from her invalid's chair; sleeps very little. Bowels costive; frequent acidity and great flatulence. She had undergone every variety of treatment without benefit. Such was her state in August; cocc. 6-4 ii. [4] m. et n. $\overline{3}$. Cocc. was thus administered alternately with nux v. 18., until Sept. 3d; by this time the bowels had become regular, the flatulence less; she was able to move the body with greater ease. Sept. 7th, continued improvement; sulph. 6-3 ii. [4] m. et n. $\overline{3}$. Sept. 18th, sil. 18., was administered as above, and under the use of this remedy she improved very rapidly; the pain became less frequent; she was able to walk a little; slept better; appetite improved.

From this time until the end of October, she received sil. 18., [ ] calc. 18., [ ] and continued to improve. She was able to walk about with much less pain; and even went out to drive. Up to the present time this patient has continued comparatively very

*This is a case of tuburculu disease of the liver, stomach, intestines, and uterus,—Ed.tor.

free of pain; and when it comes on, cocc., or sil., succeed in relieving it. Occasionally carbo. v. was given to relieve the flatulence, which at night was sometimes excessive.

Miss W., aged 26, has suffered for fifteen years from her present affection, for which numerous remedies have been tried, but without any relief. She was seen by us on January 17th, 1844. She states that the pain commenced gradually, and without any assignable cause. The pain commences in autumn, gets worse during winter and spring, and diminishes during the heat of summer. She complains of frequent attacks of pain between the shoulders, in a space not larger than half-a-crown, over the 8th dorsal vertebra, where there is no tenderness upon pressure. The pain is dull, coming on frequently eight or nine times a-day, but never at night. The pain frequently extends round the waist, when she suffers from cutting pains, as if knives were run into the stomach; these shoot round to the back, and suddenly disappear, when they settle into the dull pain above described. When the pain goes off, she is troubled with yawning. Catamenia regular, and in all other respects quite well. Cocc. 6-4, iii. [6] 8ta q. q. h,

Jan. 26.—Pain between shoulders much better. Ars. 15-4. Cocc, 6-4. Ars, 6-4. Cocc. 6-4. [4] m. et n. 1.

Feb. 9,—Has been greatly better; for the last ten days has had no pain between the shoulders, and the cutting pains in the abdomen have almost ceased.

Rept. Med. ut Jan, 26th.

Feb. 24,—Is now, and has been for some time, entirely free of pain. The patient, up to the time we write, has continued free of pain.

Ranunculus bulboses we have found useful in three instauces of pain depending upon spinal irritation. In one case, the patient, who was under treatment for chronic headaches and abdominal affections. complained of sharp shooting pains round the chest;—in the other, the pain was acute, and felt principally in the shoulder, axilla, and mamma; so acute was it in the breast, that the patient dreaded cancer, for which fear there were no grounds. These two cases we believed to be neuralgia of the intercostals. The third, which was the case of a lady who had suffered from long-existing spinal disease, and complained of sharp gnawing pain over the left side of the chest, as if the skin were torn, with occasionally shooting pain from the spine. In the two first cases, two doses of ran. 6, [ ], removed the pain, and in the third it was also very useful, but the pain returned in a fortnight. She is still under treatment; but, under the use of sil. and cocc. has improved considerably.

As the ranunculus is not as yet much used, it may not be uninteresting to give the following case of rheumatism, where it proved useful.

J. S,, aged 50, has been several voyages to warm climates; during his last voyage he caught cold, and has for some months suffered from rheumatism. The pains are confined almost entirely to the trunk. He feels as if the abdomen and chest had been bruised; on the least motion the pains become cutting and sharp. Bowels costive; tongue foul.

June 23.—Ran 6-4 ii, [4] m. et n. 3.

July 4.—Pains a good deal better. Rept. med.

July 13.—Pains in abdomen and chest are now gone; complains of pain in the neck and shoulder, Bry.

July 17.—He was better, and again received bry; and on the 20th, from a slight return of the pain round the chest, ran. b. was again administered. After this he underwent treatment for disorder of the stomach.

From the pathogenetic action of the ranunculi, we believe that they would frequently be useful in various rheumatic and neuralgic affections, especially of the chest.

The last cases the Doctor calles "Neuralgic Affections," are plain cases of tubercular disease of the organs and muscles, or chronic disease of the organs and rheumatism; and they are now in much the same state they were before the Doctor saw them.

Calculus of the Bladder treated by Electricity.

To the Editor of The Lancet.

Sir;—A "SUFFERER" imploringly asks in your last number whether you know any thing of a method for the cure of stone by electricity, and seems justly to estimate its importance. For his comfort I beg to inform him that there is such a method, and, I believe, a successful one. The author of it, whom at present I have no authority to name publicly, was so good as to call on me, about a fortnight ago, with a patient, on whom he had successfully operated, in order to show me what had been done. The man was perfectly well after, I think, about two months' treatment. I questioned him as to his previous suffering, and there can be no doubt that he had labored under very aggravated symptoms of stone in the bladder. He had, moreover, been sounded, I was told, at one of the Borough hospitals, by an eminent surgeon, whose opinion was that there was a large calculus. The physician who

brought him to me informed me that it was a very large lithic acid calculus that had been decomposed. I presume that very soon the subject wtll be brought before the profession and the public.

I am, sir, your obedient servant,

WM. MACLURE.

Harley-street, Aug. 5, 1844.

Therapeutical Application of Cold.

To insure good effects from the application of cold, the temperament of the patient should always be considered. In nervous persons, and upon irritable organs, the use of cold should never be carried to the same extent as in opposite states of the system, or in other parts of the body. Two young females, sisters, one of whom was of extreme susceptibility, the other more calm, were attacked at the same time with fever. Ice was applied to the head of both of them. The latter was relieved by the application; the symptoms of the former were, on the contrary, aggravated by it, and the attack soon proved fatal.—*Idem.*

On the Causes, Symptoms, and Treatment of Acute Founder in the Horse.

A clever communication on this subject, from the pen of Mr. Gabriel, appears in a late number of the *Veterinarian*. He points out, in an historical sketch how successfully the disease was treated some two hundred years ago, and how, on the other hand, by modern veterinarians it has been deemed incurable. He attributes its occurrence, in a large majority of cases, to over-exertion of the animal, either by long standing, rapidity of travelling, or long journeys. The symptoms are characteristic: in addition to fever there is an extreme reluctance of the animal to rest its weight on the affected fore-feet. In getting up from the ground, or in attempting to move, the hind-feet are made the instrument of progression. The treatment hitherto pursued has been exceedingly varied. We do not profess to be very profound hippopathologists, we must rely to a certain extent, therefore on the statements of the author. He says that modern pathologists pronounce the disease incurable; in his hands that the treatment rarely fails. This consists of a dose of Barbadoes aloes [eight or nine drachms] and then *a seton through each frog*; on the latter he places his chief reliance. Venesection must follow till the pulse is affected, and large tepid bran-poultices are to be applied to the feet. The shoes should not be removed, but the venesection and physic must be repeated if necessary.—These hints may prove useful to some of our professional readers, whose horses are too liable to a disease amongst the exciting causes of which are to be found rapid travelling and long journeys.

One of the most remarkable substances yet met with in organic chemistry has been obtained by Dr. Blyth, in an investigation, carried on in the Giessen laboratory, upon the styrax liquidus;—before the publication of Dr. Blyth's paper we cannot say whether as a product or educt, nor can we give the composition of the body; but it is in the form of a colorless, transparent and very limpid ffuid, with very high refracting powers.—Upon heating this fluid, in a closed vessel, beyond its boiling point, it becomes converted into a solid hard body, retaining its transparency and its refracting power unimpaired, looking like a piece of pure glass. To this substance the term styrol has been applied.

DIABETES TREATED BY ALKALIES.

MM. Miale and Contour narrated a case of diabetes millitus cured by the use of alkalies. and sudorifics. The patient, a man aged forty-three, had been labouring under diabetes for eighteen months, and was in the following state:—Extreme prostration and emaciation, great weakness, appetite good, digestion easy, thirst intense, dryness of the mouth although the patient drank five or six quarts a day. His urine was abundant, and the quantity was always in relation to the fluid he introduced into the economy. It was acid and nearly colourless; density, 1035.; it contained a little more than nine drachms of sugar for each quart. After giving, without any result, the chloride of sodium during fifteen days, the internal administration of alkalies was commenced, as also the use of flannel, of vapour-baths, and of a highly-animalized diet One drachm of bicarbonate of soda and eighteen grains of calcined magnesia were given daily during eight days. The dose of bicarbonate was then progressively raised to one drachm and a half, to two and a half, and, lastly, to three. The doses of the magnesia remained the same. This treatment lasted a month, and was followed by complete success. The quantity of sugar contained in the urine gradually decreased, and when the fluids of the economy had recovered their alkaline properties, it entirely disappeared. At that time the patient was cured, and eating every day a pound of bread along with a pint of milk. He still, however, continued the use of the alkalies, and it was impossible to say whether the symptoms might not return, were their administration suspended.

DUODYNAMICS.

Medicines that act upon the different surfaces of the body are either positive like the alkalies, or negative like the acids; that is, they are of opposite dynamic characters. Their combinations also are varied with the predominance of one force or the other; for each and every one of the articles are imbued with two forces; one of which prevails over the other, and determines its character as negative or positive. In some articles the prevalence of one over the other is very great, while in others it is very little, no matter whether they belong to the vegetable, mineral or animal kingdom, or are combinations of the different kingdoms; and we distinguish these different medicines by their effects upon the serous and mucous, or negative and positive surfaces in acute and chronic diseases of these surfaces.

Physicians have been constantly in the habit of prescribing negative and positive medicines indiscriminately in these diseases, without a knowledge of these distinctive dynamic properties, and the result of such practice has been any thing but satisfactory. We have, however, pursued a different course for many years, and the extraordinary confirmation of its correctness in the results obtained from the action of the forces from the Rotary Magnetic Machines has suggested the great importance of a new classification of medicines, and we have consequently commenced the work, as will be seen in the following tabular view in which medicines are classed according to their negative or positive properties.

It contains it will be seen the principal articles used by both the alopathic and homœopathic physicians, and present in one view a list of negative medicines, which are used mostly in diseases of the serous surfaces, and a list of positive medicines, which are prescribed mostly in diseases of the mucous surfaces, or one of which acts at least more directly on the serous, and the other on the mucous surfaces.

Negative.	Positive.
Acid, Acetic,	Amonia. Carbonate,
Benzoic,	Acetate,
Muriatic,	Muriate,
Nitric,	Antimony, Crude,
Phosphoric,	" Sulphuret,
Prussic,	Assaffœtida,
Sulphuric,	Balsam Copavia,
Aconite, Monks-hood,	" Canada,
Antimony, Tartarized,	Bryonia,
Antimonialis Pulvis,	Calcaria Carbonica,
Arnica,	Carbon Vegetable,
Arsenic,	" Animal.
Aurum, Gold,	Castor Oil,
Belladonna, Night-shade,	Cina Wormseed,
Baryta Iodide,	Camphor
Calomel,	Catechu,
Cannabis Ind. Hemp,	Cinnamon,
Cantharides,	Cochineal,
Chamomilla,	Cocculus Indicus,
China, Cinchonia	Colocynth, Bit. Cucumber
Colchicum Mead. Saff.	Cream of Tartar,
Conium. m. Hemlock	Creosote,
Crocus Sativus Saffron,	Croton Oil,
Cuprum Copper,	Cubebs,
Acetate,	Elaterium, Wild Cucumb'r
Sulphate,	Gamboge,
Digitalis,	Graphites. Carburet of Iron
Dulcamaria, Bitter-sweet,	Galls, Nut,
Emetic Tartar,	Gum Amoniac,
Gold, Chloride,	Kino,
Hyosiamus, Henbane,	Scammony,
Iodine,	Hellebore, White,
Iodine Chloride,	Black,
Iodide Potash,	Hepar Sulphur,
Mercury Mu- Corrosive or	Ignatia, St. Igna. Bean,
Mercurius Solubilis,	Ipecacuanha,
Magnetism,	Iron Carbonate,
Magnetized rings,	" Subcarbonate,
Mesmerism,	" Iodide,
Morphine,	" Muriate,
Nux Vomica,	" Sulphate,
Opium,	Jalap,
Pulsatilla,	Kino, Gum
Pulvis Antimonialis,	Lead Acetate,
" Doveri,	Lime, Muriate,
Quinine,	" Sulphate or
Ranunculus. B. Crowfoot,	Hepar Sulpher,
Rhus Tox. Sumach,	Lycopodium, Club Moss
Secale Cornutum Ergot,	Lobelia Inflata,
Silicia Silex,	Mercurius. or
Silver Nitrate,	Mercury Crude,
Sang. Cana. Bloodroot,	Magnesia Carbonate,
Sepia Inka juice, C. Fish,	" Sulphate,
Spongia Tosta,	" Calcined,
Stramonium, Thorn Apple	Petroleum, Tar Barbadoes
Tin, Muriate.	Potash Carb. Salts Tartar,
	Potash Caustic,
	Petrosilineum, Parsley,
	Phosphorus,
	Rheum, Rhubarb,
	Scillae. Squills,
	Soda, Carbonate,
	" Muriate,
	" Sulphate,
	Sulphur,
	Tartarum, Cream of Tartar
	Zinc, Sulphate.

CAMPHOR A PRESERVATIVE OF ERGOT OF RYE.

To the Editor of THE LANCET.

Sir,—In the Lancet of to-day, is a notice of Mr. Rawle, surgeon, of Saffron Walden, concerning the preservative power which camphor exerts upon ergot of rye. I have been in the habit, sir, of using this preservative for the last six years, and have done so in consequence of having read the following passage in a paper of Dr. Bright's, published in No. 141 of the "Edinburgh Medical and Surgical Journal:" "Camphor if intermixed with even-powdered ergot, completely prevents the formation of animalculæ," &c.

AUGUST 17, 1844. AN OLD OBSTETRICIAN.

Effects of Magnetising upon the Magnetiser.

Rheumatism—Dizziness—Cold feet and hands—Neuralgia—Tic Douloureux—Hahnemann and Homoeopathic remedies.

We probably receive, on an average, fifty shocks a day in magnetising our patients, either from accidentallv touching the unprotected parts of both buttons, or from touching the patient with one finger and a button with the other, and were at first much alarmed at the consequences that might result from it. We have been, however, not only happily disappointed in our expectations of injury, but have found it a great benefit to us. It has removed every vestige of chronic rheumatism with which we have been much affected during the last fourteen years.

We never had so much elasticity in our body and limbs, and never had so much strength; we never walked with so much ease as we now do; and besides, we frequently, even after having gone through great labor during the day, feel so much elasticity and buoyancy that it is rather difficult to sit or stand still, from a strong inclination to be moving, jumping, or dancing; these sensations are in fact sometimes so strong as to require great efforts to repress them.

Persons affected with rheumatism, and especially those in the decline of life, are more or less subject to turns of dizziness,, which sometimes compel them to sit or lie down suddenly, to prevent them from falling, and we had been much affected in this way. But these premonitory symptoms of palsy have entirely disappeared with those of rheumatism; and we have removed these symptoms in many other cases, by magnetising the brain—a practice much more simple and effectual than the old routine practice of the schools.

Those who are affected with rheumatism are very subject to colds,and to cold feet and hands. A great number of the cases of headache, are those of rheumatism affecting the muscles of the head, and the membranes of the brain; and the muscles of the face are affected with rheumatism under the names of Neuralgia and Tic-Douloureux; and those of the heart under the name of hypertrophy of the heart.* Many of the cases of vacillating pains about the chest—of the front, right, and left side, along the pectoral and intercostal muscles, are cases of rheumatism, often mistaken for disease of the lungs. These cases are all distinguished in an instant by the *pain* produced by pressing with the thumb and finger on the intervertebral spaces of the middle and back part of the neck, the intensity of which increases with the intensity of the disease; and physicians, on commencing the practice of the magnetic symptoms, are often surprised to find the great number of cases of rheumatism—of tubercular disease of the muscles, as well as of the organs.

Hahnemann committed a great error in mistaking tubercula of the organs and muscles for Psora or Itch, as every physician knows who practices these symptoms; and in searching for remedies for this imaginary affection, or "*anti-psorics*," justly subjected himself and his followers, or homœopathists, to the imputation of chasing a phantom.

These remedies, like those of the Allopathists, have no effect in chronic diseases of the organs and limbs, but that of palliating urgent symptoms in the periods of excitement,which uniformly follow those of repose. They NEVER cure the disease, and have little or no effect upon those who are not very susceptible to mesmeric or magnetic influence.† Homœopathic remedies are, however, generally very efficient in acute diseases, and are useful as palliatives in those that are chronic.

The negative and positive surfaces of the facia of the muscles are both equally affected in acute rheumatism, and the affected limb or limbs are consequently paralyzed; and in chronic rheumatism the positive surface of the facia in which the motor nerves terminate, is more or less affected, and the motion

* In magnetising for headache, the negative button should be placed over the point where the pain is most intense, as in other cases.

† The great number of cases we have examined with the magnetic symptoms during the last seven years, after they had been a long time under the treatment of the homœopathists of this city, has left no doubt upon this subject.

of the limb or limbs more or less impeded, and hence the necessity of using positive as well as negative medicines, or combinations of positive and negative medicines, in many cases of this disease. The uncertainty in regard to the extension of the disease in the different surfaces, relatively to each other, necessarily makes the true remedy for any given case uncertain, so that it may be necessary, in some cases, to try one, two, three or more, before we find the right one. Medicines of any kind in this disease, are, however, only palliative; they rarely cure it permanently.

MESMERISM.

Rome, N. Y. Dec. 3, 1844.

DR. SHERWOOD,

Dear Sir:—As you are the publisher of an independent medical journal, permit me briefly to relate a case or two, of the cure of disease by mesmerism.

Not long since I was called to see Mrs. M——, who was laboring under a severe attack of Inflammatory Rheumatism. She had called her physician the day before, who had bled her largely, blistered the shoulder (this and the elbow being the parts affected) and given a cathartic. Her suffering was intolerable. Every thing that had been done only increased her difficulty. I at first refused to prescribe for her in the absence of her physician. Of this she would hear nothing, but in her acute sufferings implored that I would try magnetism. At that time I did not believe it to be of any avail, but to gratify her I made the effort, and to my utter astonishment found that her sufferings began to abate, and in less than forty minutes she was perfectly easy, the arm, that was before immoveable and suspended on pillows, became flexible and the shoulder could be rotated, and moved in any and every direction.

At the time I entered the room her sufferings more resembled those of a woman in the last stage of labor than any thing to which I can compare them. Now behold the change! In less than one hour she may be said to have been cured; for her pain never returned, and as soon as her blister healed she was attending to her domestic duties!

Another case has since occurred under my observation, even more unaccountable than the one above related. A young man was suffering under partial paralysis of the right side, so much so that he could not close the eye of that side, nor thrust out his tongue, which, was turned sideways: there was moreover, great loss of sensation and motion of the whole of that side. At the suggestion of Professor Grimes, the young man being easily magnetised, I put him into the mesmeric sleep; and then, in that situation, told him that my object in mesmerising him at that time was to *entirely remove all his paralysis.* I assured him that a pass from my hand over the affected part would restore lost motion; and that as soon as this was done he would perfectly close his eye, thrust out his tongue straight, and have all his natural motions perfectly restored. In short, that he would, by this, be entirely cured.—After repeating these assurances and making a few passes over the side affected, I awoke him.

I then told him in a grave and confident manner that my object in putting him to sleep was to cure his palsy, and *that I had done it.* "Now," said I "you can thurst out your tongue straight; you can close your eye, and do all other acts with that side that you ever did." He then made the effort to close the eye, and thrust out the tongue, and to my utter astonishment every effort was successful. In short he was well; and from that day to this, nothing of his former difficulty has returned.

I know that for a man to relate circumstances like the above, is as much as his reputation for truth is worth; but I only state what I do know, and testify what I have seen. Below I give you the names of both of the above persons; one of whom is now a resident of your city.

Yours Respectfully,

J. V, COBB. M. D.

Effects of the Rotary Magnetic Machine.

St. Andrews, 18th Nov., 1844.

DEAR SIR:

In fulfilment of my promise to report to you the case of Comp. *Bronchitis,* I alluded to when I saw you last, I must apologise for its not being as free and concise as could be wished; as in the pressure of professional business, it only received a notice among a variety of other cases.

Mrs. H——, of Orange Co. N. Y., of middle age, bilious temperament and leucophlegmatic habits, last winter, suffered from

a severe and protracted attack of inflammation of the bronchial avenues, ending in effusion of the chest, (the sequel of a tedious labor, with profuse uterine hemorrhage,) from which, however, she recovered tolerable well, and so continued until August past; at which time pains of an erratic character appeared about the shoulders and right side; soon followed by tenderness in the left pectoral region, and some quickness of breathing, loss of strength, appetite, and a dry hacking cough, which annoyed her constantly—the dyspnoea now so great, that it was impossible to take the least exercise; and at one time absolutely threatened suffocation.—*Blisters, expectorants, alteratives,* &c., &c., I used for some time with little or no benefit; at length, I caused the use of the R. M. Machine ,and in exploring the chest found *Tuberculа* of the *lower* and middle *lobes* of the *left lung*, with chronic inflammation of the *Bronchia*; (pulse at this time very quick and full.)

The instrument was now used daily for three weeks, with the use of Naptha as an expectorant; and a comp. C. gold pill night and morning as a deobstruent, (if you like the term.) In conjunction and for some time subsequent to the discontinuance of the use of the Machine, rapid improvement followed from the first week—cough lessened—appetite returned, &c., &c., and at present is in the enjoyment of very good health, attending to her domestic duties, (the widowed mother of six interesting children.) It may not be improper for me to state that in March last she lost her husband with tubercular consumption, and she had come to the deliberate conclusion that no better fate awaited her; considering the disease as contracted from care and attention given to her husband, and by strong entreaties and to gratify friends, was she alone prevailed on to accept of relief.

A Physician of Orange Co.

MAGNETIC SLEEP.

A much greater number of persons can be put into the magnetic or mesmeric sleep under the combined influence of the rotary magnetic machine and the magnetiser, than by the common method, or that of the magnetiser alone. We have put persons into that state by the influence of the machine alone.

In the combined operation we place the positive button in the left hand of the person to be magnetised, and take the negative button in our left hand, and then take with the other hand the right hand of the same person, under the most moderate power of the instrument.

The patient is then requested to look steadily at some small object, as the armature of the instrument, as long as the eyes can be kept open, and then to close them and go to sleep, or into the mesmeric state.

This manner of magnetising, like every other, should be practised, under the most favorable circumstances, as regards time, place and seclusion, and should be repeated every day at the same hour, until the object is effected.

When persons or patients have passed into the mesmeric state, they should be treated in the most mild and respectful manner, and if they show symptoms of restlessness, a few passes should be made from the head, along the arms to the feet, which will quiet them, and they may then be allowed to remain in that state a few minutes or one or more hours, according to the judgment of the magnetiser, when they may be aroused in a moment, by reversing the action of the machine, or by the reversed passes, or passes with the back of the hands over the face at right angles with the median line.

Patients are sometimes clairvoyant the first time they are mesmerised, but not generally so; they will, however, tell the number of times it will be necessary to mesmerise them before they will become clairvoyant. They advance in *light* and knowledge by *degrees* in the mesmeric or somnicient state. There are six of these degrees, and six sub-degrees or steps in each degree, thus making thirty-six; and the clearness and extent of their vision, as well as of their intuitive knowledge, increases as they advance in the different degrees. There are, it appears, very few who advance higher than the third degree, or eighteen steps. A few are raised as high as the fifth degree, but these are the bounds it seems they cannot or do not pass with impunity.

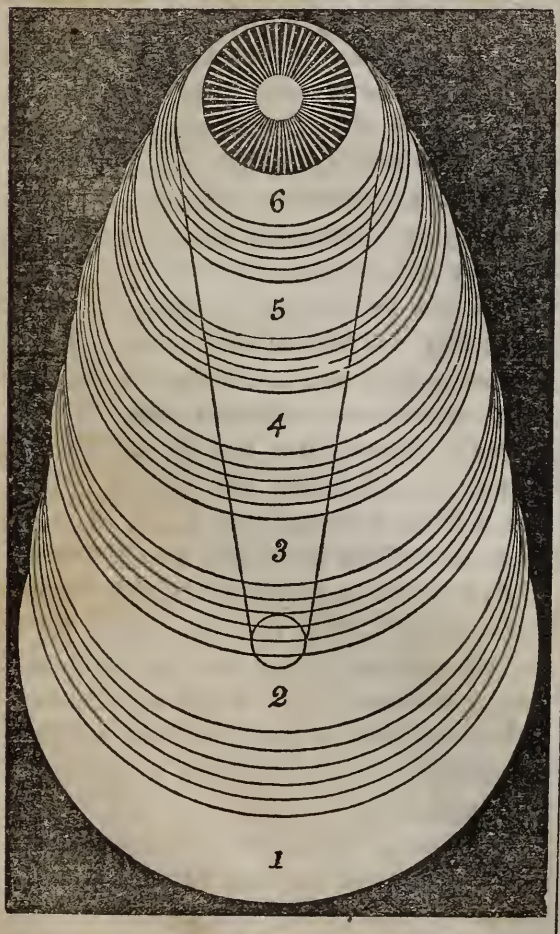
These recognized degrees are described as circles of light in the form of a cone, with steps or degrees of less light in spiral circles

between the greater degrees of light in perfect circles—the spiral being continuous, and terminating in a disc of the most intense light in the top of the cone, as represented in the engraving below.

The light is represented as radiating from the disc at the top, to the bottom of the cone, and the intensity of the light is minimum in the first degree at the base, and increasing in each degree as they rise to the sixth, where it is at its maximum.

A reversed interior arrangement or inverted cone, is also described by clairvoyants, corresponding with that in the circumference, as seen by its outlines in the engraving—the great degrees of both being interspersed with rooms or apartments of light, which are probably reflections connected with the phrenological organs.

The first great degree of light forming the base of the cone first described, surrounds the base of the brain, while the sixth degree is mounted on its summit.



Clairvoyants have the power or faculty of increasing the diameter of the great degrees or circles of light, to an unlimited extent, for the purpose of encompassing objects situated at great distances, and enabling them to see and describe with great accuracy through the surrounding Magnetic medium, especially in the intense light of the higher degrees.

The light is very dim in the first degreee, less so in the second, and at a medium in the third; in which degree clairvoyants see and describe very well under favourable circumstances, but are otherwise subject to great errors in their descriptions, as well as in the first and second degrees.

In raising clairvoyants to the higher degrees, magnetisers should proceed with great caution. They should first inquire about their knowledge of the degrees in the somnicient state, and then of the degree they are in. If they are in one of the lower degrees, the magnetiser may then inquire whether he can raise them to the next degree. If the answer is in the affirmative, he may proceed to raise them by the exercise of his will; but if it is in the negative, the clairvoyants will, on inquiry, tell him how many times it will be necessary to magnetise them, before he can raise them to the next degree. We have great doubts of the propriety of any attempt to raise them higher than the fifth degree, even with the most perfect preparations for it; because in the present state of our knowledge they cannot be raised to the sixth degree without great danger, indeed, without the peril of their lives; and there is no real necessity for it, as the light is intense enough in the fifth degree, and there are also sights enough that may be seen in that degree to satisfy the cravings of the most marvellous.

The phenomena of the degrees in the labyrinth we have described, as seen in the somnicient state, and about which there appears to be no reasonable doubt, are one of the most extraordinary that was ever presented to the human mind; yet it is a perfectly simple, and beautiful magnetic arrangement, resulting from the operation of magnetising, or of giving a new and systematic magnetic

form to the brain—of adding an artificial to natural organization, in which the organization of the great pole in the centre of the brain (2) is reflected upon its surface, and from thence into infinite space.

The poles of all the other organs are organized in a similar manner as seen in the somnicient state; that is, they are organized with circles at right angles with their radiations, like those seen on the summit of the labyrinth, and some clairvoyants see through those of the stomach. Besides the concurrent testimony of clairvoyants on the organization of magnetic poles, it is found on a comparison of our previous knowledge on this subject, that their descriptions agree exactly, as far as our knowledge extends. We were well acquainted with the radiations, with the circles at right angles with them—with their light, and with their spiral circles and inverted cones; and could not, therefore, fail to recognize in these descriptions, a magnetic organization.

Those who are unaccustomed to magnetic phenomena, however, find great difficulty in reconciling with their preconceived notions, the possibility of persons being able to see, and thereby distinguish, objects through any other medium than that of external light, and by means of the ordinary functions of vision.

The idea of *any* light, except that which comes from external objects seems to be regarded as unphilosophical, if not assumptive of the supernatural, although an easy and palpable demonstration of the fact is, at all times, within the reach of the most sceptical and supercilious. Let the doubter and sneerer simply close his eyes, so as to exclude all external light, retiring, if he please, into a perfectly dark room where not a ray exists, and on pressing his fingers on his eye-balls, he will *see*, without that mechanism of the eye which is essential to external vision, several distinct and concentric rings of light, around a central point of still greater brilliancy. And though he be afflicted with blindness towards external things, this power of internal vision will be in nowise impaired. The light thus seen is magnetic, being elicited from the two poles of opposite denominations, which belong to the crystalline lens, and is doubtless of the same character as that which is affirmed by clairvoyants to exist in the brain, the heart, the cervical glands, the kidneys and other organs, and by which, in fact, they are enabled to trace the whole magnetic organization of the human system. With the intense luminosity of the magnetic forces when in atmospheric combustion, every one is familiar; and we have now furnished an example, at least equally familiar, in which this luminosity is independent of atmosphere as it is distinct from every other kind of light. In short, every one can see for himself precisely the same kind of light that is beheld by clairvoyants in the mesmeric state.

ANIMAL MAGNETISM.

Surgical Operation under the influence of Magnetism.—The editor of the Cleveland Plain Dealer, states that he witnessed on the 25th inst. a most difficult surgical operation, performed by Professor Ackley, assisted by Professors Delamater, Kirtland, and others before a class of students at the Cleveland Medical College. The patient was a Dr. Shriever, from Columbiana county, Ohio, quite an elderly man. It was an operation for tumor, situated under the lower jaw and partly in the neck, near the right ear. In reference to the proceedings of the operator, the Plain Dealer has the following statement:

"We happened in just as the Professor was putting knife to the skin. He made two or three frightful gashes, seemingly cutting the throat, and not a muscle of the old man was observed to move. We were astonished, and we think the whole medical class, and even the faculty were not less so than ourself. The secret was, the patient was in a magnetic sleep. This fact of course was known by the professors, but not by the spectators generally. There stood, by the bleeding patient (not sufferer) the magnetiser, who, with the magic of Mesmer, had thrown his subject into pleasant dreams; and now while the knife of the bold surgeon was dashing away at his vitals, and dripping with gore at his throat, he could say to the trembling nerves, "be still," and all was quiet! What a triumph of mind over matter was there! The will of the magnetiser striking dumb even the living being and making even his body the insensible subject of dissection! No agonizing groans were

heard, as is usual from the conscious patient to alarm and terrify the operator; but he went quietly on, without haste, and consequently with better effect. It lasted some fifteen minutes, during which time there were frequent consultations among the professors, as it proved to be a malignant case. It caused a frightful wound and a profusion of blood. The patient was removed to another room, still unconscious of pain and the operation; and when we left he was assuring the magnetiser that he felt quite happy.

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The following article, from the Newburgh Gazette may be given in proof of the practical application of Animal Magnetism in many important and painful operations.

MR. ADAMS.

Beneficial effects of Animal Magnetism.

A correspondent has furnished us with the following interesting statement touching the beneficial effects of Animal Magnetism. The operation alluded to was performed on Wednesday last, by Dr. Grant, at the house of David Cromwell, near Canterbury, in the presence of several persons, among whom were Drs. Blackman and Phinney, of Newburgh, who are ready to vouch for the truth of the facts as stated by our correspondent. The following is his statement.

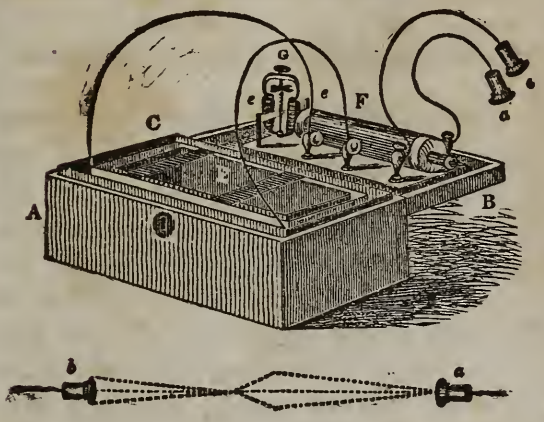
"The patient, a female 18 years of age, was subjected to the usual mesmeric "passes" by Mr. Adams for about ten minutes, when she appeared to be in a deep sleep. Dr. Grant then proceeded to cut around the gums of two of the molar teeth on the lower jaw, and to extract them with the forceps. During the whole of this proceeding, the patient manifested not the slightest evidence of pain. She was allowed to remain undisturbed for several minutes, when Dr. G. incised the gums around two of the molar teeth of the upper jaw. During the extraction of the third tooth, which from several causes, was attended with considerable difficulty, there was a slight contraction of the limbs, but not the least disturbance of the muscles of the face. The expression of the countenance remained unaltered. Dr. Grant then extracted the fourth and last tooth, which had large fangs, whilst the patient remained as before, to all appearance, insensible. In a few minutes Mr. Adams restored her to her natural condition, and she appeared to be totally unaware of the whole transaction"

We may add, the patient has suffered not the slightest pain or inconvenience from he operation since it was performed.—

Mesmerism in London.

The London papers by the Britannia state that Miss Martineau, the well-known authoress has been highly benefitted of late by mesmerism. I have been told of a letter from her to a friend in this country, in which she abundantly con firms the report. She had been given over by her physicians, who had told her that medicine could afford her no relief. She had been confined for many months to her chamber, which as she says, she never expected to quit, "unless in her coffin." She had been unable during that time to procure even an hours sleep, except through the aid of laudanum. The consequence was, that both her mental and physical powers were fast yielding to a painful, and, as it was believed, utterly incurable disease. At length it occurred to her to try mesmerism. The experiment was made and it was successful. Although not thrown by it into the state of trance of which we hear such wonders, a gentle and refreshing sleep was induced, which lasted twelve hours. On its termination her physicians declared that such had been the change in her whole nervous system, that they ventured to entertain hopes of a cure. The mesmeric process was continued at various intervals; and now the distinguished patient has so far recovered that, from not being able to walk across her room, she can, in her own language, "walk three miles at a time with a relish." "I cannot be thankful enough," she says, "*for such a resurrection.*" Miss Martineau, as all who know her will admit, is not a person of a fanciful or imaginative temperament. Her case will probably induce many to regard with more respect and attention a science, the believers in which, although Cuvier and La Place may be found among the number, are often classed with Mormons, Millerites, and other fanatics. The following intimation, from the London Literary Gazette, of the present condition of this science in London, is perfectly applicable at this moment to New-York: "Mesmerism, which has rapidly assumed a vigorous vitality, and the reality and utility of which have, despite the shallow wit of unphilosophical critics, been maintained by a number of cautious and practical men, is for the moment retarded in its progress *by public exhibitors of its often painful phenomena;* and hurried, on the other hand, to a maturity that has no real foundation by enthusiastic followers, whose intellects have apparently never been trained to the severity of scientific investigation." This is a brief but sensible view of the whole matter.—*N. Y. Corres. of the Nat. Intelligencer. Dec. 17th*, 1844.

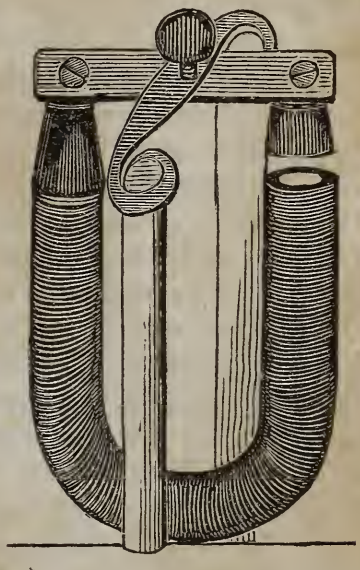
The Rotary Magnetic Machine, and the Duodynamic Treatment of Diseases.



We gave a full description of the Savage Rotary Magnetic Machine, represented in the above engraving, in the last, or October, number of this Journal, with its great superiority over the old shocking-machines, or those that were made for giving shocks instead of a continuous motion. Many physicians, who were using the old machines, have become so well satisfied of the great advantages of the Savage instrument as to lay aside the former and purchase the latter.

It was the great importance of having an instrument as perfect as possible for magnetizing, that induced us to direct the manufacture of the Savage Rotary Magnetic Machines, in which no expense has been spared to make them superior to all others; and the sale of more than 200 of them to physicians during the last six months, shows how much they are appreciated by those of the profession who have obtained a knowledge of them in so short a period.

Notwithstanding, however, the great superiority of these instruments, practice has shown that the silver conductor to the shaft of the armature, in consequence of the great velocity of the latter, will wear off in five or six months, if the machine be kept in constant motion every day, when it becomes necessary to replace them; and as a goldsmith or other mechanic may not always be at hand to replace them, or the armature, if it should require repair, we have directed our attention to a substitute for both, and have at last, succeeded in our object. We have substituted a spring as seen in the following figure, which vibrates so fast as to make the motions of the forces continuous.



A piece of brass is turned in a conical form, and a round hole turned out of the bottom for the top of the magnet to enter the eighth of an inch where it is soldered. A screw hole is then made on the top of the cone, and a piece of watch spring fastened on to it with a screw as seen in the figure. A piece of iron is turned in a conical form, and a hole drilled into the top of it, and fastened with a screw to the opposite end of the spring as seen in the figure. A hole is first drilled through the middle of the spring and a silver plate of a fourth of an inch square, placed on the top of the spring, and riveted to it, for the brass screw, in the cap of brass that crosses the spring, to rest upon The brass cap is soldered on to, and supported by, two strong brass pillars, which are secured in a steady position by brass nuts screwed on to the bottom of the pillars under the foundation board. The end of the copper wire that has been first wound around the U magnet, is then soldered to the brass nut that holds the magnet in its place—the other arrangements of the copper wires being the same as in the Savage instruments—connecting the wire which conducts the force from the zinc with the brass pillar on the

same side. The brass screw which rests on the spring, should have a rounded point, and on setting the machine in motion should be screwed down to a point where the spring vibrates in the most steady manner. It makes a steady and not unpleasant humming sound, with variations more or less regular.

The only difference in the motions of the forces from these machines is the variations in the intensity of the vibrating instruments from the variations in the motions of the forces from the battery, which is not observed in the rotary, in consepuence of the great momentum acquired by the velocity of its armature. These variations are very frequent and often very great; requiring great caution in the use of it, especially in magnetising the brain, heart, or stomach.

We have been thus particular in our description of the vibrating machine, for the purpose of enabling those who have the Savage Rotary Machines to change them into this form if they should choose to do so. when it should become necessaryto make the repairs we have mentioned, as the change can be easily made by any goldsmith, and with a trifling expense, as they have the magnet and brass cap, &c., for the purpose.

The power of these instruments is fully equal to that of the Rotary instruments, and they are made of the same sizes. They have both more power, and are *much* more portable than any others made in this country.

We shall continue to forward these machines to any part of the Union, the Canadas or the West Indies, according to order, at the low prices of 15, 18 and 20 dollars, according to the size and style in which they are finished; the vibrating being from 15 to 18, and the rotary from 15 to 20 dollars, including the buttons and manual for magnetising. Besides the improvement in the instruments, we have directed our attention to improvements in the batteries connected with them, but they have not resulted in any practical importance. The size of the batteries can be much reduced, but it involves the necessity of the use of strong acids, as the sulphuric and nitric, the fumes of which are always annoying, and even dangerous. There are besides other obvious objections to their general use,such as the danger in carrying these acids every day from place to place, which is entirely obviated by the use of the sulphate of copper in the common batteries.

Effects of the Rotary Magnetic Machine.

In our notice of the effects of the rotary magnetic machine in the last number of this Journal, we mentioned a severe case of bilious fever, in which we reduced the pain in the head, back, stomach, intestines, and the paroxysms of fever, with the machine, in the most prompt manner, and we have been much pleased to learn from physicians of this city, and from the country that they have uniformly obtained the same and very similar results from the action of the machine in the same disease.

There is now, as we have before suggested very little doubt that the machine will reduce yellow fever in the same prompt manner, for although the globules of the blood are found to be more or less broken down in this disease, or *demagnetised*, there is now no doubt that the machine, besides restoring lost motion in the membranes, magnetises the blood in the strongest manner, as well as every other part of the system. We besides suggested in the second, third, and fourth numbers of this Journal, the probability of the great importance of these machines in the treatment of tubercular consumption, and the results of a year's trial, of the instruments, in a great number of cases, has shown that we were not mistaken in the signs upon which these suggestions were founded; for more than *one hundred and fifty cases* of both sexes, and in every stage of the disease, have been magnetised in our rooms during this period, and of this number nine only have died, and of the few of the above number we are now magnetising not more than two will be lost. These results are so extraordinary as hardly to admit of belief among those who know little or nothing of the effects of these machines. They will very naturally suspect that there must be some mistake in regard to the diagnosis or genuineness of the cases; yet there is no-

thing more certain, than that they were all true cases of tubercular consumption; for the manner of our diagnosis does not admit of a mistake in any case. There was not among these a solitary case of chronic bronchitis; for we distinguish these cases with the same certainty we do the above cases, and reduce them with the aid of the machines in about the same proportion to the number of cases. Other physicians of this city have obtained with the instruments similar results in such cases.

The reader, we hope, is now prepared for what has appeared to us more extraordinary results from the action of these machines, one of which at least we are sure we could not have believed without ocular demonstration, and that is a case of luxation inwards of the right hip joint, set on the third trial by the action of the machine *alone*. The hip had been out of joint three or four years, and the leg fully an inch and a half shorter than that on the opposite side.

In this case the positive button of one of our largest machines was placed in the groin while the negative one was moved over and around the hip or gluteal muscles, when the head of the femor went into its place with a loud snapping sound. Such is the power and such are the astonishing effects of the machine.

Among other interesting effects of the machines not before noticed in this work, is the case of two large carbuncles over the right side of the lumber vertebræ of a gentleman aged 70 years, which were reduced by the usual means with the aid of the action of the machine. The age and feeble state of the patient's health, with the large and extensive swelling around the carbuncles indicated a fatal case. The swelling, with the livid and scarlet color of the skin was, however, reduced in the most marked manner by every application of the instrument, and the disease subdued in a few days.

Bed-sores, gleets, gonorrhœas, and chancres are now also subdued with great facility by physicians of this city with the action of the machine.

MAGNETIC SURVEY.

In the *Montreal Herald* we find the following interesting letter on a recent magnetic survey:

"As a brief notice of the route pursued by Lieut. Lefroy, in his late scientific exhibition to the far North West, together with one or two novel facts, brought to light by him while engaged in that quarter, may not be uninteresting to some of your readers, I shall make no apology for requesting the favor of you to give the following outline of them a place in your valuable columns. But, before proceeding farther, it may not be unnecessary to premise, that the Royal Society having determined on making a number of magnetic observations, in various parts of the globe, selected Mr. Lefroy for that service, as he had already proved himself eminently qualified for it, by discharging so successfully the duties which devolved upon him on a similar mission to St. Helena, where an observatory, of which he was placed in charge, was established for the like scientific purpose. Lieut. Lefroy, with his assistant, left Montreal, on the 1st of May, 1843, and followed the usual canoe route to the interior, in the prosecution of the objects of his mission, he visited York Factory in Hudson's Bay, Norway House, Red River Settlement, Cumberland House, Isle a la Crosse, the great Methey Portage, so graphically described both by Sir John Franklin and Sir George Beck, and reached Lake Athabasca in the following September. Having remained at the latter station for the space of five months, he sat out on the ice for Mackenzie's River, on which he travelled to the verge of the Arctic Circle. Retracing his steps to Lake Athabasca, he descended the Peace River to Dunvegan, whence he crossed over land to Edmonton on the Saskutchewan, which river he descended, and traversed the north west end of Lake Winnepeg to Norway House, where he arrived in the early part of September last. The necessary arrangement for his journey to Canada being completed, he embarked at this place in a canoe manned by six men, and after a tedious and boisterous passage in his frail bark, reached Penetanguishene on the 14th of last month, having been absent about twenty months, and having thus completed a chain of magnetical observations, which includes many miles of country, and which will add msterially to our knowledge of a very important and interesting branch of the *Physique du Globe*. Conformably to his instructions, Mr. Lefroy devoted a portion of every day to magnetical observations, having for their object to ascertain upon a great number of

determinate stations, the physical facts as to the present distribution of the earth's magnetism over this portion of the earth's surface, and more particularly, the region of the greatest magnetic energy or intensity; since it is a curious fact, that this region, the pole or focus of greatest attraction, is far from coinciding with the pole of vertical dip, discovered in 1831, by Commander (now Sir James) Ross; and appears, we understand, to exist somewhere in the neighborhood of the Lake of the Woods. The winter of 1843 and 1844 was comparatively mild, the severe cold weather lasting but a short period; its lowest degree at Lake Athabasca was 46 degrees below Zero, Fahrenheit. Here a small observatory was erected, and many curious and interesting facts, relative to the influence of the aurora upon magnetic needles were displayed, and these observations we are informed, throw light upon that beattiful and little understood phenomenon, and its close connection with the ageney which produces the effect of terrestial magnetism.—*N. Y. Herald, Dec.* 16.

Mr. Sunderland.

The experiments performed by this gentleman at his last two lectures in this city, were so very extraordinary, so every way unlike any thing we ever heard of before, and so very like the tales of the fairies, or the wonders of the Arabian Nights, that we frankly confess our inability to believe what we saw with our own eyes, but for our knowledge of the lecturer, and those of our citizens upon whom the experiments were performed.

Mr. Sunderland had, previously, informed his audience, that, on Friday evening he would give a novel exhibition of that power which he denominates Pathetism, by causing a number of the audience to fall into a state of somnambulism, before he, Mr. S. came into the Hall. Accordingly, the place was well filled with an anxious multitude, some time before half past six, waiting to witness results performed on the human mind so strange and unaccountable. And sure enough, some considerable time before Mr. S. came in, one after another was seen to arise, and slowly approach the platform, and two gentlemen and one lady were seated upon it, besides a number of other cases, of persons in whom the sleep was equally profound, but who did not leave their seats in the audience till some minutes after Mr. S. had arrived.

On Saturday evening, Mr. S. reversed somewhat the order of proceeding, by actually inducing some eight or ten cases of somnambulism even before the persons on whom the influence was exerted, had reached the Hall! The lecturer arrived a few miuutes after six, and took his seat on the platform as usual; and such was the great desire of the large audience who had assembled to witness the approach of the *sleep-walkers*, that considerable commotion ensued. At about half-past six, a young lady was seen entering the Hall with her eyes fast closed, the hands extended; and with a slow and somewhat unnatural step, she approached the place where Mr. S. was standing, and was seated upon the platform. Next came a gentleman, Mr. R., and then another, Mr. D., with the eyes closed, somewhat awkwardly making their way up the aisle to the lecturer, who seated them upon the platform. Soon after, there came two more ladies, until there were eight seated upon the rostrum, with as many more asleep, promiscuously seated in the audience.

After the statement of a few facts, showing the utter falsity of the old theories known under the terms of "Mesmerism," or "Neurology," and, proving that these results were not produced by any fluid magnetic or nervous, he proceeded to the developement of a series of most curious and extraordinary phenomena. The patients were first thrown into a state of ecstacy, and with their hands clasped and elevated as in a state of devotion, they manifested in their countenances and conversation, a state of mental tranquility almost superhuman. While in this state, Mr. Sunderland drew from them some pieces of music which were most beautifully performed. Next they were transferred into what they conceived to be enravishing fields of fruit and flowers, and now commenced a most diverting scene, for each patient made motions as if actually gathering flowers, grapes from vines, and peaches from the trees, which they seemed to taste and eat with the greatest imaginable delight.

"Come," said the lecturer, "go with me in another direction," when, in a few moments, they began to describe every variety of wild animals. Among them was discovered an elephant, and a ride on his back having been proposed, they went through with the motions of mounting for that purpose. The expressions of fear, the agitation and tossing about seemed reality to the life; till, in a few minutes, as if the huge animal had actually stumbled and fallen, and the patients were thrown upon the floor, with cries of fear, and complaints of broken bones which it took the operator sometime to restore.

Other interesting results followed, which were highly gratifying to the audience, espe-

cially in view of the facts referred to by Mr. S., that neither of these patients had ever been mannipulated in the usual way, the sleep having been induced for the first time by his new process of operating, and they had never been operated upon together, in that manner before. And what was still more interesting to the audience, and those who wished to understand the practical benefits of Pathetism, Mr. S. pointed out a number of them who had been most remarkably relieved or cured of some nervous or chronic disease. One, a Mr. A , had been cured of St. Vitus' dance. Mr H. had been cured of nervous sick-headache; and a third was a case of amaurasis. The lady had been almost blind, and utterly unable to see, or read without glasses; but since she first attended these lectures, she has thrown aside her specs, and has been able to see as well as ever before; and the lecturer pleasantly remarked, that, had he only been known, heretofore, as a good Catholic, or Mormon, cures like those he had performed in these and many other similer cases. might have passed for miracles, and entitled him to a place among the "Saints" of the Polish Calander, or made him the successful rival of the Mormon Prophet. * * *

Providence Gazette.

—*Dec.* 17.

Pretended Discoveries in Animal Magnetism.

Duly impressed with the deep and extended interest which the subject of Animal Magnetism has created in the public mind, and the ardent curiosity and attention which every new fact connected with it is sure to command, several writers have flattered themselves that it is only necessary to advance a claim, however shallow and assumptive, to some peculiar originality in the science, in order to become distinguished as immense magnetical philosophers. Accordingly we have a Dr. James Braid of Manchester in England, discovering that Animal Magnetism ought no longer to be known under that name, but be called Hypnotism, or Hypo-tism; and he therefore introduces new terms for all the principles and processes involved. Thus a person can be no more magnetised, but must be hypnotised, &c., and he then favors us with the whole under the general denomination of *Neurypnology!* This philosopher's production appeared in London in 1843, in 12mo.

The Rev. La Roy Sunderland discovered, in this country, and nearly contemporaneously with Mr. Braid, that Animal Magnetism should be called *Pathetism*, because, as he supposes, it depends altogether upon sympathy. The word sympathy, however, not being fine enough for such a discovery, and as it might induce a number of common people to inquire into the causes and laws of sympathy, he discards it for the word Pathetism, which of course stops all further investigation, and leaves every body perfectly satisfied. He consequently uses the word Pathetising for Magnetising, &c., and his work was published in New York in 1843, in 12mo.

Next, and quite recently, we have Professor J. Stanley Grimes, coming out in a volume of 350 pages, to show that Animal Magnetism should be re-baptized, and ever known hereafter, under the name of *Etherology*, *Etherium*, or *Etheropathy*, but which of these three terms he decidedly prefers he leaves rather dubious, so much so indeed, that it would not surprise us to see some other new philosopher reject them altogether for one of his own invention or sponsorship. Prof. Grimes's Etherology has been published in this city within a few weeks, and bears the confidently anticipatory date of 1845.

Of the character and capacity of this work as a philosophical treatise, a pretty adequate idea may be formed from the following brief specimen which constitutes the author's first grand postulate, and to which he is so much attached that he copies it on his title-page:

"All the known phenomena of the Universe may be referred to three general principles, viz: *matter*, *motion*, and *consciousness*. Everything that we know is a modification of one or all of these three."

Previous philosophers had held the doctrine that *motion* (for instance) was an *effect* of forces, instead of being a primary principle, and that the forms and modifications of matter were results of the motion thus produced. But n'importe.

The only other highly original feature of this production that particularly strikes us

is to be found under the title of "Credensiveness" a new term, we presume, for the old phrenological organ of marvellousnes. In connection with this new piece of nomenclature, the author expatiates with no little complacency upon the extraordinary efficacy of ASSERTION, as a branch of Animal Magnetism---we beg his pardon—Etherology; and his whole work may be adopted as an evidence of his unbounded confidence in this potent agency. In fact, he wields it like the rod of Aaron through his whole controversy with other magicians, and causes it to swallow up the whole of theirs with the utmost facility. With this weapon only he defeats Buchanan, Caldwell, Braid, Sunderland, Fowler, Elliotson, and all others while he remains invincible.

We have no doubt that each and all of these writers upon Animal Magnetism whom we have here mentioned have many merits, both as writers and investigators, and are entitled to the regard of all lovers of science for the zeal and dilligence with which they have pursued their labors. We merely protest against their childish exploits in setting up ideal distinctions where there are no real differences, as if they felt that this was the only way of becoming distinguished above other men from whom they do not otherwise differ.

Colon Strangulated by the Meso-colon.

By Gilman Davis, M. D., Portland, Me.

Communicated for the Boston Medical and Surgical Journal.

On the 13th Oct. 1843, was called to Anson Robinson, Esq. æt. 26, merchant. I found him complaining of violent pain, not constant, but paroxysmal, and referred to the epigastrium. There was no tenderness on pressure over any portion of the abdominal surface, no thirst, and the pulse not accelerated; the bowels constipated, and had been so for some time. The most remarkable symptom was a tonic rigidity of the abdominal muscles. On applying the hand to the abdomen, the muscles were felt to be literally as firm as board, in a perfect tonic spasm, and yielding to no pressure. Colocynth, calomel hyoscyamus were given internally, conjoined with morphia and repeated injections. After three days the symptoms yielded, but there was pain, and rigidity of the recti and other muscles remaining for several days. The relief began as soon as an evacuation from the bowels was produced.

On the evening of the 5th of May, 1844, I was again called to see Mr. Robinson.—He had enjoyed moderate health in the interval since I had last attended him, but had been troubled by constipated bowels. During the latter part of the time, he was observed to place his hand frequently during the day, on the hypogastrium, as if in pain, and during the last week had repeatedly said to a member of the family, that he could obtain no evacuation from his bowels. There was a very small discharge, however, two days previous to my visit. I found him complaining of great pain, as in the previous attack, but with much less of the muscular rigidity; the pain, as before, coming on in paroxysms. There was now superadded to the previous symptoms, constant vomiting, the smallest quantity of food being instantly rejected, and the effort of vomiting increasing the pain. There was no thirst, no pain caused by the firmest pressure on the epigastrium or other parts of the abdomen, and the pulse not perceptibly accelerated. His pain he referred to the epigastrium, placing his hand directly below the sternum, and repeatedly said there "was a stoppage there," and that "he should feel better if he could only have an evacuation from his bowels." There was no appearance of hernia. There was a remarkable restlessness and nervous agitation, as much as I ever before saw.

The same medicines were given as before—calomel, colocynth, hyoscyamus, morphia, and injections. Between 11 and 12 o'clock that night, there was a slight alvine evacuation, but it afforded no relief. Hot fomentations with hops enclosed in flannel bags were kept constantly applied. The morphia afforded slight temporary relief. There was no vomiting of fæculent matter at any time.

He remained in this state Monday and Tuesday, during which I visited him four times a day. On Tuesday night, at 11 o'clock, I visited him, and the symptoms had not changed; still no tenderness and no apparent acceleration of the pulse, though I examined carefully and often, and with surprise. It was evident there was some internal strangulation, and that it must end fatally. On Wednesday, at my morning visit, I found a great change—a Hippocratic face, the pain much less, and the pulse betweeu 130 and 140, and so feeble as to yield to the slightest pressure. He was also

thirsty now, but the smallest quantity of fluid was rejected generally, though he had swallowed and retained a very little broth. There was extreme restlessness and jacitation, the patient going repeatedly from one room and one bed to another.

He remained in this state till evening: the extremities then became cold, but he lingered till the next day (Thursday) and died at 12 o'clock, noon. For hours before death the limbs were icy cold, and no pulse, and the most incessant restlessness, the poor sufferer rising up in bed with a look of indescribable anguish, and then falling back faint and apparently dying. I remained with him from Wednesday noon through the night, and until his death, with the exception of an hour and a half on Thursday, when I was obliged to leave him.

On the following morning I opened the body. The stomach was empty, with considerable ecchymosis; the gall-bladder fully distended with dark bile; the intestines filled with gas, and a little fluid fœcal matter. In the hypogastrium appeared a large knuckle of intestine, of a deep port-wine color. I removed the whole with great care, and found this knuckle to be composed of thirteen inches of the colon, strangulated in an aperture of the meso-colon, the aperture being about the size of an American quarter of a dollar. From the strangulated part of the colon to its termination in the anus, it measured four feet, I need not add that the portion included in the aperture was in a complete state of mortification. The aperture was round and with even edges, with no appearance that could lead to any reasonable conjecture as to its formation; nor could I learn that the patient had ever had any severe fall or blow upon the abdomen.

I know of no similar case. In the two cases recorded by Sir Astley Cooper of mesenteric and meso-colic hernia, in the last edition of his work on Hernia, the bowel was contained in a sac formed by the intestine protruding itself through one layer of the peritoneum forming the mesentery, separating the two layers, and remaining enclosed between them. In this case the aperture was through the entire thickness of the meso-colon, and through this thirteen inches of the colon had passed and become strangulated.

Organ of Calculation.

Vermont has furnished two or three boys, within the last twenty five years, whose sagacity for arithmetical pursuits was of an extraordinary character. The autobiography of the far-famed Zera Colburn is familiar to the public. After having positively astonished the mathematicians, both here and in Europe, with the rapidity, accuracy and mystery with which he conducted the most elaborate arithmeticial calculations, all at once, equally to the surprise of himself as well as every body else, he actually lost the faculty of doing wonders in figures. No effort on his part was successful in recovering a power that made his name ring over the world as an eighth wonder.

Another calculating boy, by the name of Safford, now only eight years of age, says the Vermont Journal, has been discovered in Vermont, who will give the product of four figures by four, performing the operation mentally nearly as quick as one can do it with pen and paper. He has also multiplied five places of figures by five, which was the extent of Zera Colburn's power in his best days. He will extract the square and cube roots of numbers extending to nine or ten places, performing the operation quite rapidly in his head. The division of numbers into their factors is a favorite amusement with him. Give him the age of a person, and he will give the number of seconds correctly.

How can the doctrines of the phrenologist be called in question, with such sustaining proofs of their truth, as are presented in this and many other analogous cases?—*Boston Medical and Surgical Journal.*

Value of Homœopathic Practice.

In the Circuit Court of this city Dr. F. Vanderberg brought an action against T. E. Beckman, to recover $427 for two professional visits from New-York to Hudson, and nine visits from Rhinebeck to Hudson, to attend Miss Elizabeth Beckman, ill with consumption, who died in Dec., 1842. "Dr. V.'s treatment was of the homœopathic description, and it is contended, in defence to the charge, that such is a species of quackery, and unskilful: also that the charge is too high. In relation to the homœopathic treatment, several eminent physicians, viz: Drs. Buel, Frasy, Manly, Stevens, Greenough, Cheesman and Beck, declared their belief that the system is a species of quackery. One of the gentlemen said it was an attempt to cure one disease by creating another of the same kind. Dr. Manly said his opinion of it could be stated in a few words. It is delusion on the part of the public and knavery on the part of the practitioner.—These gentlemen stated that they had not examined the theory, as they thought it too absurd to give it attention. On the other hand, Drs. Cooke, McVickar, Curtis and Peck, stated that they had fully examined the

theory, and were decidedly in its favor. Its principle is to treat 'like with like.' That is, to administer heat for a fever, &c. while the allopathic, or old system, was the reverse. It was shown that the young lady whom Dr. V. was called upon to attend was seized with a vomiting of blood. Dr. Cooke was her physician, and the services of Dr. V. were requested by her father, knowing that his mode of treatment was on the principle of homœopathy. She was taken afterwards with a second attack of vomiting blood, and Dr. V. again sent for, though he stated to her father from the first, it is said, that he could do her no good. It was remarked by the physician who gave testimony, that consumption, when once seated, can never be cured, although life may be prolonged by care and medicine. It was shown that Dr. V's practice, under the old system, was large."

The court charged that Dr. V. having shown himself a regularly licensed physician, he is entitled to pay for his services, unless it can be shown by defendant that he exhibited ignorance or want of skill. On that point, and also as to the compensation asked for, the Jury must decide from the evidence. Verdict for plaintiff, $325.

Decomposition of Tincture of Opium by Ammonia.

It is of great importance for prescribers to remember that the addition of ammonia either as carbonate or spiritus ammon. aromaticus, to mixtures containing tincture of opium or any salt of morphia, will after some time, say twenty-four hours, precipitate the morphia in a crystalline form; so that if a mixture is made a day or two before it is taken, the patient may get several doses of morphia concentrated in the last portion left in the bottle, and fatal consequences may be produced. The presence of alcohol will prevent the precipitation.—*Chemical Gazette.*

Medical Miscellany.

There was some alarm in regard to the appearance of small-pox, lately, both at Hanover N. H., and near New Preston, Conn.—The Visiting Physician of the Michigan Penitentiary, located at Jackson, receives of the State seventy-five cents for each visit, and one dollar when he prescribes for two patients. Yellow fever was raging fearfully, at the last accounts, at Metamoras, Texas.

The American Consul and many others had died with it. From fifteen to twenty cases of small-pox recently occurred among the paupers in the Almshouse in Saratoga Co. N. Y. Two of them only proved fatal.

J. J. Paulding, M. D. will sail from Boston soon, destined for the foreign missionary service in Asia. There are sixty students at the Botanico-medical Institution, at Cincinati. Dr. Hill, of the chair of Anatomy, is represented to be an admirable instructer. A pamphlet has appeared in that city, upon human magnetism, by Henry F. Smith.—There is a class of ninety students now attending lectures at Dartmouth College. The school is well sustained. At Willoughby University, there are now attending the medical lectures, 120 students. The institution is very prosperous, and the faculty, to a man, are exerting themselves to educate their classes in the best manner. There are nearly nine hundred students attending lectures at the two medical schools in Philadelphia.—*Boston Medical and Surgical Journal.*

There are about 500 students, attending the Medical Schools in New York.—*Ed.*

The Local Pathology of Neuralgia

Has been explained by Dr. Black upon anatomical principles. He very justly observes that the nerves, which are usually the seat of neuralgic pains, are those which take their exit from the interior of the body through canals in bone or unyielding tendinous structure. He adds to this, the anatomical fact, that each nervous twig is accompanied by a branch of an artery and a vein. It may easily, therefore, be conceived that those nerves, which are contained in rigid canals, must be subjected to injurious pressure whenever their accompanying vessels are unusually distended with blood. Upon this pressure, according to Dr. Wallis, depends the neuralgic paroxysm. The explanation is ingenious, and is, I think, borne out by the consideration both of the exciting causes and the effects of treatment.—*Dr. Kanking in Provencial Journal.*

Motion along the nerves ceases in such cases, and violent pain is the consequence, as in cases of pleurisy, and as the pain ceases instantaneously on the application of the forces from the Rotary Magnetic Machine, there can be no doubt but it is the consequence of restoring lost motion.—*Ed.*

The Symptoms of Abscess of the Prostate Gland. Diagnosis from Gonorrhœa.

The following remarks by Professor Colles, deserve to be remembered:

"Abscess of the prostate often begins with symptoms closely resembling gonorrhœa inflammatory fever, more or less well-marked usually precedes both, there is the same heat and pain in making water; and the pain in

micturition is often referred to the same spot in both; there is a discharge from the urethra scarcely purulent perhaps at first, but soon becoming so: but while, in clap, the discharge increases with an uniform progression, in the prostatic disease it will often be observed to be very trifling suppose today, profuse to-morrow, again diminished considerably on the next, and so on; even this, however, is not so constant as to be relied on for a distinguishing mark of the nature of the case. There will be often felt a pain or uneasiness in the region of the gland, increased during the passage of hardened stools, irritability of the bladder, or retention of urine."—*Medical Press.*

THE CURABILITY OF HYDROPHOBIA.

Mr. Hawkins makes the following remarks in a very interesting lecture on the subject of hydrophobia. We fear that those anticipations are very far from being realised.

"At the same time that a cure of hydrophobia is possible is rendered not unlikely by the fact that rabies is sometimes cured, or recovered from, in dogs, of which there seems no doubt, from the experience of Mr Youatt and others who have attended to the subject —so, also, it is, perhaps, sometimes in the human subject; at least more than one instance has been recorded in which several persons at once, in the same family or neighbourhood, have been bitten by the same animal, of whom one has died, and of the others some one or more have suffered from an indisposition. This indisposition may have been *essentially* hydrophobia, though without coming to its usual stage. At any rate, I am convinced that in such a line of investigation alone is any cure to be anticipated.—*Medical Gazette.*

On the Efficacy of Large Doses of Calomel in Typhus.

By J. Burgess, Esq., M.R.C.S.

If you think proper to insert the inclosed communication, which appeared in a provincial journal in 1842, it will show that the use of *calomel* in *typhus*, proclaimed as a new opinion in a contemporary periodical, which came accidentally under my notice, has been anticipated by me, as therein recorded, and practised in the manner described, with the most unfailing success more than twenty years since.

CALOMEL.

The popular character of calomel as a medicine may be some apology for trespassing upon your space with the following observations, since medicines of common and general use, like diet, clothing, nursing, and exercise, appeal to the welfare of all classes, and claim a popular discussion.

An interesting article in the Times, on "The Climate of the Western Coast of Africa," which appeared on the 12th ult., induced the following remarks:—

Calomel, although a specific remedy in many diseases, is capricious and uncertain in its action, which is frequently the result of an empiricism in its use, even by those of whom better things ought to be expected.

One of the most familiar circumstances attending its use, when continued in small doses, is salivation, and swelling of the soft parts of the palate, mouth, and gums, which occur more or less certainly and speedily in different constitutions.

This is so common a tendency that it is frequently considered by the practitioner inseparable from its remedial powers, a conclusion which leads to much error in the treatment of diseases.

In those cases in which this test of a curative mercurial influence is wanted to establish its permanency and safety, the object is to know how to arrive at it, in a degree sufficiently small and mild, and which is one of the desiderata of medical practice.

There is a wide range of diseases in the treatment of which its remedial powers depend in no degree whatever on these circumstances, but, on the contrary, are impeded and frustrated by them, and yet, in its use, the practitioner has difficulty to divest himself of the prejudice of a necessity for its affecting the mouth and gums.

It is necessary to continue its influence on the vascular and absorbent systems for a lengthened period to develop some of its powers; and it may be difficult under some circumstances and constitutions to avoid this dilemma; but if mercurial salivation was to be considered in the light of a false practice, and its avoidance a test of a successful one, supposing the cure to be obtained in the one instance without mischief or injury to the constitution, so likely to result from salivation, the triumph of calomel in the treatment of disease would become established, and this valuable remedy would be henceforth relieved from the ban under which it is placed.

In those cases in which small doses of calomel are required to be administered most often there exist counteracting circumstances to prevent or mitigate its irritating tendencies.

In children, in whom small doses of calomel are most often indicated, a condition of the intestinal canal presents, to remove which no other remedy than calomel will prevail,

it being loaded with a slimy and mucous secretion,(*excretion*) protecting its surfaces from the agency of remedies, which, in no other cases and without such protection, would be irritating and preternaturally active.

It is the peculiar remedy of infants and children; but the greatest triumph of calomel, even in the cure of infantile diseases, is in the administration of large doses, which act upon the overloaded absorbent system, invigorating it, and restoring the patient to health.

Its merit as a remedial agent does not consist in its irritant qualities, but in its sedative ones; and the first invariably developed by a timid and fearful exhibition of it in small doses, whilst its sedative and more valuable qualities result from large doses.

Thirty, or sixty grains of calomel, administered in typhus, act like a charm upon the unconscious and comatose patient, and produce what every other remedy fails to do, a profound and natural sleep, from which he awakens to consciousness and comparative comfort, with a soft and relaxed skin, a free and tranquil pulse, and a tendency to general perspiration; the bowels become washed with secretions, (*excretions*,) and saline purgatives being resorted to, after the benefit of sleep has been obtained, make them patent; and little more is left to remove the most formidable attacks of this epidemic, but to repeat the remedy and aid its influence by cold affusions over the surface of the body.

The agency of calomel in yellow fever, and the other formidable endemics of trophical climates, which cæteris paribus, are within the same denomination aud class of morbid actions, only influenced by temperature, is of a similar character, and totally independent of its irritant agency, or of any effect it produces upon the mouth and gums, which is a regular and course test of its influence.

The most successful sedatives we possess, next to blood-letting to syncope, are calomel, in large doses; laudanum, in large doses (particularly when administered after depletion and blood-letting,) oxymuriate of mercury, combined with tincture of foxglove, in small doses; and these, next to the laneet, are the most successful means to combat acute dieseasc, and are divested of the objections to blood-letting, of leaving a permanent and organic debility, forbidding in many instances its use; or as an evil scarcely less than the disease, and which objection also exists against tartar emetic, which remotely debilitates the nervous and absorbent systems, and impairs the vital powers. I am, Sir, your most obedient servant,

JOSHUA BURGESS.

London Lancet.

We have pursued the course suggested in the above article in the use of calomel more than twenty years, and we have no doubt of its correctness. In epidemics we have been constantly in the habit of giving tea-spoonful doses of calomel to adults, and when attacked with the disease,we have taken table-spoonful doses, with the happiest effects—eschewing small doses in acute, and its use in chronic diseases.—ED.

Spontaneous Cure of Cataract.

A stone-breaker had suffered from cataract from his youth. Whilst pursuing his occupation, he was struck by a splinter in the affectedeye, and this gave rise to inflammation. He consulted a medical man, who with a view of examining the eye, dropped into it a solution of belladonna. The pupil became largely dilated, and at the same time the opake lens fell into the anterior chamber, vision being immediately restored.—*Edinburgh Monthly Journal.*

PLANE TRIGONOMETRY.

°	′	″	
23	27	33	Obliquity Ecliptic, Jan.1, 1845.
101	17	46	West Longitude Magnetic pole in [arctic circle.
96	30	56	West do line no va. do do
83	29	04	East do do do do
158	38	32	East do Magnetic pole in [antarctic circle.
153	51	42	East do line no.va. do do
21	21	28	West do do do do
	32	26	An. rate of motion of line no. va.
	4	18	Minimum daily va. of needle
6	27	33	Maximum do do do
	8	03	Mean annual rate of declination
6	41	04	West dec. City Hall, New-York.

Dec. increasing—mean heat is increasing.
Dec. decreasing—mean heat is decreasing.

Errata.—On page 45, in Column of Positive Forces, in 46th line from the top of page—for Sulphate read Sulphuret.

THE DISSECTOR.

Vol. II. NEW-YORK, APRIL, 1845. No. II.

FALLACIES OF THE FACULTY.

Lectures Delivered at the Egyptian Hall, Picadilly, London. 1840.

By S. Dixon, M. D.

LECTURE V.

MEDICAL DOCTRINES, OLD AND NEW—GOUT—RHEUMATISM—CUTANEOUS DISEASE—SMALL POX—PLAGUE—YELLOW FEVER—DYSENTERY—DROPSY—CHOLERA.

Gentlemen,

When a young man has run the usual course of study at a university, he thinks he has learned everything worth knowing. But herein he grievously mistakes; for if we may trust Lord Bacon who had no interest in the matter, rather than the Professors who have, we shall find that "in the Universities all things are found *opposite* to the advancement of the sciences; for the readings and exercises are here so managed, that it cannot easily come into any one's mind to think of things out of the common road; or if here and there one should venture to use a liberty of judging, he can only impose the task upon himself without obtaining assistance from his fellows; and if he could dispense with this, he will still find his industry and resolution a great hindrance to his fortune. For the studies of men in such places are confined and pinned down to the writings of certain authors; from which, if any man happens to differ, he is presently represented as a disturber and innovator."

Gentlemen, in this passage you at once see the reason why Medicine has progressed so little from the time of Hippocrates to the present. Every person who has in any way improved the practice of physic has had to repent it. Harvey lost his business by discovering the circulation of the blood; Lady Mary Montague suffered in her reputation for introducing the small-pox inoculation; and Jenner for a long period of his life was victimized for the still greater improvement of the Vaccine. His moral character was for years at the mercy of the most venal and corrupt members of the profession. "Such," in the words of Milton, "are the errors, such the fruits of misspending our prime youth at schools and universities, as we do, either in learning mere words, or such things chiefly as were better unlearned." So far as they relate to Medicine, the doctrines of the schools have been a succession of the grossest absurdities. Let us briefly review a few of the most prominent.

For several ages the state of the Blood was held to be the cause of all disease—no matter how the disorder originated. Had you a shivering fit from exposure to cold or damp, the "Blood" required to be instantly purified,—a fever from a bruise or fall, the only thought was how to sweeten "the Blood;" nay, were you poisoned by hemlock or henbane, "the blood" or its blackness was the cause of all your sufferings—and the chief anxiety was how to get rid of it. It never occurred to the physicians of that day that the blood was an indispensable part of the economy, or that "black blood" was better than no blood at all,—so on they bled and continued to bleed while a drop would flow from the veins When their patients died, it was all owing to the accursed "black blood" that still remained in the system! How to get the whole out, was the great subject of scholastic disputation, and treatises innumerable were written to prove that it might be done. In progress of time, another doctrine arose, namely, that all diseases first originate in the *Solids*, and many were the partizans that took it up; so that for several centuries the fluidists and solidists divided the schools, and, like Guelph and Ghibelline, ranged themselves under their respective leaders. What medi-

cal man is ignorant of the wars they waged, the ink they shed, and the eloquence they wasted upon the still unsettled point whether the solids or the fluids ought to bear the blame of first imparting disease to the constitution!

But to turn from these to the doctrines of more modern schools. The chief feature in the professional notions of the day, is the assumption that all diseases may be traced to the "inflammation" or other theoretical state of a given portion of the body, one School taking one organ—another, another; but why should I say ORGAN? seeing there are professors who exclusively patronize a given TISSUE, and others a given SECRETION even;—which *One* thing, after they have wrapped it round in mummery and mysticism, they gravely proceed to magnify into the very Daniel O'Connell of every corporeal disturbance! Exposure to cold and heat, the mid-night revel, and the oft-repeated debauch—any, or all of these may have injured your constitution. This, of course, you already know and feel; so you wish to have the sense of your physician upon it. And what does he do? Why, he takes you by the hand, counts, or affects to count, your pulse, looks at your tongue perhaps, and then, with a seriousness becoming the occasion, he tells you, your "*Stomach* is wrong;"—and so far, so true, as your own want of appetite and sensation of nausea abundantly testify. But as if this were not enough, and more than enough, he must proceed to tell you the *cause* of your disease; and what does he say that was? Being a "stomach doctor," of course he says, "the stomach" again. "The stomach," he tells you, is the cause of all;—your headache, tremor, and blue devils, all proceed from "the stomach!" But herein, if I mistake not, the doctor falls into the same error as the man who, on seeing a house n ruins, should point to one of the broken bricks, and saddle it with the whole amount of mischief; when, in reality, it was only one of many coincident effects produced by agency from without, such as accident, time, or tempest.

For a considerable space, the Stomach held undisputed sway in the medical schools,—John Hunter having contributed much to bring it into fashion. His pupil Abernethy afterwards coupled the whole alimentary canal with it, under the name of the "digestive organs;" and for a time nobody dared to dispute his dictum that derangement of the digestive organs is the cause of all disease. Some other partialist would have it, howevr, that "the *Liver*" is the great source of all ailments—and a very convenient substitute this organ became, for not only did it save the physician the trouble of thinking, but the patient, by constantly directing his mind to it, very soon found out that the liver was the only organ of the body worth a moment's cogitation. Oh! "the liver" has put a great many fees into the pockets of the faculty, and might continue to do so still, but for Laennec's invention, the stethoscope.—Adieu, then, to the liver, and adieu to the stomach and digestive organs! for, from the moment people heard of this instrument, the *Heart* and *Lungs* eclipsed them all. We have no liver and digestive organs in these days,—we have only "the heart" and "lungs;" and these, as the world wags, are always in such a state—in such a deplorable condition of disease and danger, that Heaven only knows for what end they were given us, unless it be that our bodies were

———intended
For nothing but to be mended!

—in other words, were expressly created for the benefit of the next-door neighbor the apothecary! Never was there such a catalogue of disease as these organs have entailed upon us;—but the curious thing is, that nobody knew it until Laennec made the discovery by means of the stethoscope. Since then, leech, lancet, cupping-glass, and purge have followed each other with unexampled rapidity; but whether the "fits" and "sudden seizures," which now-a-days carry off so much mortality, be the effect of these very safe and gentle remedies, or of the "Heart-disease," under which the doctors, in their innocence, are pleased to class them, I leave to persons of common sense and common discrimination to decide. One thing is certain, physicians have made a great professional stride since the days of Moliere—for whereas in his time the only organ they ever thought or theorized about was the lungs; now, thanks to the stethoscope, they have got the heart, with its valvular and vascular apparatus, to the bargain. So much for organs, Gentlemen;—let us now speak of tissues. To be chronologically correct, we must first take the "Skin"—for of skin, and nothing but skin, our bodies at one time would appear to have been entirely constructed. The skin was the medical rage and the doctors were very certain they had made a great discovery, when they turned their attention to it. Derangement of the skin explained every thing in existence, and many other things besides; whatever your sufferings, the answer was always the same, "The skin, Sir, the skin!"—The skin solved every possible difficulty, and if patients were pleased, why undeceive them? Sick men do not reason—

you must therefore treat them like children; and he who can best impose upon their credulity is sure to become the popular physician. The skin, however, had a pretty long run; but, like its predecessors, it was destined to fall in its turn—to be supplanted by another tissue, "the *Mucous Membrane.*"—In the hands of Broussais the mucous membrane first rose to eminence. Bustling, active, ready, he first pushed it into notice; and so skilled was he in all the arts of scholastic juggling, that not only did he parry every blow aimed against his favorite theme by the skin supporters, but he at last obtained for it so great an influence in the sick-room, that no patient of importance could be put to death legitimately till he had first been called in to prescribe something for the "mucous membrane." Broussais thus became the French medical dictator, and the "mucous membrane" the French ruling doctrine. Carried by his numerous partizans and disciples into every commune in France, the "mucous membrane" at last found its way into England, where it was taken up by the late Dr. Armstrong—and an excellent stepping-stone it proved to him in practice. Every body came to hear what he had to say of the "mucous membrane." You could not have an ache in your back, or a cramp in your leg, but the "mucous membrane" was at fault; nay, had you a pimple on your nose, or a pain in your great toe, it was still the "mucous membrane!" Nor is this doctrine even now quite exploded. How many of the various secretions have run this gauntlet of accusation, it would be unprofitable to do more than allude to. The Perspiration was at one time much in vogue, and "checked perspiration" the reply to every inquiry—our grandmothers use the phrase occasionally still; though some of them betray a leaning to the system of the Water-doctors, a class of persons who only needed to inspect your urine to find out a cure for your complaint. Many curious stories come to my mind in connection with this;—but the subject is too grave to be trifled with—let us therefore pass from that to "the *Bile*"—the mysterious cause of so much offending. How many difficulties has not this secretion mastered? How many has it not made where none existed before? You derange every organ and function of your frame by intemperance—"the bile," not the wine, is the criminal! You have headache from hard study, it is still "the bile;"—the palpable and obvious agencies going for nothing, while one of many effects produced by a common cause, is absurdly singled out as the father and mother of the whole!

I have still to notice another school of physicians, who ring the same changes upon a word, which having no very definite signification itself, may therefore signify anything they have a mind, without in the least committing them in the opinion of the public. Rheumatism, Gout, Scrofula, Scurvey—what is the meaning of these terms? They are synonymous simply, having all a common import, fluidity or humor. In Rheumatism, we have merely a derivation from the Greek verb, (Rheo, I flow,) and Shakspeare used it in its proper sense when he said,

> Trust not these cunning *waters* of his eyes,
> For villiany is not without such *Rheum*.

Then, as regards Gout, what is it but a corruption of the French word goutte, a "drop." And this perhaps some of you may think not so bad a name for a class of symptoms which frequently proceed from "a drop too much"—but that is not what doctors mean by the term. Gout with them is merely a fanciful "humor." Scrofula in Latin, and Scurvy in Saxon, have the same signification, namely, a "dry humor." Only think of dry humidity, Gentlemen,—and the confusion of tongues during the building of Babel, will readily occur to you as a type of the language in which medicine is even now taught in most of our schools! Some German physicians of the present day tell us that scrofula has taken the place of scurvy in the European constitution. But this is only one of the many modes in which professors play at "hide and seek" with words. The Diseases Continental doctors formerly termed Scurvy, they now term Scrofula, and Heaven only knows what the doctors of after times will call the same corporeal variations before the world comes to an end! So much, Gentlemen, for the "Humoral school"—a school that impressed upon its disciples a doctrine of purgation scarcely less fatal than the sanguinary practice of the present pathologists. In fact it is the identical system of "Morrison, the hygeist," and all those quacks, who, by their determined perseverance in purging away a fancied "impurity of the blood," have too often purged away the flesh and the lives of their credulous victims. Do people at this time of day require to be told that you may purge a *healthy* man to death!—that by any class of purgatives, whether vegetable or mineral, you may so disturb every action of the body—may so alter every corporeal structure and secretion, that no one shall be of natural consistence or appearance! By the eternal use or rather abuse of any purgative you please, in a previously healthy body, you may so change the alvine secretions, that they shall take the form of any "impurity"

you fancy—and for this impurity of your own creation you may, day by day, and week by week, purge and purge till you have brought your patient to the state of inanition which constitutes, as I shall in the course of this lecture explain to you, the disease termed "Ship Scurvy." See, then, the effect of that humoral doctrine! But even this kind of folly appeared too simple to some teachers, and these taxed their invention to make nonsense compound. Who has not heard of Rheumatic Gout?—and who will be so bold as to deny its existence? Yet, what is it but a self evident absurdity! Its literal meaning is "fluid fluidity." You might as well call an injury from fire, "a ignes-eous burn!" Gentlemen, does such jargon convey to your minds the most distant idea of the true motions which take place in the body in the course of any one disease? How then can you wonder at men of observation laughing at the whole medical profession? It is only a fool or a physician who could be duped for a moment by such puerility; and Lord Stowel was right when he hinted a man might be both at forty.—"When youth made me sanguine," says Horace Walpole, "I hoped mankind might be set right. Now that I am very old, I sit down with this lazy maxim, that unless one could cure men of being fools, it is to no purpose to cure them of any folly, as it is only making room for some other." This I believe was said in regard to religious doctrines—but that it applies equally well to medical doctrines, may be seen from a statement of Sir William Temple:—"In the course of my life," he says, "I have often pleased or entertained myself, with observing the various and fantastical changes generally complained of, and the remedies in common vogue, which were like birds of passage, very much seen or heard of at one season, and disappeared at another, and commonly succeeded by some of a very different kind.—When I was very young, nothing was so much feared or talked of as rickets among children, and consumptions among young people of both sexes. After these the spleen came into play, and grew a formal disease. Then the scurvy, which was the general complaint, and both were thought to appear in many various guises. After these and for a time, nothing was so much talked of as the ferment of the blood, which passed for the cause of all sorts of ailments, that neither physicians nor patients knew well what to make of; and to all these succeeded vapors, which serve the same turn, and furnish occasion of complaint among persons whose bodies or minds ail something but they know not what; and among the Chinese, would pass for mists of the mind or fumes of the brain, rather than indispositions of any other parts. Yet these employ our physicians more than other diseases, who are fain to humor such patients in their fancies of being ill, and to prescribe some remedies, for fear of losing their practice to others that pretend more skill in finding out the cause of diseases or care in advising remedies, which neither they nor their patients find any effect of, besides some gains to one and amusement to the other. As Diseases have changed vogue, so have Remedies, in my time and observation. I remember at one time the taking of tobacco: at another, the drinking of warm beer, proved universal remedies—then swallowing of pebble stones in imitation of falconers curing hawks. One doctor pretended to help all Heats and Fevers by drinking as much spring water as the patient could bear; [Priessnitz's plan?] at another time swallowing up a spoonfull of powder of sea biscuit after meals, was infallible for all indigestion, and so preventing diseases. Then coffee and tea began their successive reigns. The infusion of powder of steel has had its turn; and certain drops of several names and compositions. But none that I find have established their authority, either long, or generally, by any constant and sensible scucesses, but have rather passed like a mode which every one is apt to follow, and finds the most convenient or graceful while it lasts, and begins to dislike in both these respects when it goes out of fashion. Thus men are apt to play with their healths and their lives as they do with their clothes; which may be the better excused, since both are so transitory, so subject to be spoiled with common use, to be torn by accidents, and at last to be so worn out.—Yet the usual practice of physic among us runs still the same course, and turns in a manner wholly upon evacuation either by blood-letting, vomits, or some sorts of purgation; though it be not often agreed among physicians in what cases or what degrees any of these are necessary, nor among other men whether any of these are necessary or no. Montaigne questions whether purging ever be so, and from many ingenious reasons. The Chinese NEVER let Blood."

Gentlemen, you now see the correctness of a remark of the late Dr. Gregory, that medical doctrines are little better than "Stark staring absurdities." And God forgive me for saying it, but their authors, for the most part have been very nearly allied to those charlatans and impostors, who

———wrap *nonsense* round
In pomp and darkness, till it seems profound;

Play on the hopes, the terrors of Mankind
With changeful skill; * * *
While Reason, like a grave-faced mummy, stands
Wi h her arms swathed in hieroglyphic bands.

MOORE.

As for the Schools, at this very moment, the whole regime of medical teaching is a system of humbug, collusion, and trick—embracing intrigue and fraud of every kind, with the necessary machinery of Periodical Journals, and Reviews, by which the masters are enabled to keep down truth, and mystify and delude the student and country practitioner at their pleasure. In physic, now as formerly, the very clever world

———bows the knee to Baal,
And hurling lawful GENIUS from his throne,
Erects a shrine and IDOL of its own,—
Some leaden Calf—

who by virtue of his puppet position, maintains a reputation and a rule in matters medical, to which neither his merits nor his learning in the very least entitle him;—nevertheless he reigns the Esculapius of the day, and it is only in the next age that,

——— the vulgar stare,
When the swollen bubble bursts and all is air!

But Gentlemen, what do the faculty of our own time mean by the term

GOUT?

What do they mean by it? You may ask them that indeed. Crabbe, who studied physic, but left the profession in early life to take orders, when describing some of the doctors of his day, among other things, tells us,

One to the GOUT contracts *All* human pain,
He views it raging on the frantic brain,
Finds it in fevers all his efforts mar,
And sees it lurking in the cold catarrh.

Gout, then, may be any thing you please; for according to received opinion, this offspring of Nox and Erebus, this vox et preterea nihil, takes shapes as many and Protean as there have been authors to treat of it—This much I may venture to tell you, that nothing will so soon help a man to a chariot as to write a book with Gout for its title—for being supposed to be a disease peculiar to aristocracy, every upstart is fain to affect it.—You cannot please a mushroom squire, or a retired shopkeeper better, than by telling him his disease is "Gout"—"Gout suppressed" "Gout retrocedent"—"Gout in this place, or "Gout" in that! And what is Gout?—

——— Of all our vanities the motliest—
The *merest* word that ever fooled the ear,
From out the schoolman's jargon!—

BYRON.

In sober seriousness, is there such a *disorder* as Gout? Gentlemen, as a "counter to reckon by," you may use the word; having first so far made yourselves acquainted with its real meaning that nobody shall persuade you that it is in itself anything but a piece of hypothetical gibberish, invented by men who knew as little of Disease and its nature as the tyros they pretend to illuminate. When a Lady or Gentleman of a certain age complains to you of a *painful swelling* in some of the *small joints* of the hand or foot, you may say, if you please, that such patient has got the Gout. If the same kind of swelling should appear in the knee or hip-joint, or take the shape of an enlarged gland or a rubicund nose, you must then change your phrase; and you may easily exhaust a volume in pointing out the differences betwixt them. But as neither this kind of disquisition, nor the baptizing your patient's disease by one name or another, can in the very least help you to cure it, I may just as well explain to you that this swelling, like every other malady incident to man, is not only a development of constitutional disease, but comes on in fits or paroxysms. Now, Gentlemen, you will find this fit in one case perfectly periodic and regular in its recurrence; in another less determinate as to the time of its approach. The result of repeated paroxysms, as in other diseases where great heat and swelling take place, must be a tendency to decomposition, and in this instance, the product for the most part is a deposit of chalky or earthy matter. In that case nobody will dispute the name you have given to the disorder; but should the result of the decomposing action by purulent matter or ichor, instead of chalk or earth,—which neither you nor anybody else can know beforehand,—you must not be astonished if a rival practitioner be called in to give the disease another soubriquet,—to christen it anew by some other phonic combination full as indefinite as the first, and which may thus serve you both to dispute about very prettily from one end of the year to the other, without either of you becoming a whit the wiser! You see, then, that the only difference betwixt what is called "Gout," and what is called "Inflammation," is, that the result of the morbid action in the former case, is earthy instead of purulent deposit a solid instead of a fluid product. Now, this difference may be accounted for, partly by hereditary predispositon, and partly by the age of the respective subjects of each. Young plants contain

more sap than old ones; the diseases of both must therefore in some points vary; for though in the blood of the old or middle-aged man we find the same elemental principles as that of infancy and youth, from these being in different proportions, the results of decomposition must mutatis mutandis, be different. What are the CAUSES of GOUT? One writer says one thing; another, another. Dr. Holland, Physician Extraordinary to the Queen, is among the latest who has written upon the subject, and he says the cause is "a morbid ingredient in the blood;"—nay, he says, "it cannot be denied." Still, not only do I presume to dispute the dictum, but I challenge him to bring forward a title of proof in support of it. His whole doctrine of Gout, I apprehend, is a fallacy; for if you enquire, the patient will tell you that he took too much Wine the night before his first fit; or that he had got Wet; or had been exposed to the East Wind; or had been vexed by some domestic matter. From which you see, the causes of Gout are any thing and every thing that may set up any other disease,—Small-pox and the other Contagious Fevers of course excepted. A paroxysm of Gout has been actually brought on by Loss of Blood and also by a purge, for which statement, if you will not believe me, you may take the authority of Parr and Darwin. What, then, is the remedy? If you ask me for a Specific, I must again remind you there is no such thing in physic; and what is more, the man who understands his profession would never dream of seeking a specific for any disorder whatever. No, the remedies for Gout are the same as cure other diseases; namely, attention to temperature during the Fit, and the exhibition of the chrono-thermal or ague medicines during the Remission;—for we have seen that, like the ague, it is a periodic disorder, and such is the description of it given by Sydenham, who was half his life a martyr to it;—to say nothing of Dr. Samuel Johnson's explanation in his dictionary. That it comes on like the ague with cold shiverings, the experience of almost every case will tell you; but as your minds may be too much occupied with school theories to mark that fact for yourselves, I will give it to you in black and white in the words of Darwin. Speaking of some cases of the disease, he says: "The patients after a few days, were both of them affected with cold fits like ague-fits, and their feet became affected with Gout." To meet it in a proper manner you must treat the disease purely as an ague. With quinine, arsenic, opium, and colchicum, I have cured it scores of times, and truth obliges me to say I have in some cases failed with all. Now what can I say more of any other disease? Every day you hear people talk of the "principle" of a thing, but really without knowing what they are talking about. The true meaning of the word principle is UNITY—something simple or single to which you may specially refer in the midst of an apparently conflicting variety. That a perfect unity of type pervades all the variations of disease is indisputable, and of the correctness of a unity or principle to guide your treatment there is as little doubt. What, then, are all your school-divisions but "flocci, nauci, nihili, pili!" I shall now give you a case or two which may perhaps suffice to show you my treatment of Gout.

Case 1,—Colonel D——, aged 60, had a fit of Gout which came on every night, and for which leeches and purgation had been ineffectually prescribed, before I was called in. I ordered a combination of quinine and colchicum, but as this did not stop the fit, I changed it for arsenic, after taking which the patient had no return.

Case 2.—Captain M——, aged 56, had a fit of Gout which recurred every night during his sleep. I prescribed arsenic without effect; I then gave him quinine, which acted like magic. The same gentleman, twelve months after, had a recurrence, but was much disappointed, on resuming the quinine to obtain no relief. I then prescribed arsenic, which, though it failed the year before, this time perfectly succeeded!—a lesson to such as would vaunt any remedy as a specific for any disease.

The influence of the Passions in causing or curing gout is well known. One of many cases so cured comes just at this moment to my mind. A clergyman was laid up with a severe attack of the Gout—his wife having heard of the effects of Surprise in cases of the kind, dressed up a large hare in baby-clothes, and brought it to his bed-side, telling him how fearfully changed their child had become. The old gentleman eyed the animal with a look of terror, sprung out of bed, and comp'ained of his foot no more!

Now, Gentlemen, as gout, like Ague, is a remittent disease, and curable in the same manner,—whether by mental or physical agency,—what right have we to assume that its cause is a "morbid ingredient in the blood," any more than the cause of ague is? Still, we shall suppose for a moment that it is the effect of a 'morbid ingredient in the blood,' what, then, let me ask, is this morbid ingredient doing all the time of remission? Does it sleep or wake during this interval of immunity?—and how comes it that arsenic, quinine, and colchicum so often neutralise its effects—while purgation and blood-letting

in too many instances, produce a recurrence? In a word, is not this "morbid ingredient in the blood" a mere crotchet of Dr. Holland's brain—a goblin—a phantom—that, like other goblins and phantoms, disappears the moment the daylight comes in?

Having stated my reasons for dissenting from Dr. Holland's hypothetic view of the cause of gout, it may not be out of place here to request your attention to some points of infinitely greater importance, upon which that physician and myself, by some curious fatality, maintain a remarkable COINCIDENCE of opinion. I quote the following passages from his *Medical Notes and Reflections.*

"Has sufficient weight been assigned in our pathological reasonings to that principle which associates together so many facts in the history of disease, namely, the tendency, in various morbid actions, to distinct intermission of longer or shorter duration, and more or less perfect in kind?" "The subjection of so many diseased actions to this common law, establishes relations which could not have been learned from other sources, and which have much value even in the details of practice."

Again he says, "It will probably be one of the most certain results of future research, to associate together, by the connexion of causes of common kind, diseases now regarded as wholly distinct in their nature, and arranged as such in our systems of noseology. This remark applies very widely throughout all the genera of disease." "We can scarcely touch upon this subject of Fever (particularly that which our present knowledge obliges us to consider as of idiopathic kind,) without finding in it a Bond with which to associate together numerous forms of disease but withal a knot so intricate, that no research has hitherto succeeded in unravelling it."

Now, what does Idiopahtic mean? It means peculiar or primary—in opposition to symptomatic disease, or disease of long standing. The profession, then, according to Dr. Holland, and he is right, have been perfectly in the dark in regard to the beginning of any disease. The "knot" they have for so many centuries been trying to unravel, I hope he, they, and every body else will now consider as completely untied, but not, as I shall in a few minutes prove, in consequence of Dr. Holland's prediction.

When speaking of the Influenza and other Epidemics, Dr. Holland says: "I may briefly notice the singular analogy to the milder forms of Typhus and Intermittent Fever which these epidemics have occasionally presented." Why he puts Typhus before Intermittent fever, I know not; but this I do know, that except where badly treated, the Influenza seldom takes the typhoid shape. However, Dr. Holland admits he has prescribed Bark in the Influenza with very great advantage

On the subject of Temperature, the same physician thus speaks: "The patient may almost always choose a temperature for himself, and inconvenience in most cases, positive harm in many, will be the effect of opposing that which he desires, his feelings here is rarely that of theory, though too often contradicted by what is merely such. It represents in him a definite state of the body, in which the alteration of temperature desired is that best adapted for relief, and the test of its fitness usually found in the advantage resulting from the change. This rule may be taken as applicable to all fevers, even to those of the exanthematous kind." By which term medical men understand smallpox, chicken-pox, measles, and scarlet-fever. Some include the plague.

Dr. Holland asks: "Is not depletion by blood-letting still too general and indiscriminate in affections of the Brain, and especially in the different forms of Paralysis? I believe that the soundest medical experience will warrant this opinion. The vague conception that all these disorders depend upon some inflammation or pressure which is needful to remove, too much pervades and directs the practice in them, and if the seizure be one of sudden kind, this method of treatment is often pursued with an urgent and dangerous activity." "Theory might suggest that in some of these various cases, the loss of blood would lead to mischief. Experience undoubtedly proves it, and there is cause to believe that this mischief, though abated of late years, is still neither infrequent, nor small in amount." It is now the fashion of the Eminents and their herd of followers to say, "Oh, there has certainly been too much bleeding," and "Oh, we don't bleed as we used to do;" but it is not so convenient for them to tell who opened their eyes to their errors.

Now, Gentlemen, if any of you be disposed to question by whose influence this abatement of mischief was principally brought about, I may suggest that, from numerous letters I have received from medical men, long before Dr. Holland's volume first appeared, my writings must at least have contributed to it. Dr. Holland's work, from which I quote, was published by Messrs. Longman and Co. in 1839. Mark that date, and mark also, if you please, that it was in the year 1836, three years before, that the same Publishers brought out the *Fallacy of the Art of Physic as taught in the Schools*, wherein I stated:—

1. "We hope to prove even to demonstration, that Fever, remittent or intermittent, comprehends every shape and shade which Disorder can assume."

2. "That many cases of Disorder have been observed to partake of the nature of Remittent Fever, and to derive benefit from the modes of treatment adapted to that periodic distemper, we are sufficiently aware. But we have yet to learn that any author, ancient or modern, has detected that tpye, and advocated that treatment in every shade and variety of disease."

3. "That attention to Temperature is the end to all medicine."

4. "That Blood-letting might be advantageously dispensed with in all diseases, even in Apoplexy."

Gentlemen, some of you may have read an anecdote of Dennis the Critic. Having invented a new mode of producing theatrical thunder, he submitted his discovery to the managers; but their high mightiness only affected to laugh at it. Some weeks afterwards, he went to see a play, in which there was a thunder-scene. "Now thought Dennis, is my turn, now can I afford to laugh at their thunder as much as they laughed at mine;" but judge his surprise when, instead farcical squall he expected, his ears were saluted with a thunder as terrible and as true as the "hurly-burly" of his own invention. Perceiving, in an instant, the trick that had been played him, he cried aloud. "By G—! that's my thunder!" This or something like this, always excepting the irreverent adjuration, was the sentiment that escaped me when I first perused the passages I have read to you from the Medical Notes and Reflections. "These are my doctrines," I said; "aye, the identical doctrines which Dr. James Johnson, physician-extraordinary to the King deceased, two years before, stigmatized as a Pyrexy-mania, or Fever-madness. How will he receive them now, now that they are patronized a second hand by an F.R.S. and a physician extraordinary to the Queen that reigns?" That was my exclamation, and how did he receive them, Gentlemen? Oh! he praised Dr. Holland to the skies; said he was this, and said he was that; and concluded by telling us that "it is impossible to lay down his book without an acquiescence in the decision of the pnblic, which has placed him in the first rank among the practical physicians of the capital; adding, moreover, that "his bearing towards his brethren is fair and open, and his candid mind, instructed by liberal reading and polished by society, is willing to allow their need of merit to all." But not a syllable did Dr. James Johnson say in condemnation of Dr. Holland's prophecy, that "Fever" would one day be found to be "the Bond with which to associate together numerous forms of disease;" nor did he remind him that when that prophecy was actually fulfilled by me to the letter years before Dr. Holland took the trouble to make it, he, Dr. James Johnson ridiculed it as a Fever-madness! Gentlemen, if, in the course of his "liberal reading," the Author of the Medical Notes and Reflections never saw the Fallacy of the Art of Physic as taught in the Schools! Nor the Review of it by his patron Dr. Johnson; Nor Dr. Conolly's equally honest criticism of it! Nor the controversy in the Lancet, to which the former gave rise! Nor heard in "society" the remarks made by the laughter-loving part of the profession, when that controversy was concluded! Nor met with the Unity of Disease! Nor the many Reviews that were written upon it!! You must acknowledge the coincidence to be curious, startling!!! And, further, you must admit that this coincidence affords another of many proofs of the truth of a discovery, which, when Dr. Holland, with the candor, I am willing, in common with Dr. Johnson, to allow him, takes into account dates, facts and other similar trifles, I hope he will, in return, permit me now, henceforth and forever, to call MINE! Meantime, I have much pleasure in availing myself of the testimony of a physician so eminent, in favor of its "value, even in the details of practice."

[Shortly after the above observations made their appearance in print, Dr. Holland addressed to me a letter in "explanation." The correspondence which followed I am not quite at liberty to give, as the Doctor expressed a wish that his communications should be kept private. This much I may, however, state, that though couched in very polite, very diplomatic language, the explanation afforded by his letters did not appear to me to be any explanation at all. His observation might apply to this, that, or the other, or anything else! How *green* Dr. Holland must have thought me when he imagined he would tie up my hand with his "private" letters. But seriously, if he intended to do more than shuffle me out of my discoveries, why did he send a "private" answer to my published charge, or insinuation, if he like it better. The concluding paragraph of his last letter is so adroitly worded, that with, or without his leave I must quote it. "It gives me pleasure to know that you find anything of truth or useful suggestion in what I have published. And I shall be gratified by any opportunity

which may hereafter occur of talking with you on these subjects, of common interest to us, out of print, [no dobut! Ever, my dear Sir, yours faithfully, H. Holland." Now I should like to know which is the "suggester" here, I who first published the discovery, or Dr. Holland, who three years afterwards printed it in a phraseology only slightly altered? "New truths of a higher order," says an enlightened physiologist, "and of which the connection is not seen with common and hackneyed doctrines, are scouted by all, and especially sneered at, denied, and abused by the base creatures who have just sense enough to see there really is something in them, who have just ambition enough to make them hate one who appears to know more than they do,—and who have just cuncedure, the doctrines at first denied are subsening or skill enough to bias minds yet weaker than their own. To crown suitably such proquently pilfered with all the little art of which such minds are capable." Alexander Walker on the Nervous System, "to which is prefixed some account of his earlier discoveries, of which the more recent doctrine of Bell, Magendie, &c., is shown to be at once a plagiarism, an inversion, and a blunder."]

From this digression I now turn to

Rheumatism.

Like Gout, the word Rheumatism conveys nothing beyond the expression of the false theory, which first gave rise to it. But as we are compelled, by long custom, to retain this among other equally unmeaning terms, I may tell you, that the profession of the present day class under it numerous affections of the great joints, particularly such as have come on suddenly, and are attended with much pain and swelling. You will find that these, in every case, have been ushered in by fever fits. The young and middle aged are more liable to rheumatism than the extreme old. Like the gout, it is a remittent disorder, and Dr. Haygarth, long ago, wrote a work illustrative of the value of Bark in its treatment. My own practice is to premise an emetic; this I follow up with a combination of quinine and colchicum. If that mode of treatment fail, I have recourse to opium, arsenic, guiaic, mercury, silver, turpentine, copaiba, arnica montana, aconite or sulphur,—or combinations of them—all of which remedies have succeeded and failed in ague as well as in Rheumatism. In most instances of acute rheumatism, the first combination will be found to answer perfectly; though, in cases of long standing, you may have to run from one medicine and combination of medicine to another, before being able to bring about this desirable termination;—and it is my duty to confess to you, that in some cases, particularly where either much depletion, or much mercury, or both have been employed—as I grieve to say, they too often are in the primary treatment—you may fail with every means you may devise.

Under the head of Rheumatism, medical men also include certain muscular pains, which occur in various parts of the body, but which are unattended by any apparent morbid structural development. With nitrate of silver and prussic acid, I have often cured these pains; and with the cold plunge bath, I have sometimes succeeded after every other means had failed. Of my mode of treating acute Rheumatism, I will give you two examples.

Case 1.—A young man, aged 25, had been suffering severely from Rheumatism for four or five days before I saw him. At this time, the joints of his wrists and ancles were much swelled and exquisitely painful; his heart labored, and was in such pain as to impede his breathing; his tongue was foul and furred, and he had been occasionally delirious. I ordered an emetic, which was some time in operating, but when it did, the relief was signal. I followed this up with pills containing a combination of quinine, blue pill, and colchicum, and in two days he was sitting up with scarcely any swelling remaining in the affected joints; in two days more he had no complaint.—Not a drop of blood was taken in this case.

Case 2.—A gentleman aged thirty, after exposure to wet and cold, had a shivering fit with fever, in the course of which almost every joint in his body became swollen and very painful. He was bled, leeched, blistered, and took mercury to no purpose, before I was called in. I ordered him a combination of quinine, colchicum, and opium, which agreed so well with him, that in three days I found him free from every symptom but weakness, which I presume was as much the effect of the former sanguinary treatment, as of the disease; at any rate, he had certainly suffered very severely. But, Gentlemen, like every other disease incident to man, Rheumatism may not only be cured without loss of blood, but without any physic at all; and in evidence of this, I will read to you an extract from the writings of Sydenham; "As to the cure of Rheumatism" he says "I have often been troubled, as well as you, that it could not be performed without the loss of a great deal of blood, upon which account the patient is not only much weakened for a time, but if he be of a weakly constitution, he is most commonly rendered more obnoxious to other diseases

for some years, when, afterwards, the matter that causes the Rheumatism [Sydenham, like Hippocrates, was a disciple of the Humoral School] falls upon the lungs, the latent indisposition in the blood being put into motion by taking cold, or upon some slight occasion. For these reasons, I endeavor to try for some other method different from Bleeding, so often repeated, to cure this disease; therefore, well considering that this disease proceeded from an inflammation, which is manifest from other phenomena, but especially from the color of the Blood, which was exactly like that of Pleuritis. I thought it was probable that this disease might be as well cured by ordering a simple cooling, and moderately nourishing diet, as by bleeding repeated, and those inconveniences might be avoided which accompanied the other method; and I found that a whey diet, used instead of Bleeding, did the business. After last summer, my neighbor Matthews, the apothecary, an honest and ingenious man, sent for me; he was miserably afflicted with a Rheumatism, accompanied with the following symptoms. He was first lame in the hip for two days, afterwards he had a dull pain upon his lungs, and a difficulty of breathing, which also went off in two days time, [both remittent,] after which his head began to pain him violently, and presently the hip of the right side which was first seized; and afterwards, according to the usual course of the disease, almost all the joints, both of the arms and legs, were afflicted by turns. He being of a weak and dry habit of body, I was afraid that by taking away much blood his strength before but infirm, would be wholly vanquished, especially the summer being so far spent, it was to be feared winter would come before he could recover his strength, weakened by frequent bleeding, and therefore I ordered that he should feed on nothing but whey for four days. Afterwards, I allowed him, besides the whey, white bread instead of a dinner, namely, once a day, till he was quite well. He, being contented with this thin diet, continued the use of it for eighteen days; only I at last indulged him in bread at supper too; he daily drank eighteen pints of whey, made at home, wherewith he was sufficiently nourished. After these days, when the symptoms did no more vex him, and when he walked abroad, I permitted him to eat flesh, namely of boiled chickens, and other things of easy digestion; but every fourth day he was dieted with whey, till at length he was quite well; the inconveniences mentioned above being quite remedied by this method, with which he was grievously afflicted ten years before, bleeding being then used by my order for his cure, and often repeated. If any one shall contemn this method because it is plain and inartificial, I would have such a one know that only weak people despise things for their being simple and plain; and that I am ready to serve the public, though I lose my reputation by it. And I will say that I do not at all question, were it not for common prejudice, that the said method might be accommodated to other diseases, the names whereof I conceal at present, and that it would be more beneficial to the sick than the common pomp of Remedies that are used for people when they are just dying, as if they were to be sacrificed like beasts."—But

The Stone.

You will doubtless, Gentlemen, ask me whether or not I look upon that also as an effect of intermittent fever? To this question I have only to say, that Stone must be admitted to be a result of morbid urinary secretion. Can any secretion become morbid without the previous occurrence of constitutional (in other words intermittent febrile,) change? Certainly not; then; without such change, how could stone become developed at all?—moreover, are there not times of the day, when the subject of it is better and worse, and this not altogether to be referred to the period of micturition. A "fit of the stone" is as common an expression as a fit of the ague. Drs. Prout and Roget, who have paid much attention to calculary diseases, state, that while medicines styled lithontriptics exert but little influence in such cases, tonics have almost universally ameliorated the condition of the patient;— and what are the medicines usually termed tonics, but the remedies for ague?

Whether Gout and Rheumatism be remittent diseases or not, or whether they be remarkable for the changes of temperature and action, termed fever, nobody but such as prefer books of nosology to the book of nature and common sense, would be so ignorant as to question. Whether they be varieties of the same disease is another thing; but this I know, they are both first-cousins to ague, and by treating them as such, the practitioner may save himself a world of trouble, and the patient a world of pain, which neither might escape, in adopting the doctrine of the "pathologists," that these are inflammatory diseases, and only to be subdued by leech, lancet, and mercury to salivation. Gentlemen, laugh at the pathologists, and laugh too at their disputations, which, being all about nonsense, can never possibly come to a satisfactory conclusion.

The calculary (gritty) or stony concretions which are occasionally deposited in the different joints during Gout, suggested to medical men, even at an early period, the analogy subsisting betwixt that disease and stone. During constitutional disorders, calculus may be developed in any tissue or structure of the body. Salivary concretions are common; pulmonary calculi I have seen in two instances: in one case they were expectorated by a consumptive female who died; in the other, by a gentleman whose lungs being otherwise organically uninjured recovered his health completely by attending to the temperature of his chest, and by the occasional use of hydrocyanic acid and quinine, which I prescribed for him. This patient had previously consulted two of the best employed medical men in London, one a physician, the other a surgeon, neither of whom held out a hope for him but in a warm climate. Dr. Chalmers and Sir B. Brodie, for these were the practitioners the patient previously consulted, showed in this instance, at least, their good opinion of attention to temperature. How often the liver, gall bladder, and kidney are the seat of stone, I need not tell you. Taking place in the course of an artery, calculus is erroneously termed ossification. I wonder it never occured to authors to call it the gout! seeing that there is at least, this resemblance betwixt them, that both generally become developed after middle age has marked the subjects of them with her seal.

There are not wanting authors who have traced an analogy betwixt Rheumatism and

Cutaneous Disease—or

Disease of the skin—and as all disorders are cousins-german to ague, we must give them full credit for their powers of observation—stating, at the same time, our readiness to help them out to a still more comprehensive view of the relationship which subsists betwixt all "the various genera of disease."

What a fine thing to be able to master the cloud of ridiculous distinctions and definitions by which Drs. Willan and Bateman have contrived to disguise the whole subject of Cutaneous Disorder;—to distinguish, for example, psoriasis from lepra — erythema from erysipelas, diseases only differing from each other in being acute or chronic, or from being more or less extensively developed; all, too, depending upon the same constitutional unity and integrity of state—all more or less amenable to identical agency! Most truly, then, has my Lord Bacon remarked, "Divisions only give us the husks and outer parts of a science, while they allow the juice and kernel to escape in the splitting." What! I shall be asked, is Erysipelas or Rose nothing more than a result of ague—Erysipelas, for which, according to Mr. Lawrence, we must make incisions in the skin, at least a foot long —gashes not quite so short, but quite as deep as sabre wounds! Hear what Sir James Mackenzie says when describing his own case; and the accuracy of his description will scarcely be questioned, if it be remembered that previously to entering upon his legal career, Sir James had not only studied but taken his degree in physic:—"We had an unusually cheerful day," he says "but just as I was going to bed I was attacked by a fit of shivering, which in the morning was followed by a high fever, and in two days by an erysipelas in the face. The disease went through its course mildly, but it is liable to such sudden turns, (fits ;) that one is always within six hours of death." For the value of quinine or bark in this disease I could cite many authorities, but the candor of Mr. Travers entitles his evidence to a preference. At a meeting of the Medico Chirugical Societv, he is reported to have stated that in "a great many instances (of Erysipelas) he had found the most decided benefit from the use of Bark and other tonics, and which, at the commencement of the disease, he had often seen highly useful in the practice of others, even in cases where he would have employed the antiphlogistic treatment, if the patients had fallen into his own hands.—*Lancet.*

Every medical man of experience knows that Erysipelas is very often epidemic; in other words, it prevails at a particular time to a greater or less extent among a particular people or class of people. Wherefore it seems to depend upon a peculiar constitution of atmosphere; for during the time it is prevalent in camps or cities, the slightest scratch on the skin will set it up. I have known it follow the application of a blister to the chest, and I remember, when in Edinburgh Castle with the Royals, I was obliged to tell the officer commanding the troops a little of my mind upon the subject of corporeal punishment: one poor fellow had just escaped with his life from the Erysipelas brought on by a flogging. But even at periods when the disease is not epidemic, it may be produced by any one of the thousand things that daily occur in life. Cold and wet are frequent causes; and there are individuals who cannot take mercury in any shape or dose without being liable to an attack of it—nevertheless, I have myself cured many cases with mercury. The best practice, however, is to treat it like other acute

fevers. Begin with emetics and follow them up with arsenic or quinine; this practice will apply to all acute diseases of the skin, by whatever names they may be known or distinguished.

What are the causes of cutaneous disease generally? Every thing that can set up Fever;—and what agent in nature, when abused, may not do that? Cutaneous disease may be produced by mechanical injury even—a blow, or a fall, for example. A friend of mine, who hunts a great deal, has had several falls from his horse, and on each occasion the accident was followed by an erruption all over his skin. I have known eruptions to be a constant effect of the introduction of a bougie into the urethra of a particular individual. What will the gentlemen of the Humoral school say to this? for you know the partizans of that school trace all such diseases to a "morbid ingredient in the blood," and they look upon eruptions as an effort of nature to expel the "peccant humor." Be careful, they tell you not to drive it in! Now, what is an eruption but the effect of a tendency to decomposition of the matter entering into a detached portion of the cuticular tissue, so as to produce an arrangement and motion of the atoms composing it different from their motion and arrangement in health? Such caution, therefore, amounts exactly to this: be careful that you do nothing that shall make these cuticular atoms resume their respective places and motions in the economy, so as to resemble the healthy skin! See, then, to what a ridiculous pass the humoral doctrine leads us! When that doctrine was more prevalent than it is at present, cutaneous diseases were very generally classed under the head of "Scurvy;" or Scorbutic; whoever had eruptions on his skin of a chronic character, was said to have the scurvy. Now, if this phrase had been used simply as a sign or "counter to reckon by," no great harm could have ensued; but like "scrofula," and the "gout" "Scurvy" in process of time came to perform the part, not of a sign merely, but of a corporeal something—an indefinite entity or essence,—or any thing but a real sense, which, like a will-o-the-wisp, played its "fantastic tricks" now in this part of the body, now in that. Some wise professor made his pupils suppose that he had detected it in the Blood even; and from that moment not only did people believe that Scurvy was a specific disease, but the whole faculty were anxious to discover a specific remedy for it. A specific for what, Gentlemen? for an "airy nothing," that only existed in the theoretic visions of their own most mystified brains. You may stare as you please—but this, after all, is the truth. What, then, you will demand, is the disease which doctors call "ship-scurvy!" Now to this most reasonable question, I will endeavor to reply in a reasonable manner. Having been myself for months at sea without landing or seeing land, my evidence may be just as good as that of others who have handled the subject before me. During long and harassing voyages, what from being forced by foul weather to sleep under closed and consequently unventilated decks—what from being obliged to watch and work hard upon a short allowance of food and water—together with the anxiety and depression of spirits produced by "hope deferred," the men gradually begin to show signs of a constitutional "break up." You will find them with faces pale and bloated;—their skins rough, rugged, and exhibiting petechiae and haemorrhagic ulcers; their gums weak, spongy, and bleeding; their hair harsh, dry and falling away, and their bowels subject to fluxes; a low fever wastes them day by day and night by night, and they become at last so ill as to faint from the least exertion. This is Ship Scurvy,—not depending upon a something noxious in the blood, but upon a positive want of something essential to its healthy reproduction. And how, think you, is this disease to be cured? By wholesome food and pure air. you will naturally reply. No such thing, Gentlemen; nothing so simple would do for scientific people. It can only be cured by Lemon Juice! Lemon Juice, according to the greatest medical professors is not only a preventive of the bad effects of starvation—but a substitute for pure air and proper food in the cure of diseases produced by a deprivation of both! Now, it is a curious fact in the history of ship scurvy, that just about the time that lemon juice came into fashion as a cure for it, great improvements began to be made in navigation, as also in ship building, and in the ventillating and victualling of fleets; voyages that formerly took up a year, can now be completed in a month or two, and the natural good effects of all this upon the habits and constitution of the seamen are up to this moment, very modestly claimed by the doctors as the result of their employment of lemon juice. And not only are there fools in the world, but philosophers also, who daily echo this trumpery story!

There is not a disorder of the skin, however named, that I have not myself cured with QUININE,—and I have met with examples of every kind of skin disease, that have baffled me with every thing I could

think of. I may here, nevertheless, state in regard to cutaneous disease generally, that I have not very often been at a loss, while I had at my disposed quinine, arsenic, oxymuriate of mercury, hydriodate of potass, creosote, iron, and lead. In a very obstinate case of scalled-head, the subject of which was a young artist of talent, a combination of belladonna and stramonium effected a complete cure in about a fortnight. The disease, in this instance, had been upwards of twelve months standing, and had resisted the prescriptions of some of the ablest men of Dublin and London. Baths, of which I shall afterwards speak, I have also found of great service in diseases of the skin—and what, Gentlemen, do all these remedies come to at last, but to thermal change?

In the great majority of instances, then, the local disorder from which physicians now almost invariably name disease, and to which they almost invariably confine their attention, is only one of the many features of universal disturbance. So far from being the causes of such disturbance, the local tendencies to disorganization are merely hereditary or accidental developments occurring in its course—developments expressive, for the most part, of the weak points of individual constitution—though sometimes determined by climate or other speciality of cause. In England, for example, the viscera of the chest are the organs which chiefly suffer, while in the East and West Indies, the liver and other contents of the abdomen become more frequently implicated. Remittent fever, I need not say, is the parent of both.

Injuries, passions, poisons, then, are each capable of producing the same constitutional disturbance with every kind and degree of organic change to which the subjects of them may, by original weakness of configuration, be predisposed. To use a homely phrase—"when the whole house shakes, the worst built room suffers most,"—and this, of course, differs with every house. A blow on the head, nay, an injury to so minute a member as the finger, may produce a general febrile disorder, ending in abscess of the lungs or liver, according to the predisposition of the patient. Even in the course of the Contagious or Pustular Fevers, we daily find all kinds of organic change developed—change which no man in his senses would place in the light of a Cause of those fevers. Among the organic and other disturbances induced by the

Small-Pox Fever

or Variola, as it is called by the profession, I have noticed sore throat, deafness, dropsy, consumption, glandular swellings, rheumatism, and palsy, just as I have seen the same localisms developed in the course of a common remittent fever,—such sequelæ depending, of course, upon the original predisposition of the patient to the development of this or that complaint by any agency capable of injuring the general constitution. And how should it be otherwise, when we come to reflect that the Small-Pox Fever, like every other fever, consists in a succession of paroxysms so exactly resembling ague, that, before the appearance of the eruption, it cannot possibly be distinguished from it! Nor, so far as individual treatment is concerned, does that matter a straw, for however perfectly specific the cause of the disorder undoubtedly is, the disease itself admits of no specific mode of treatment. To shorten the cold stage, you may resort to the nearest cordial you can get. During the hot, keep the patient as cool as possible, or endeavor to break it by an emetic, which, in nine times out of ten, you may easily do; and when that and the sweating stage are ended, endeavor to prolong the interval of remission by opium, hydrocyanic acid, or quinine. That I believe comprehends nearly the whole duty of the physician in this, as in every other acute disorder. By a reverse course, the most perfectly curable case of small-pox may be very speedily rendered malignant. During the spring of 1824, a great many instances of the disease occurred in Edinburgh, and I remember two cases which, from the difference of the practice employed, and from the difference of the results, made a strong impression upon my mind. The first case was treated by the late Dr. Mackintosh by repeated bleeding and purgation; in consequence of which the patient became delirious, and the pustules were rendered confluent. The subject of the second case was myself; having frequently visited the former gentleman during his illness, I may fairly presume I took the infection from him. But the treatment in my own instance, was restricted to an occasional antimonial, and an opiate about seven in the evening, which had the effect of either entirely preventing the anticipated paroxysm, or of rendering it so trifling as to pass without observation. On two occasions it was neglected, and a night of fever and restlessness was each time the result. I was out of the house in ten days, and, as you see, I have not a perceptible mark on my countenance, while the other gentleman was confined to his room for more than a month, barely escaping with his life, and when he made his appearance in the streets,

his face was so disfigured by scars, that his most intimate friends did not know him when he addressed them. During the autumn and winter of 1825, while I attended the Parisian Hospitals, the small-pox was raging fearfully in France. But so unsuccessful was the treatment employed, bleeding, leeching, and purgation, that the dissecting-rooms of Paris were literally crowded with the bodies of the people who had died of the disease. Some of these bodies bore the mark of *vaccination* on their arms. But what is Vaccination? Vaccination is only the artificial introduction into the human system of an animal *poison;* and it was first practised by Dr. Jenner of Berkley, in Gloucestershire. Now Jenner was a man of great observation, great penetration—a man upon whom facts were never lost, not a mere collector of facts, not one of those poor creatures who cry "facts, facts, give me facts, I never think,'—men who might as wittily cry "Bricks, bricks, give me bricks, I never Build!" Of quite a different stamp was Dr. Jenner. Practising his profession, chiefly at first among the poor of his native country, from them he learned that the people connected with dairies had their hands very often attacked with an eruptive disease, which they traced to a similar eruption on the teats of the cows they milked, and their general belief was that such as had this eruption could not take the small-pox. All through Gloucestershire this fact was known to the peasantry, but the wise doctors only looked upon it as a popular superstition. Not so Jenner,—who set about an investigation, and he discovered it to be the truth; and, in spite of the greatest opposition from men of his own profession, and others whom they secretly influenced, he finally succeeded in establishing the practice of vaccination, so called from *vacca*, the Latin for cow. Jenner, then, was the first who artificially introduced cow-*pox* as a preventative of small-*pox*; and that it is indeed a preventative you will have no difficulty in believing, if you choose to recall to memory the number of persons whose faces were fretted and seamed by the small-pox in your younger days, and the few instances of a similar kind you meet with in these times, since vaccination has been practised. Do you doubt the preventive effect of Small-*pox* against a recurrence of small-pox? No more can you doubt the effect of vaccination—for though small-pox does occiasionally attack individuals who have previously undergone vaccination, so also does it recur occasionally in persons who bear the indelible marks of having previously suffered from small-pox itself. What is the Vaccine disease but a modification of the small-pox? It is small-pox in a milder form, a fact which Jenner suspected, and which Mr. Ceely of Aylesbury has recently proved by a very simple experiment. He first inoculated a cow with the matter of a Small-pox pustule. From the new pustules which were in due time produced in that animal, he took matter and inserted it into the arm of a child. The vaccine or cow-pox pustule was the result!—and these experiments he has several times repeated with the same success, in the presence of many medical men,—so that the cause of small-pox in man (whatever its real nature be) becomes so altered in its vaccine or Cow modification, as to constitute a most valuable preventative against the severer form. What is the nature of the specific agent which produces and reproduces, through such an infinity of individuals, an effect so generally specific? Can it be, as Linnæus thought, of an animalculine character? or, is it at all analogous to the influence produced by the magnet on iron? which metal, you all know, may, from the contact of a magnet, become itself magnetic. These are the most probable relations in which the subject may be viewed—if, indeed, it have not some analogy to the continuation and reproduction of all animal life.

There are a few questions, connected with this subject, which I confess myself unable to answer. Perhaps the ingenuity of some of you may solve them for me.

1 Why is Small-pox, when directly inoculated, more generally mild than when taken casually by infection?

2. Why, after Vaccination, have we, in the majority of cases, only one pustule instead of many, as in cases of the small-pox?

3. Why is the Cow-pox not infectious, like Small-pox—seeing that it is a mere modification of identical agency? The cow. pox, so far as we know, can only be communicated by direct inoculation.

4. Has the protection which the Cow-pox and the Small-pox afford to the constitution against recurrence, any analogy to agricultural exhaustion—to the impossibility to obtain more than a given number of successive crops of a particular herbage, from a particular soil, in a given period of years?

But the small-pox fever is not the only fever which once having attacked an individual during his life, for the most part renders him unsusceptible of recurrence;—all the truly contagious fevers have this effect—Chicken pox, Measels, Scarlet-fever, Hooping-cough, seldom affect the constitution above once in life—though sometimes, like

Small-pox, they make their appearance twice and even three times in individuals. By some authors, the Chicken-pox has been supposed to be a modification of Small-pox—an opinion to which I myself lean—for when we consider how remarkably small-pox becomes modified after vaccine transmission, we can scarcely doubt that it may admit of still further modifications, by passing through the bodies of other animals besides the cow. This much is certain, that every one of the contagious diseases has the most perfect analogy to the ague—seeing that all have remissions and exacerbations of fever more or less perfect in kind, and that all are more or less amenable to the chrono-thermal remedies—not one of which remedies, however, possess such specific influence over them, as to be exclusively relied upon in the treatment of any case. Is not this the best of all proofs that there is no Specific in physic? If in a most decidedly specific disease we have no specific remedial agency, how can we possibly expect to find such for any one of the great family of disorders which may be produced by anything and everything that can derange the general health? Yet Dr. Holland hopes that medical men may one day find a specific for Gout, and another for Consumption—diseases which may be produced and cured by any agency that can alter the moving powers of particular individuals!

Is the

Plague

an intermittent fever?—The case of Corporal Farrel, as detailed by Dr. Calvert, [*Medico-Chirurgical Transactions*] will be a sufficient answer to the question:—"This man had been standing in the sea on the 10th of November, upwards of an hour, to wash and purify his clothes, according to an order to that effect. On coming out of the water he was seized with violent shivering and headache, succeeded by heat of skin, and afterwards by sweating, which alleviated the distressing symptoms. On the following day the paroxysm was repeated. He was permitted to remain in the barracks from a belief that his complaint was intermittent fever. The next day his fever returned as usual, but it now declared itself to be the Plague by a bubo (glandular swelling) arising in the groin, while the seat of the pain seemed to be suddenly transferred from the head to that part. The paroxysm was again followed by intermission or remission. But the next morning, while dressing himself to go to the lazaret, he dropped down and expired."

Disputes still exist as to whether Plague be contagious or not. On whichever side truth lies, there can be no difficulty as to the proper treatment. The indications, in Plague as in simple intermittent fever, or the Small-pox, are to regulate the temperature in the cold and hot stages, by the means already pointed out, and to prolong the remission by quinine, opium, arsenic, &c., according to particular constitutions. Treated in this manner, the disease could not by any possibility be more fatal than we are told it is under the present routine of practice. "In all our cases," says Dr. Madden, "we did as all other practitioners did,—we continued to bleed, and the patients continued to DIE!"—[*Madden's Constantinople.*]

From the same candid author, I find that the

Yellow Fever

of the West Indies, is not less remarkable for its periodic remissions and exacerbations than for the shiverings and alternations of temperature characteristic of every other disorder. The yellow appearance of the patient, like the milder jaundice of our own climate, is a mere effect of spasm of the gall ducts. Jaundice, then, is a symptom, not a disease; it is the result of spasm developed in the course of a febrile paroxysm. People will say, "You would not give Quinine or Bark in jaundice." But wherefore not? seeing I could muster a good half-hundred instances where I myself have cured the disease by one or the other. Dr. Madden details a case of yellow fever cured by Quinine, a case in which he says, "had the gentleman been bled, after the fashion of the country, I think in all probability he would have died; or had he survived, that he would have had left a debilitated constitution and a dropsical diathesis to encounter in his convalescence."

Previous to my embarkation for the East Indies, where it was my chance to serve five years as a medical officer of the army, I read Dr. James Johnson's work on the "Diseases of Tropical Climates." Impressed when a boy with his pretty style, I put his sanguinary treatment and his twenty-grain doses of calomel to the test. But so far from confirming his assertions, my own after-experience led me to adopt conclusions much the same as Dr. Madden Capt. Owen of the Royal Navy, too, who could neither have a theory to support nor any interested end to serve one way or the other, details at great length the mortality which took place among his people while employed in surveying the African coast. "It may, in fact, be questioned," says this intelligent navigator, "whether our very severe losses were not, in some measure, attributable to European medical practice, Bleeding and Calomel being decidedly the most deadly enemies in a tropical climate.—

During the whole time of the prevalence of the fever, we had not one instance of perfect recovery after a liberal application of the lancet or of this medicine." Captain Owen farther states, that he himself recovered without either bleeding or calomel, while the ship-doctor fell a martyr to his medical faith,—he bled himself, took calomel, and died! [The above remarks were first printed in 1840.—Two years afterwards, 12th November 1842, extracts from the Report of the Select Committee on the Western coast of Africa, appeared in the Times newspaper, wherein, among other things, is the following: "The bleeding system has fortunately gone out of fashion, and the frightful mortality that attended its practice, is now no longer known on board our ships." Dr. James Johnson, are you satisfied!]

But the Eastern practitioner will tell me possibly, that

Dysentery

cannot be safely treated in any other fashion. Is he sure he knows exactly what is meant by the word Dysentery? I shall say nothing of its etymology but rather give you the symptoms included by Sydenham under the name. "The patient," he tells us, "is attacked with a chilliness and shaking, which is immediately succeeded by a heat of the whole body. Soon after this gripes and stools follow." What then, Gentlemen, is this dysentery but an ague, with increase of secretion from one surface instead of another—from the mucous surface of the bowels instead of the skin, and the skin remember is only a continuation of the mucous membrane of the bowels. Now, Dr. Cumming, late of the East India Company's medical service, informs us, that while ascending the Nile in 1836, he was attacked with dysentery. After suffering for a week with "intervals of remission," he fairly gave himself up, and so did his attendants, for he had nothing in the shape of medicine with him. As a forlorn hope, however, he ordered his guide to sponge him with warm water. And this simple remedy [attention to temperature,] with fomentation of the abdomen, was the only treatment employed. He took a little wine and water, which remained upon his stomach; he then became drowsy, slept for a short time, felt his skin less hot and burning, and, in brief, began to recover, and that rapidly. In about a week afterwards, he writes in his journal: "My recovery is almost complete, and the rapidity of my convalescence leads me to contrast my late attack with a precisely similar one which I had at Cawnpore in the autumn of 1829. On that occasion I was largely bled at the arm, had *fifty* leeches applied to the abdomen, and during the first four days of the disease, in addition to extensive mercurial frictions, I swallowed *two hundred and sixteen grains* of calomel. True, I recovered; or rather I did not die! whether in consequence, or in spite of the above heroic treatment, I will not venture to say. My face was swollen to an enormous size, every tooth was loose in my jaws, and for six or eight weeks I could eat no solid food; my constitution received a shock from which it never fairly recovered, and I was obliged to come to Europe on furlough. On the present occasion, fortunately for me, the vis medicatrix naturæ was my sole physician, [he forgot the sponging part!] and I am now almost as well as before the attack commenced. British medical practice, in my humble opinion, deals too much in heroics."

That opinion, Gentlemen, I hope, is now yours also—it has many years been mine. Such a case, from such a quarter, must doubtless be more than sufficient to warn you against the sanguinary and mercurial practice introduced into the East by the influence of Dr. James Johnson's Work on the Diseases of India. What an idea, first to break down by the lancet and mercury to salivation the attractive power of every atom of the body, in the expectation of thereby strengthening its weakest parts! Does this savour of mania, or does it not? and that too, as I hinted before, madness of rather a homicidal kind?

Dropsy.

How can there be a morbid superabundance of any secretion without a corresponding change of temperature? He who will rigidly scrutinize this disease shall find that the same shiverings and fever which precede the sweat of ague, usher in the tumid abdomen and swollen legs of Dropsy. Dropsy, then, may be termed an Ague with inward sweat. That it is a remittent disease may be seen by the palpable diminution of the swelling on particular days; to say nothing of the hopes both of the patient and physician on such days being excited by general improvement throughout. How should the disease be treated? Not, according to modern practice, by diuretics and sudorifics solely; but by a combination and alternation of these remedies with the medicines of acknowledged efficacy in that most perfect type of all disease, the ague. Of cases successfully treated by me in this manner, I could give you hundreds—but to what purpose? The recital would only comprehend the symptoms of ague with increase of the natural secretions of the vari-

ous cavities even to effusion, (or cellular substance) instead of perspiration by the skin; and the remedies, as you may guess, quinine, opium, arsenic, hydrocyanic acid, combined or alternated with creosote, squill, ipecacuanha, colchicum, mercury, &c. What other proofs do you want of the unity of all disease? The Paymaster-Sergeant of the Royals had dropsy, which, notwithstanding the usual treatment by diuretics, purgatives, &c., was daily getting worse, when Dr. Stephenson, of the 13th Dragoons, suggested the applicaton of poultices of *lichen vulgaris* to the loins. From that day the amendment was rapid, and the patient subsequently got well. Now, Gentlemen, everybody believed that there must have been some magical virtue in the lichen. But Mr. Brady, the surgeon of the regiment, thinking that the plant had less to do with the cure than the heat which, in the form of a poultice, it produced, determined to try poultices made with *rice* in a case exactly similar. The result was the same—a cure; proving how right he was in his conjecture. Since I have entered into private practice, I have repeatedly applied poultices to the loins with advantage, and have also, with the assistance of plasters of pitch, galbanum, &c., succeeded in curing cases of dropsy, that resisted every kind of internal remedy.

CHOLERA,—

the scourge of nations—will cholera be found to partake of the same universal type of disease, the ague? You will be the best judges, Gentlemen, when I draw my parallel. While in India I had ample opportunities for ascertaining its nature. Tremulous and spasmodic action belong equally to ague and to cholera; vomiting or nausea characterises both. The ague patient has sometimes diarrhœa or looseness; oppression at the chest, and coldness of the whole body are the primary symptoms of each. The increased flow of pale urine, so often remarked in ague, is an occasional symptom of epidemic cholera. In more than one instance of cholera, which came under my observation while serving in the East, that secretion passed involuntarily from the patient a short time before death. Suppression of urine, so common in the late epidemic, was a frequent symptom of the Walcheren ague. When there is no hot fit or reaction, death is usually preceded by a sleepy stupor in both. You have ague, too, with hot skin and bounding pulse, a state analogous to the milder forms of cholera, in which you remark the same phenomena. When not fatal, cholera, like ague, has a hot and sweating stage. Moreover, when ague terminates life by a single paroxysm, you find the same appearances after death in the bodies of both. Lastly, phrensy, disease of the lungs, liver, and spleen, with dysentery and dropsy, to say nothing of epilepsy and apoplexy, have been the occasional sequelæ of each. Cholera, then, is an extreme of the cold stage of ague.

What are the remedies most beneficial in Cholera? Attention to temperature comprehends every thing that has either failed or succeeded. Were I myself to become the subject of it, I should feel inclined to trust more to a bottle of brandy than to any thing contained in the Materia Medica. While serving in the East Indies I saw many hundred cases of the disorder, but I never could convince myself of the superiority of any one kind of *medical* treatment over another. In my Work upon the Diseases of India, I have proved that death, in the great majority of instances of cholera, takes place from a palsy of the pneumo-gastric nerves,—those nerves that influence the functions of the lungs and stomach. If you divide these nerves in the dog, you have the essential symptoms of Cholera, viz., loss of voice, vomiting, and difficult breathing always,—cramps and flatulence frequently; and the animal seldom survives the third day. On dissection, you find the vessels of the head, lungs, and intestines, filled with black blood. That is exactly what you find on opening the bodies of persons who have died of cholera. Shortly after my return from India, Dr. Wilson Philip read a paper at the Westminster Medical Society, in which he took the very same view of Cholera, but wherein he forgot to say that his views of the disease had been every one of them anticipated in my Remarks upon it, published in the *Lancet* some months before I quitted India.

Poisoning by Arsenic.

M. Grimaud, a chemist at Poictiers, has proposed a mode of rendering poisoning by arsenic more difficult. He recommends that this article shall be sold only when mixed with a certain quantity of sulphate of iron and cyanure of potash. About one per cent. of each substance would, he alleges, be sufficient. The arsenic, thus qualified, shews itself either by colour or smell, when used in the various aliments fit for man. Thus, arsenic prepared this way, and thrown into warm meat soup, gives immediately a green bronze colour; into hot milk, an opal; into red wine, a violet; into bread, a deep blue; and so on for 20 mixture, on which M. Grimaud has made experiments.—*Galignani's Messenger.*

MISS MARTINEAU'S LETTERS ON MESMERISM.

LETTER I.

Tynemouth, Nov. 12.

It is important to society to know whether Mesmerism is true. The revival of its pretensions from age to age makes the negative of this question appear so improbable, and the affirmative involves anticipations so vast, that no testimony of a conscientious witness can be unworthy of attention. I am now capable of affording testimony: and all personal considerations must give way before the social duty of imparting the facts of which I am possessed.

For some years before June last, I was in the class of believers upon testimony. I had witnessed no mesmeric facts whatever; but I could not doubt the existence of many which were related to me without distrusting either the understanding, or the integrity, of some of the wisest and best people I knew. Nor did I find it possible to resist the evidence of books, of details of many cases of protracted bodily and mental effects. Nor, if it had been possible, could I have thought it desirable or philosophical to set up my negative ignorance of the functions of the nerves and the powers of the mind, against the positive evidence of observers and recorders of new phenomena. People do not, or ought not, to reach my years without learning that the strangeness and absolute novelty of facts attested by more than one mind is rather a presumption of their truth than the contrary, as there would be something more familiar in any devices or conceptions of men; that our researches into the powers of nature, of human nature with the rest, have as yet gone such a little way that many discoveries are yet to be looked for; and that, while we have hardly recovered from the surprise of the new lights thrown upon the functions and texture of the human frame by Harvey, Bell, and others, it is too soon to decide that there shall be no more as wonderful, and presumptuous in the extreme to predetermine what they shall or shall not be.

Such was the state of my mind on the subject of Mesmerism six years ago, when I related a series of facts, on the testimony of five persons whom I could trust, to one whose intellect I was accustomed to look up to, though I had had occasion to see that great discoveries were received or rejected by him on other grounds than the evidence on which their pretensions rested. He threw himself back in his chair when I began my story, exclaiming, "Is it possible that you are bit by that nonsense?" On my declaring the amount of testimony on which I believed what I was telling, he declared, as he frequently did afterwards, that if he saw the incidents himself, he would not believe them; he would sooner think himself and the whole company mad than admit them. This declaration did me good; though of course, it gave me concern. It showed me that I must keep my mind free, and must observe and decide independently, as there could be neither help nor hindrance from minds self-exiled in this way from the region of evidence. From that time till June last, I was, as I have said, a believer in Mesmerism on testimony.

The reason why I did not qualify myself for belief or disbelief on evidence was a substantial one. From the early summer of 1839, I was, till this autumn, a prisoner from illness. My recovery now, by means of mesmeric treatment alone, has given me the most thorough knowledge possible that Mesmerism is true.

This is not the place in which to give any details of disease. It will be sufficient to explain briefly, in order to render my story intelligible, that the internal disease, under which I have suffered, appears to have been coming on for many years; that after warnings of failing health, which I carelessly overlooked, I broke down, while travelling abroad, in June, 1839; that I sank lower and lower for three years after my return, and remained nearly stationary for two more preceding last June. During these five years, I never felt wholly at ease for one single hour. I seldom had severe pain; but never entire comfort. A besetting sickness, almost disabling me from taking food for two years, brought me very low; and, together with other evils, it confined me to a condition of almost entire stillness—to a life passed between my bed and my sofa. It was not till after many attempts at gentle exercise that my friends agreed with me that the cost was too great for any advantage gained: and at length it was clear that even going down one flight of stairs was imprudent.—From that time I lay still; and by means of this undisturbed quiet, and such an increase of opiates as kept down my most urgent discomforts, I passed the last two years with less suffering than the three preceding. There was, however, no favorable change in the disease. Every thing was done for me that the best medical skill and science could suggest, and the most indefatigable humanity and family affection devise: but nothing could avail beyond mere alleviation. My dependence upon opiates was desperate. My kind and vigilant medical friend—the most

sanguine man I know, and the most bent upon keeping his patients hopeful—avowed to me last Christmas, and twice afterwards, that he found himself compelled to give up all hope of affecting the disease—of doing more than keeping me up, in collateral respects, to the highest practicable point. This was no surprise to me; for when any specific medicine is taken for above two years without affecting the disease, there is no more ground for hope in reason than in feeling. In June last, I suffered more than usual, and new measures of alleviation were resorted to. As to all the essential points of the disease, I was never lower than immediately before I made trial of Mesmerism.

If, at any time during my illness, I had been asked with serious purpose, whether I believed there was no resource for me, I should have replied that Mesmerism might perhaps give me partial relief.

After my medical friend's avowal of his hopelessness, however, I felt myself not only at liberty, but in duty bound, to try, if possible, the only remaining resource for alleviation. I felt then, and I feel now, that through all mortification of old prejudices, and all springing up of new, nobody in the world would undertake to say I was wrong in seeking every recovery by any harmless means, when every other hope was given up by all: and it was not recovery that was in my thoughts, but only solace. It never presented itself to me as possible that disease so long and deeply fixed could be removed; and I was perfectly sincere in saying that the utmost I looked for was release from my miserable dependence on opiates. Deep as are my obligations to my faithful and skilful medical friend, for a long course of humane effort on his part, no one kindness of his has touched me so sensibly as the grace with which he met my desire to try a means of which he had no knowledge or opinion, and himself brought over the Mesmerist under whom the first trial of my susceptibility was made.

Last winter, I wrote to two friends in London, telling them of my desire to try Mesmerism, and entreating them to be on the watch to let me know if any one came this way of whose aid I might avail myself.—They watched for me, and one made it a business to gain all the information she could on my behalf; but nothing was actually done, or seemed likely to be done, when in June a sudden opening for the experiment was made, without any effort of my own, and on the 22nd I found myself, for the first time, under the hands of a Mesmerist.

It all came about easily and naturally at last. Mr. Spencer T. Hall being at Newcastle lecturing, my medical friend went out of curiosity, was impressed by what he saw and came to me very full of the subject. I told him what was in my mind; and I have said above with what a grace he met my wishes, and immediately set about gratifying them.

At the end of four months I was, as far as my own feelings could be any warrant, quite well. My mesmerist and I are not so precipitate as to conclude my disease yet extirpated, and my health established beyond all danger of relapse; because time only can prove such facts. We have not yet discontinued the mesmeric treatment, and I have not re-entered upon the hurry and bustle of the world; the case is thus not complete enough for a professional statement. But, as I am aware of no ailment, and am restored to the full enjoyment of active days and nights of rest, to the full use of my powers of body and mind, and as many invalids, still languishing in such illness as I have recovered from, are looking to me for guidance in the pursuit of health by the same means, I think it right not to delay giving a precise statement of my own mesmeric experience, and of my observation of some different manifestations in the instance of another patient in the same house.

On Saturday, June 22nd, Mr. Spencer Hall and my medical friend came, as arranged, at my worst hour of the day, between the expiration of one opiate and the taking of another. By an accident the gentlemen were rather in a hurry—a circumstance unfavorable to a first experiment. But result enough was obtained to encourage a further trial, though it was of a nature entirely unanticipated by me. I had no other idea than that I should either drop asleep or feel nothing. I did not drop asleep, and I did feel something very strange.

Various passes were tried by Mr. Hall; the first of those that appeared effectual, and the most so for some time after, were passes over the head, made from behind—passes from the forehead to the back of the head and a little way down the spine. A very short time after these were tried, and twenty minutes from the beginning of the seance, I became sensible of an extraordinary appearance, most unexpected, and wholly unlike anything I had ever conceived of. Something seemed to diffuse itself through the atmosphere—not like smoke, nor steam, nor haze—but most like a clear twilight, closing in from the windows and down from the ceiling, and in which one object after another melted away, till scarcely anything was left visible before my wide opened eyes. First, the outlines of all objects were blurred; then

a bust, standing on a pedestal in a strong light, melted quite away; then the opposite bust, then the table with its gay cover, then the floor, and the ceiling, till one small picture, high up on the opposite wall, only remained visible — like a patch of phosphoric light. I feared to move my eyes, lest the singular appearance should vanish; and I cried out, "O! deepen it! deepen it!" supposing this the precursor of the sleep.— It could not be deepened, however; and when I glanced aside from the luminous point, I found that I need not fear the return of objects to their ordinary appearance while the passes were continued. The busts reappeared, ghost-like, in the dim atmosphere, like faint shadows, except that their outlines, and the parts in the highest relief, burned with the same phosphoric light. The features of one, an Isis with bent head, seemed to be illumined by a fire on the floor, though this bust has its back to the windows. Wherever I glanced, all outlines were dressed in this beautiful light: and so they have been at every seance, without exception, to this day; though the appearance has rather given away to drowsiness since I left off opiates entirely. This appearance continued during the remaining twenty minutes before the gentlemen were obliged to leave me.— The other effects produced were, first, heat, oppression and sickness, and, for a few hours after, disordered stomach: followed, in the course of the evening, by a feeling of lightness and relief, in which I thought I could hardly be mistaken. On occasions of a perfectly new experience, however, scepticism and self distrust are very strong. I was aware of this beforehand, and also, of course of the common sneer—that Mesmeric effects are "all imagination." When the singular appearances presented themselves, I thought to myself,—"Now, shall I ever believe that this was all fancy? When it is gone, and when people laugh, shall I ever doubt having seen what is now as distinct to my waking eyes as the rolling waves of yonder sea, or the faces round my sofa?" I did a little doubt it in the course of the evening: I had some misgivings even so soon as that; and yet more the next morning, when it appeared like a dream.

Great was the comfort, therefore, of recognizing the appearances on the second afternoon. "Now," thought I, "can I again doubt?" I did, more faintly; but, before a week was over, I was certain of the fidelity of my own senses in regard to this, and more.

There was no other agreeable experience on this second afternoon. Mr. Hall was exhausted and unwell, from having mesmerized many patients; and I was more oppressed and disordered than on the preceding day, and the disorder continued for a longer time: but again, towards night, I felt refreshed and relieved. How much of my ease was to be attributed to Mesmerism, and how much to my accustomed opiate, there was no saying, in the then uncertain state of my mind.

The next day, however, left no doubt. Mr. Hall was prevented by illness from coming over, too late to let me know. Unwilling to take my opiate while in expectation of his arrival, and too wretched to do without some resource, I rang for my maid, and asked whether she had any objection to attempt what she saw Mr. Hall do the day before. With the greatest alacrity she complied. Within one minute the twilight and phosphoric lights appeared; and in two or three more, a delicious sensation of ease spread through me,—a cool comfort, before which all pain and disease gave way, oozing out, as it were, at the soles of my feet. During that hour, and almost the whole evening, I could no more help exclaiming with pleasure than a person in torture crying out with pain. I became hungry, and ate with relish, for the first time for five years. There was no heat, oppression, or sickness during the seance, nor any disorder afterwards.— During the whole evening, instead of the lazy hot ease of opiates, under which pain is felt to lie in wait, I experienced something of the indescribable sensation of health, which I had quite lost and forgotten. I walked about my rooms, and was gay and talkative. Something of this relief remained till the next morning; and then there was no re-action. I was no worse than usual; and perhaps rather better.

Nothing is to me more unquestionable and more striking about this influence than the absence of all re-action. Its highest exhilaration is followed, not by depression or exhaustion, but by a further renovation. From the first hour to the present, I have never fallen back a single step. Every point gained has been steadily held. Improved composure of nerve and spirits has followed upon every mesmeric exhilaration. I have been spared all the weaknesses of convalescence, and have been carried through all the usually formidable enterprises of return from deep disease to health with a steadiness and tranquility astonishing to all witnesses. At this time, before venturing to speak of my health as established, I believe myself more firm in nerve, more calm and steady in mind and spirits, than at any time of my life before. So much, in consideration of the natural and common fear of the mesmeric influence as pernicious excitement—as a kind of intoxication.

When Mr. Hall saw how congenial was the influence of this new Mesmerist, he advised our going on by ourselves, which we did until the 6th of September.

I owe much to Mr. Hall for his disinterested zeal and kindness. He did for me all he could; and it was much to make a beginning, and put us in the way of proceeding.

LETTER II.

I next procured, for guidance, Deleuze's 'Instruction Pratique, sur le Magnetisme Animal.' Out of this I directed my maid: and for some weeks we went on pretty well. Finding my appetite and digestion sufficiently improved, I left off tonics, and also the medicine which I had taken for two years and four months, in obedience to my doctor's hope of affecting the disease,—though the eminent physician who saw me before that time declared that he had "tried it in an infinite number of such cases, and never knew it avail." I never felt the want of these medicines, nor others which I afterwards discontinued. From the first week in August, I took no medicines but opiates; and these I was gradually reducing. These particulars are mentioned to show how early in the experiment Mesmerism became my sole reliance.

On four days, scattered through six weeks, our *seance* was prevented by visitors, or other accidents. On these four days, the old distress and pain recurred; but never on the days when I was mesmerized.

From the middle of August (after I had discontinued all medicines but opiates,) the departure of the worst pains and oppressions of my disease made me suspect that the complaint itself,—the incurable, hopeless disease of so many years,—was reached; and now I first began to glance towards the thought of recovery. In two or three weeks more, it became certain that I was not deceived; and the radical amendment has since gone on, without intermission.

Another thing, however, was also becoming clear: that more aid was necessary. My maid did for me whatever, under my own instruction, good-will and affection could do. But the patience and strenuous purpose required in a case of such long and deep seated disease can only be looked for in an educated person, so familiar with the practice of Mesmerism as to be able to keep a steady eye on the end, through all delays and doubtful incidents. And it is also important, if not necessary, that the predominance of will should be in the Mesmerist, not the patient. The offices of an untrained servant may avail perfectly in a short case,—for the removal of sudden pain, or a brief illness; but, from the subordination being in the wrong party, we found ourselves coming to a stand.

The difficulty was abolished by the kindness and sagacity of Mr. Atkinson, who had been my adviser throughout. He explained my position to a friend of his—a lady, the widow of a clergyman, deeply and practically interested in Mesmerism—possessed of great Mesmeric power, and of those high qualities of mind and heart which fortify and sanctify its influence. In pure zeal and benevolence, this lady came to me, and has been with me ever since. When I found myself able to repose on the knowledge and power (mental and moral) of my Mesmerist, the last impediments to my progress were cleared away, and I improved accordingly.

A few days after the arrival of my kind Mesmerist, I had my foot on the grass for the first time for four years and a half. I went down to the little garden under my windows. I never before was in the open air, after an illness of merely a week or two, without feeling more or less overpowered; but now, under the open sky, after four years and a half spent between bed and a sofa, I felt no faintness, exhaustion, or nervousness of any kind. I was somewhat haunted a day or two by the stalks of the grass, which I had not seen growing for so long (for, well supplied as I had been with flowers, rich and rare, I had seen no grass, except from my windows;) but at the time I was as self-possessed as any walker in the place. In a day or two, I walked round the garden, then down the lane, then to the haven, and so on, till now, in two months, five miles are no fatigue to me. At first, the evidences of the extent of the disease were so clear as to make me think that I had never before fully understood how ill I had been. They disappeared one by one; and now I feel nothing of them.

The same fortifying influence carried me through the greatest effort of all,—the final severance from opiates. What that struggle is, can be conceived only by those who have experienced, or watched it with solicitude in a case of desperate dependence on them for years. No previous reduction can bridge over the chasm which separates an opiated from the natural state. I see in my own experience a consoling promise for the diseased, and also for the intemperate, who may desire to regain a natural condition, but might fail through bodily suffering. Where the mesmeric sleep can be induced, the transition may be made comparatively easy. It

appears, however, that opiates are a great hindrance to the production of the sleep; but even so, the mesmeric influence is an inestimable help, as I can testify. I gave all my opiates to my Mesmerist, desiring her not to let me have any on any entreaty; and during the day I scarcely felt the want of them. Her mesmerizing kept me up; and, much more, it intercepted the distress,—obviated the accumulation of miseries under which the unaided sufferer is apt to sink. It enabled me to encounter every night afresh,—acting as it does in cases of insanity, where it is all-important to suspend the irritation—to banish the haunting idea. What further aid I derived in this last struggle from Mesmerism in another form, I shall mention when I detail the other case with which my own became implicated, and in which, to myself at least, the interest of my own has completely merged.

It will be supposed that during the whole experiment, I longed to enjoy the mesmeric sleep, and was on the watch for some of the wonders which I knew to be common. The sleep never came, and except the great marvel of restored health, I have experienced less of the wonders than I have observed in another. Some curious particulars are, however, worth noting.

The first very striking circumstance to me, a novice, though familiar enough to be practised, was the power of my Mesmerist's volitions, without any co-operation on my part. One very warm morning in August, when every body else was oppressed with heat, I was shivering a little under the mesmeric influence of my maid,—the influence, in those days, causing the sensation of cold currents running through me from head to foot.—"This cold will not do for you ma'am," said M. "O!" said I, "it is fresh, and I do not mind it:" and immediately my mind went off to something else. In a few minutes, I was surprised by a feeling as of warm water tickling through the channels of the late cold.—In reply to my observation, that I was warm now, M. said, "Yes, ma'am, that is what I am doing. By inquiry and observation, it became clear to me, that her influence was, generally speaking, composing, just in proportion to her power of willing that it should be so. When I afterwards saw, in the case I shall relate, how the volition of the Mesmerist caused immediate waking from the deepest sleep, and a supposition that the same glass of water was now wine—now porter, &c., I became too much familiarized with the effect to be as much astonished as many of my readers will doubtless be.

Another striking incident occurred in one of the earliest of my walks. My Mesmerist and I had reached a headland nearly half a mile from home, and were resting there, when she proposed to mesmerize me a little—partly to refresh me for our return, and partly to see whether any effect would be produced in a new place, and while a fresh breeze was blowing. She merely laid her hand on my forehead, and in a minute or two the usual appearances came, assuming a strange air of novelty from the scene in which I was. After the blurring of the outlines, which made all objects more dim than the dull gray day had already made them, the phosphoric lights appeared, glorifying every rock and headland, the horizon, and all the vessels in sight. One of the dirtiest and meanest of the steam tugs in the port was passing at the time, and it was all dressed in heavenly radiance—the last object that any imagination would select as an element of a vision. Then, and often before and since, did it occur to me that if I had been a pious and very ignorant Catholic, I could not have escaped the persuasion that I had seen heavenly visions. Every glorified object before my open eyes would have been a revelation; and my Mesmerist, with the white halo round her head, and the illuminated profile, would have been a saint or an angel.

Sometimes the induced darkening has been so great, that I have seriously inquired whether the lamp was not out, when a few movements of the head convinced me that it was burning as brightly as ever. As the muscular power oozes away under the mesmeric influence, a strange inexplicable feeling ensues of the frame becoming transparent and ductile. My head has often appeared to be drawn out, to change its form, according to the traction of my Mesmerist, and an indescribable and exceedingly agreeable sensation of transparency and lightness, through a part or the whole of the frame, has followed. Then begins the moaning, of which so much has been made, as an indication of pain. I have often moaned, and much oftener have been disposed to do so, when the sensations have been the most tranquil and agreeable. At such times, my Mesmerist has struggled not to disturb me by a laugh, when I have murmured, with a serious tone, "Here are my hands, but they have no arms to them:" "O dear! what shall I do? here is none of me left?" the intellect and moral powers being all the while at their strongest. Between this condition and the mesmeric sleep there is a state, transient and rare, of which I have had experience, but of which I intend to give no account. A somnambule calls it a glimmering of the lights of somnambulism and clairvoyance. To me there appears nothing like glimmering

in it. The ideas that I have snatched from it, and now retain, are, of all ideas which ever visited me, the most lucid, and impressive. It may be well that they are incommunicable—partly from their nature and relations, and partly from their unfitness for translation into mere words. I will only say that the condition is one of "no nervous excitement," as far as experience and outward indications can be taken as a test. Such a state of repose, of calm translucent intellectuality, I had never conceived of; and no reaction followed, no excitement but that which is natural to every one who finds himself in possession of a great new idea.

Before leaving the narrative of my own case for that of another, widely different, I put in a claim for my experiment being considered rational. It surely was so, not only on account of my previous knowledge of facts, and of my hopelessness from any other resource, but on grounds which other sufferers may share with me;—on the ground that though the science of medicine may be exhausted in any particular case, it does not follow that curative means are exhausted;—on the ground of the ignorance of all men of the nature and extent of the reparative power which lies under our hand, and which is vaguely indicated by the term "Nature;"—on the ground of the ignorance of all men regarding the very structure, and much more, the functions of the nervous system;—and on the broad ultimate ground of our total ignorance of the principal of life,—of what it is, and where it resides, and whether it can be reached, and in any way beneficially affected by a voluntary application of human energy.

It seemed to me rational to seek a way to refreshment first, and then to health, amidst this wilderness of ignorances, rather than to lie perishing in their depths. The event seems to prove it so. The story appears to me to speak for itself. If it does not assert itself to all,—if any should, as is common in cases of restoration by Mesmerism,—try to account for the result by any means but those which are obvious, supposing a host of moral impossibilities rather than admit a plain new fact, I have no concern with such objectors or objections.

In a case of blindness cured, once upon a time, and cavilled at and denied, from hostility to the means, an answer was given which we are wont to consider sufficiently satisfactory: "One thing I know, that whereas I was blind, now I see." Those who could dispute the fact after this must be left to their doubts. They could, it is true, cast out their restored brother; but they could not impair his joy in his new blessing, nor despoil him of his far higher privileges of belief in an allegiance to his benefactor. Thus, whenever, under the Providence which leads on our race to knowledge and power, any new blessing of healing arises, it is little to one who enjoys it what disputes are caused among observers. To him, the privilege is clear and substantial.—Physically, having been diseased, he is now well. Intellectually, having been blind, he now sees.

For the wisest this is enough. And for those of a somewhat lower order, who have a restless craving for human sympathy in their recovered relish of life, there is almost a certainty that somewhere near them there exist hearts susceptible of simple faith in the unexplored powers of nature, and minds capable of an ingenuous recognition of plain facts, though they be new, and must wait for a theoretical solution.

LETTER III.

Tynemouth, Nov. 20, 1844.

When I entered upon my lodgings here, nearly five years ago, I was waited upon by my landlady's niece, a girl of fourteen. From that time to this, she has been under my eye; and now, at the age of nineteen, she has all the ingenuousness and conscientiousness that won my respect at first, with an increased intelligence and activity of affections. I am aware that personal confidence, such as I feel for this girl, cannot be transferred to any other mind by testimony. Still, the testimony of an inmate of the same house for so many years, as to essential points of character, must have some weight: and therefore I preface my story with it. I would add that no wonders of Mesmerism could be greater than that a person of such character, age, and position should be able, for a long succession of weeks, to do and say things, every evening, unlike her ordinary sayings and doings, to tell things out of the scope of her ordinary knowledge, and to command her countenance and demeanor, so that no fear, no mirth, no anger, no doubt, should ever once make her move a muscle, or change colour, or swerve for one instant from the consistency of her assertions and denials on matters of fact or opinion. I am certain that it is not in human nature to keep up for seven weeks, without slip or trip, a series of deceptions so multifarious; and I should say so of a perfect stranger, as confidently as I say it of this girl, whom I know to be incapable of deception, as much from the character of her intellect as of her *morale*. When it is seen, as it will be, that she has also told incidents which it is impossible she could have known by ordinary means, every person who really wishes

to study such a case, will think the present as worthy of attention as any that can be met with, though it offers no array of strange tricks, and few extreme marvels.

My Mesmerist and I were taken by surprise by the occurrence of this case. My friend's maid told her, on the 1st of October, that J. (our subject) had been suffering so much the day before, from pain in the head and inflamed eye, that she (the maid) had mesmerised her; that J. had gone off into the deep sleep in five minutes, and had slept for twenty minutes, when her aunt, in alarm had desired that she should be awakened. J. found herself not only relieved from pain, but able to eat and sleep, and to set about her business the next day with a relish and vigour quite unusual. My friend saw at once what an opportunity might here offer for improving the girl's infirm health, and for obtaining light as to the state and management of my case, then advancing well, but still a subject of anxiety.

J. had for six years been subject to frequent severe pain in the left temple, and perpetually recurring inflammation of the eyes, with much disorder besides. She is active and stirring in her habits, patient and cheerful in illness, and disposed to make the least, rather than the most, of her complaints. She had, during these six years, been under the care of several doctors, and was at one time a patient at the Eye Infirmary at Newcastle; and the severe treatment she has undergone is melancholy to think of, when most of it appears to have been almost or entirely in vain. She herself assigns, in the trance, a structural defect as the cause of her ailments, which will prevent their ever being entirely removed: but from the beginning of the mesmeric treatment, her health and looks have so greatly improved, that her acquaintance in the neighborhood stop her to ask how it is that her appearance is so amended. There was in her case certainly no "imagination" to begin with; for she was wholly ignorant of Mesmerism, and had no more conception of the phenomena she was about to manifest than she has consciousness of them at this moment.

This unconsciousness we have guarded with the utmost care. We immediately resolved that, if possible, there should be one case of which no one could honestly say that the sleeping and waking states of mind were mixed. Our object has been, thus far, completely attained—one harmless exception only having occurred. This was when, speaking of the nature and destiny of man, an idea which she had "heard in church" intruded itself among some otherwise derived, and troubled her by the admixture. On that occasion, she remarked afterwards, that she had been dreaming, and, she thought, talking of the soul and the day of judgment. This is the only instance of her retaining any trace of anything being said or done in the trance. Her surprise on two or three occasions, at finding herself, on awakening, in a different chair from the one she went to sleep in, must shew her that she has walked, but we have every evidence from her reception of what we say to her, and from her ignorance of things of which she had previously informed us, that the time of her mesmeric sleep is afterwards an absolute blank to her. I asked her one evening lately, when she was in the deep sleep, what she would think of my publishing an account of her experience with my own,—whether she should be vexed by it. She replied that she should like it very much; she hoped some body would let her know of it, and show it to her,—for though she remembered when asleep everything she had thought when asleep before, she could not keep any of it till she awoke. It was all regularly "blown away." But if it was printed, she should know; and she should like that.

To preserve the unconsciousness as long as possible, we have admitted no person whatever at our séances, from the first day till now, who could speak to her on the subject. We shut out our maids at once; and we two have been the constant witnesses, with a visitor now and then, to the number of about twelve in the whole.

It is a memorable moment when one first hears the monosyble, which tells that the true mesmeric trance has begun. "Are you asleep?" "Yes." It is crossing the threshold of a new region of observation of human nature. Then it goes on.—"How long shall you sleep?" "Half an hour."—"Shall you wake of yourself, or shall I wake you?" "I shall wake of myself."—And so she did to a second,—no clock or watch being near, but the watch in my hand. For some weeks she could always see the time, and foretell her own waking; but of late, in manifesting some new capabilities, she has lost much of this.

Nothing can induce her to say a word on a matter she is not perfectly sure of. She solemnly shakes her head, saying, "I won't guess: it won't do to guess." And sometimes, appealingly, "I would tell you if I could." "I'll try to see." "I'll do all I can," &c. When sure of her point, nothing can move her from her declarations. Night after night, week after week, she sticks to her decisions, strangely enough sometimes, as it appears to us: but we are not aware of

her ever yet having been mistaken on any point on which she has declared herself. We ascribe this to our having carefully kept apart the waking and sleeping ideas; for it is rare to find somnambules whose declarations can be at all confidently relied on. If any waking consciousness is mixed up with their sleeping faculties, they are apt to guess —to amuse their fancy, and to say anything that they think will best please their Mesmerist. J.'s strict and uncompromising truthfulness forms a striking contrast with the vagaries of hackneyed, and otherwise mismanaged somnambules.

It soon became evident that one of her strongest powers was the discernment of disease, its condition and remedies. She cleared up her own case first, prescribing for herself very fluently. It was curious to see, on her waking, the deference and obedience with which she received from us the prescriptions with which she herself had just furnished us. They succeeded and so did similar efforts on my behalf. I cannot here detail the wonderful accuracy with which she related, without any possible knowledge of my life ten and twenty years ago, the circumstances of the origin and progress of my ill-health, of the unavailing use of medical treatment for five years, and the operation of Mesmerism upon it of late. One little fact will serve our present purpose better. Soon after she was first mesmerized, I was undergoing my final severance from opiates—a serious matter to one who had depended so long and so desperately upon them. As I have said, I got through the day pretty well; but the nights were intolerable, from pain and nervous irritations, which made it impossible to rest for two minutes together. After four such nights, I believe my Mesmerist's fortitude and my own would have given out together, and we should have brought the laudanum bottle to light again, but for the bright idea, "let us ask J!" She said at once what my sufferings had been, and declared that I should sleep more and more by degrees, if I took—(what was as contrary to her own ordinary ideas of what is right and rational as to mine)—ale at dinner, and half a wine-glass full of brandy in water at night. I refused the prescription till reminded—"Remember she has never been wrong." I obeyed; the fact being kept secret between us two, in order to try, every evening, J 's knowledge and opinion. She always spoke and advised, in a confident familiarity with incidents known only to us two, and carried me steadily through the struggle. I lost my miseries, and recovered my sleep, night by night, till, at the end of the week, I was quite well, without stimulant or sedative. Nothing can be more remote from J.'s ordinary knowledge and thought than the structure of the human body, and the remedies for disease; and, though I was well aware how common the exercise of this kind of insight is in somnambules—how it is used abroad as an auxiliary to medical treatment—I was not the less surprised by the readiness and peremptoriness with which a person, in J.'s position, declared, and gave directions about things which she is wholly ignorant of an hour after, and was, during the whole of her life before.

Monday, October 14th, J. did not come up as usual to our séance. There was affliction in the house-hold. An aunt of J.'s, Mrs. A., a good woman I have long known, lives in a cottage at the bottom of our garden. Mrs. A.'s son, J.'s cousin, was one of the crew of a vessel which was this evening reported to have been wrecked near Hull. This was all that was known, except that the owner was gone to Hull to see about it. J. was about to walk to Shields with a companion to inquire, but the night was so tempestuous, and it was so evident that no news could be obtained, that she was persuaded not to go. But she was too much disturbed to think of being mesmerized. Next morning there was no news. All day there were flying reports, —that all hands were lost—that all were saved—but nothing like what afterwards proved to be the truth. In the afternoon (no tidings having arrived) we went for a long drive, and took J. with us. She was with us, in another direction, till tea-time; and then, on our return, there were still no tidings; but Mrs. A. was gone to Shields to inquire, and if letters had come, she would bring the news in the evening. J. went out on an errand, while we were at tea,—no person in the place having then any means of knowing about the wreck; and on her return, she came straight up to us for her seance. Two gentlemen were with us that evening, one from America, the other from the neighbourhood. I may say here, that we note down at the moment what J. says; and that on this evening there was the additional security of my American friend repeating to me, on the instant, (on account of my deafness,) every word as it fell.

J. was presently asleep, and her Mesmerist, knowing the advantage of introducing subjects on which the mind had previously been excited, and how the inspiration follows the course of the affections, asked, as soon as the sleep was deep enough,

"Can you tell us about the wreck?"

J. tranquilly replied,

"Oh! yes, they're all safe; but the ship is all to pieces."

"Were they saved in their boat?"

"No, that's all to pieces."

"How then?"

"A queer boat took them off; not their boat."

"Are you sure they are all safe?"

"Yes; all that were on board; but there *was* a boy killed. But I don't think it is my cousin."

"At the time of the wreck?"

"No, before the storm."

"How did it happen?"

"By a fall."

"Down the hatchways, or how?"

"No, he fell through the rigging, from the mast."

She presently observed, "My aunt is below, telling them all about it, and I shall hear it when I go down."

My rooms being a selection from two houses, this "below" meant two stories lower in the next house.

She continued talking of other things for an hour longer, and before she awoke, the gentlemen were gone. After inquiring whether she was refreshed by her sleep, and whether she had dreamed, ("No,") we desired her to let us know if she heard news of the wreck; and she promised, in all simplicity, that she would. In another quarter of an hour, up she came, all animation, to tell us that her cousin and all the crew were safe, her aunt having returned from Shields with the news. The wreck had occurred between Elsinore and Gottenberg, and the crew had been taken off by a fishing-boat, after two days spent on the wreck, their own boat having gone to pieces. She was turning away to leave the room, when she was asked,—

"So all are saved—all who left the port?"

"No, ma'am,' said she, "all who were on board at the time: but they had had an accident;—a boy fell from the mast, and was killed on the deck."

Besides having no doubt of the rectitude of the girl, we knew that she had not seen her aunt,—the only person from whom tidings could have been obtained. But, to make all sure, I made an errand to the cottage the next morning, well knowing that the relieved mother would pour out her whole tale. My friend and I encouraged her; and she told us how she got the news, and when she brought it to Tynemouth,—just as we knew before. "How glad they must have been to see you 'at ours'!" said I.

"O yes, ma'ma:" and she declared my landlady's delight.

"And J.," said I.

"Ma'am, I did not see J." said she, simply and rapidly, in her eagerness to tell. Then, presently,—"They told me, ma'ma, that J. was up stairs with you."

Two evenings afterwards, J. was asked, when in the sleep, whether she knew what she related to us by seeing her aunt telling the people below? to which she replied, "No; I saw the place and the people themselves,—like a vision."

Such was her own idea, whatever may be the conjectures of others.

LETTER IV.

Tynemouth, Nov. 24, 1844.

I have too little knowledge of Mesmerism to be aware whether the more important powers of somnambulism and clairvoyance abide long in, or can be long exercised by, any individual. I have heard of several cases where the lucidity was lost after a rather short exercise; but in those cases there was room for a supposition of mismanagement. The temptation is strong to overwork a somnambule; and especially when the faculty of insight relates to diseases, and sufferers are languishing on every side. The temptation is also strong to prescribe the conditions,—to settle what the somnambule shall or shall not see or do, in order to convince oneself or somebody else, or to gratify some desire for information on a particular subject. It is hard to say who was most to blame with regard to Alexis,—the exhibitor who exposed him to the hardship of unphilosophical requirements, or the visitors who knew so little how to conduct an inquiry into the powers of Nature, as to prescribe what her manifestations should be. The "failures," in such cases, go for nothing, in the presence of one new manifestation. They merely indicate that there is no reply to impertinent questions. The successes and failures together teach that the business of inquirers is to wait upon Nature, to take what she gives, and make the best they can of it, and not disown her because they cannot get from her what they have predetermined. Strongly as I was impressed by this, when reading about Alexis, from week to week last spring, I still needed a lesson myself,—a rebuke or two such as our somnambule has more than once given us here. As soon as her power of indicating and prescribing for disease was quite clear to us, we were naturally anxious to obtain replies to a few questions of practical importance We expressed, I hope, no impatience at the often repeated "I'll try to see: but I can't make it out yet." "I shall not get a sight of that again till Thursday." "It's all gone:—it's all dark,—and I shall see no more to-night." We reminded each other of the beauty and value of her truthfulness, from which she could not be turned aside, by any pressure of our eagerness.

But one evening out came an expression, which procured us a reproof which will not be lost upon us. She was very happy in the enjoyment of some of her favorite objects, crying out "Here come the lights! This *is* a beautiful light! It is the quiet, steady, *silent* light!" And then she described other kinds, and lastly one leaping up behind the steady light, and shining like the rays of the sun before the sun itself is visible. When this rapture had gone on some time, she was asked "What is the use of these lights, if they show us nothing of what we want?" In a tone of gentle remonstrance, she said earnestly, "Ah!—but you must have patience!"

And patience comes with experience. We soon find that such extraordinary things drop out when least expected, and all attempts to govern or lead the results and the power are so vain, that we learn to wait, and be thankful for what comes.

The first desire of every witness is to make out what the power of the Mesmerist is, and how it acts. J seems to wish to discover these points; and she also struggles to convey what she knows upon them. She frequently uses the act of mesmerizing another person as soon as the sleep becomes deep; and if not deep enough to please her, she mesmerizes herself,—using manipulations which she can never have witnessed. Being asked about the nature of the best mesmeric efforts, she replied that every power of body and mind is used, more or less, in the operation; but that the main thing is to desire strongly the effect to be produced. The patient should do the same.

"People may be cured who do not believe in the influence; but much more easily if they do."

"What is the influence?"

"It is something which the Mesmerizer throws from him; but I cannot say what."

And this was all that evening; for she observed, (truly,) "It is a few minutes past the half hour; but I'll just sleep a few minutes longer."

"Shall I wake you then?"

"No, thank you; I'll wake myself." And she woke up accordingly, in four minutes more. Another evening, "Do the minds of the Mesmerist and the patient become one?"

"Sometimes, but not often."

"Is it then that they taste, feel, &c., the same things at the same moment?"

"Yes."

"Will our minds become one?"

"I think not."

"What are your chief powers?"

"I like to look up, and see spiritual things. I can see diseases; and I like to see visions."

When asked repeatedly whether she could read with her eyes shut, see things behind her, &c., she has always replied that she does not like that sort of thing, and will not do it; —she likes "higher things." And when asked how she sees them—

"I see them, not like dreams in common sleep,—but things out of other worlds;—not the things themselves, but impressions of them. They come through my brain."

"Mesmerism composes the mind, and separates it from the common things of every day."

"Will it hurt your Mesmerist?"

"It is good for her. It exercises some powers of body and mind, which would otherwise lie dormant. It gives her mind occupation, and leads her to search into things."

"Can the mind hear otherwise than by the ear?"

"Not naturally; but a deaf person can hear the Mesmerist, when in the sleep;—not any body else, however."

"How is it that you can see without your eyes?"

"Ah! that is a curious thing. I have not found it out yet."—Again when she said her time was up, but she would sleep ten minutes longer.

"Shall I leave you, and mesmerize Miss M.?"

"No: I should jump about and follow you. I feel so queer when you go away; The influence goes all away.—It does so when you talk with another."

"What is the influence," &c. &c. as before.

"I have seen as many places since I was mesmerized; but they all go away when I wake. They are like a vision,—not a common dream."

"How do you see these? Does the influence separate soul and body?"

"No: it sets the body to rest; exalts and elevates the thinking powers."

When marking, from her attitude and expression of countenance, the eagerness of her mind, and vividness of her feelings, and when listening to the lively or solemn tones of her voice, I have often longed that she had a more copious vocabulary. Much has probably been lost under the words "queer," "beautiful," "something," "a thing," &c., which would have been clearly conveyed by an educated person. Yet some of her terms have surprised us, from their unsuitableness to her ordinary language; and particularly her understanding and use of some few, now almost appropriated by Mesmerism. On one of the earliest days of her sleep, before we learned her mesmeric powers and habits, she was asked one evening, after a good deal of questioning,

"Does it tire you to be asked questions?"

"No."

"Will it spoil your lucidity?"

"No."—Whereat I made a dumb sign to ask her what "lucidity" meant.

"Brightness," she instantly answered.

In the course of the day, her Mesmerist asked her carelessly, as if for present convenience, if she could tell her the meaning of the word "lucidity."

J. looked surprised, and said, "I am sure, ma'am, I don't know. I don't think I ever heard the word."

When asleep the next day, she was again asked,

Does it hurt your lucidity to be asked many questions?"

"When not very deep in sleep, it does."

"What is lucidity?"

"Brightness, clearness, light shining through. I told you that yesterday."

"Have you looked for the word since?"

"No: and I shall not know it when I am awake."

It struck us that we would try, another evening, whether her Mesmerist's will could affect her taste. In her absence, we agreed that the water should be silently willed to be sherry next night. To make the experiment as clear as possible, the water was first offered to her, and a little of it drank as water. Then the rest was, while still in her hands, silently willed to be sherry; she drank it off, —half a tumbler full—declared it very good; but, presently, that it made her tipsy. What was it? "Wine—white wine." And she became exceedingly merry and voluble, but refused to rise from her chair, or dance any more, or go down stairs, for she could not walk steady, and should fall and spoil her face, and moreover frighten them all below. I afterwards asked her Mesmerist to let it be porter the next night. J. knew nothing of porter, it seems, but called her refreshment "a nasty sort of beer." Of late she has ceased to know and tell the time,—"can't see the clock-face," as she declares. The greatest aptitude at present seems to be for being affected by metals, and for the singular muscular rigidity producible in the mesmeric sleep.

When her arms or hands are locked in this rigidity, no force used by any gentleman who has seen the case can separate them; and in her waking state she has certainly no such muscular force as could resist what has been ineffectually used in her sleeping state. The rigid limbs then appear like logs of wood, which might be broken, but not bent; but a breath from her Mesmerist on what is called by some phrenologists the muscular organ, causes her muscles to relax, the fingers to unclose, and the limbs to fall into the attitude of sleep. During these changes, the placid sleeping face seems not to belong to the owner of the distorted and rigid limbs, till these last slide into their natural positions, and restore the apparent harmony.

Not less curious is it to see her inextricable gripe of the steel snuffers, or the poker, detached by a silent touch of the steel with gold. When no force can wrench or draw the snuffers from her grasp, a gold pencil-case or a sovereign stealthily made to touch the point of the snuffers, causes the fingers to unclasp and the hands to fall. We have often put a gold watch into her hands, and when the gripe is firm, her mesmerist winds the gold chain round something of steel. In a minute or less occurs the relaxation of the fingers, and the watch is dropped into the hand held beneath. While grasping these metals she sometimes complains that they have burnt her.

LETTER VII.

Tynemouth, Nov. 28, 1844.

Many persons suppose that when the truth, use, and beauty of Mesmerism are established, all is settled; that no further ground remains for a rejection of it. My own late experience, and my observation of what is passing abroad, convince me that this is a mistake. I know that there are many who admit the truth and function of Mesmerism, who yet discountenance it. I know that the repudiation of it is far more extensive than the denial. It gives me pain to hear this fact made the occasion of contemptuous remark, as it is too often by such as know Mesmerism to be true. The repudiation I speak of proceeds from minds of a high order; and their superstition (if superstition it be) should be encountered with better weapons than the arrogant compassion which I have heard expressed.

I own I have less sympathy with those who throw down their facts before the world, and then despise all who will not be in haste to take them up, than with some I know of, who would seriously rather suffer to any extent, than have recourse to relief which they believe unauthorized; who would rather that a mystery remained sacred than have it divulged for their own benefit; who tell me to my face that they would rather see me sent back to my couch of pain than witness any tampering with the hidden things of Providence. There is a sublime rectitude of sentiment here, which commands and wins one's reverence and sympathy; and if the facts of the history and condition of

Mesmerism would bear out the sentiment, no one would more cordially respond to it than I—no one would have been more scrupulous about procuring recovery by such means—no one would have recoiled with more fear and disgust from the work of making known what I have experienced and learned. But I am persuaded that a knowledge of existing facts clears up the duty of the case, so as to prove that the sentiment must, while preserving all its veneration and tenderness, take a new direction, for the honor of God and the safety of man.

Granting to all who wish that the powers and practice of Mesmerism (for which a better name is sadly wanted) are as old as man and society; that from age to age there have been endowments and functions sacred from popular use, and therefore committed by providential authority to the hands of a sacred class; that the existence of mysteries ever has been, and probably must ever be, essential to the spiritual welfare of man; that there should ever be a powerful sentiment of sanctity investing the subject of the ulterior powers of immortal beings in their mortal state; that it is extremely awful to witness, and much more to elicit, hidden faculties, and to penetrate by their agency in to regions of knowledge otherwise unattainable;—admitting all these things, still the facts of the present condition of Mesmerism in this country, and on two continents, leave to those who know them, no doubt of the folly and sin of turning away from the study of the subject. It is no matter of choice whether the subject shall remain sacred — a deposit of mystery in the hands of the Church—as it was in the Middle Ages, and as the Pope and many Protestants would have it still. The Pope has issued an edict against the study and practice of Mesmerism in his dominions; and there are some members of the Church of England who would have the same suppression attempted by means of ecclesiastical and civil law at home. But for this it is too late; the knowledge and practice are all abroad in society; and they are no more to be reclaimed than the waters, when out in floods, can be gathered back into reservoirs. The only effect of such prohibitions would be to deter from the study of Mesmerism, the very class who should assume its administration, and to drive disease, compassion, and curiosity into holes and corners to practice as a sin what is now done openly and guiltlessly, however recklessly, through an ignorance for which the educated are responsible. The time past for facts of natural philosophy to be held at discretion by priesthoods; for any facts which concern all human beings to be a deposit in the hands of any social class. Instead of re-enacting the scenes of old—setting up temples with secret chambers, oracles, and miraculous ministrations — instead of reviving the factitious sin and cruel penalties of witchcraft, (all forms assumed by mesmeric powers and faculties in different times), instead of exhibiting false mysteries in an age of investigation, it is clearly our business to strip false mysteries of their falseness, in order to secure due reverence to the true, of which there will ever be no lack. Mystery can never fail while man is finite: his highest faculties of faith will, through all time and all eternity, find ample exercise in waiting on truths above his ken: there will ever be in advance of the human soul, a region "dark through excess of light;" while all labor spent on surrounding clear facts with artificial mystery is just so much profane effort spent in drawing minds away from the genuine objects of faith. And look at the consequences! Because philososhers will not study the facts of that mental rapport which takes place in Mesmerism, whereby the mind of the ignorant often gives out in echo the knowledge of the informed, we have claims of inspiration springing up right and left. Because medical men will not study the facts of the mesmeric trance, nor ascertain the extremest of its singularities, we have tales of Estaticas, and of sane men going into the Tyrol and elsewhere to contemplate, as a sign from heaven, what their physicians ought to be able to report of at home as natural phenomena easily producible in certain states of disease. Because physiologists and mental philosophers will not attend to facts from whose vastness they pusillanimously shrink, the infinitely delicate mechanism and organization of brain, nerves and mind are thrown as a toy into the hands of children and other ignorant persons, and of the base. What, again, can follow from this but the desecration, in the eyes of the many, of things which ought to command their reverence? What becomes of really divine inspiration when the commonest people find they can elicit marvels of prevision and insight? What becomes of the veneration for religious contemplation when Estaticas are found to be at the command of very unhallowed—wholly unauthorized hands? What becomes of the respect in which the medical profession ought to be held, when the friends of the sick and suffering, with their feelings all alive, see the doctors' skill and science overborne and set aside by means at the command of an ignorant neighbor—means which are all ease and pleasantness? How can the profession hold its dominion over minds, however

backed by law and the opinion of the educated, when the vulgar see and know that limbs are removed without pain, in opposition to the will of the doctors, and in spite of their denial of the facts? What avails the decision of a whole College of Surgeons that such a thing could not be, when a whole town full of people know that it was? Which must succumb, the learned body or the fact? Thus are objects of reverence desecrated, not sanctified, by attempted restriction of truth, or of research into it.—Thus are human passions and human destinies committed to reckless hands, for sport or abuse. No wonder if somnambules are made into fortune-tellers—no wonder if they are made into prophets of fear, malice and revenge, by reflecting in their somnambulism the fear, malice, and revenge of their questioners; no wonder if they are made even ministers of death, by being led from sick-bed to sick-bed in the dim and dreary alleys of our towns, to declare which of the sick will recover, and which will die! Does any one suppose that powers so popular, and now so diffused, can be interdicted by law—such oracles silenced by the reserve of the squeamish—such appeals to human passions hushed—in an age of universal communication, by the choice of a class or two to be themselves dumb? No: this is not the way. It is terribly late to be setting about choosing a way, but something must be done; and that something is clearly for those whose studies and art relate to the human frame to take up, esrnestly and avowedly, the investigation of this weighty matter; to take its practice into their own hands, in virtue of the irresistible claim of qualification. When they become the wisest and most skilful in the administration of Mesmerism, others, even the most reckless vulgar, will no more think of interfering than they now do of using the lancet, or operating on the eye. Here, as elsewhere, knowledge is power. The greater knowledge will ever insure the superior power. At present, the knowledge of Mesmerism, superficial and scanty as it is, is out of the professional pale. When it is excelled by that which issues from within the professional pale, the remedial and authoritative power will reside where it ought: and not till then. These are the chief considerations which have caused me to put forth these letters in this place;—an act which may seem rash to all who are unaware of the extent of the popular knowledge and practice of Mesmerism. The *Athenæum** is not likely to reach the ignorant classes of our towns; and if it did, the cases I have related would be less striking to them than numbers they have learned by the means of itinerant Mesmerists. The *Athenæam* does reach large numbers of educated and professional men; and I trust some of them may possibly be aroused to consideration of the part it behoves them to take.

As for the frequent objection brought aginst inquiry into Mesmerism, that there should be no countenance of an influence which gives human beings such power over one anothe, I really think a moment's reflection, and a very slight knowledge of Mesmerism would supply both the answers which the objection requires. First, it is too late, as I have said above; the power is abroad, and ought to be guided and controlled. Next, this is but one addition to the powers we have over one another already; and a far more slow and difficult one than many which are safely enough possessed. Every apothecary's shop is full of deadly drugs—every workshop is full of deadly weapons—wherever we go, there are plenty of people who could knock us down, rob, and murder us; wherever we live there are plenty of people who could defame and ruin us. Why do they not? Because moral considerations deter them. Then bring the same moral considerations to bear on the subject of Mesmerism. If the fear is of laying victims prostrate in trance, and exercising spells over them, the answer is, that this is done with infinitely greater ease and certainty by drugs than it can ever be by Mesmerism; by drugs which are to be had in every street. And as sensible people do not let narcotic drugs lie about in their houses, within reach of the ignorant and mischeivous, so would they see that Mesmerism was not practised without witnesses and proper superintendence. It is a mistake, too, to suppose that Mesmerism can be used at will to strike down victims, helpless and unconscious, as laudanum does, except in cases of excessive susceptibility from disease; cases which are of course under proper ward. The concurrence of two parties is needful in the first place, which is not the case in the administration of narcotics; and then the practice is very uncertain in its results on most single occasions; and again, in the majority of instances; it appears that the intellectual and moral powers are more, and not less vigorous than in the ordinary state. As far as I have any means of judging, the highest faculties are seen in their utmost perfection during the mesmeric sleep; the innocent are stronger in their rectitude than ever, rebuking levity, reproving falsehood and flattery, and indignantly refusing to tell secrets, or say or do any thing they ought not; while

* The Letters were first pulished in London, in the "Athenæum, a Journal of English and Foreign Literature and the Fine Arts."

the more faulty confess their sins, and grieve over and ask pardon for their offences. The volitions of the Mesmerist may actuate the movements of the patient's limbs, and suggest the material of his ideas; but they seem unable to touch his *morale*. In this state the *morale* appears supreme, as it is rarely found in the ordinary condition. If this view is mistaken, if it is founded on too small a collection of facts, let it be brought to the test and corrected. Let the truth be ascertained and established; for it cannot be extinguished, and it is too important to be neglected.

And now one word of respectful and sympathizing accost unto those reverent and humble spirits who painfully question men's right to exercise faculties whose scope is a new region of insight and foresight. They ask whether to use these faculties be not to encroach upon holy ground, to trespass on the precincts of the future and higher life. May I inquire of these in reply, what they conceive to be the divinely appointed boundary of our knowledge and our powers? Can they establish, or indicate, any other boundary than the limit of the knowledge and powers themselves? Has not the attempt to do so failed from age to age? Is it not the most remarkable feature of the progress of Time that, in handing over the future into the past, he transmutes its material, incessantly, and without pause, converting what truth was mysterious, fearful, impious to glance at, into that which is safe, beautiful and beneficent to contemplate and use,—a clearly consecrated gift from the Father of all to the children who seek the light of his countenance Where is his pleasure to be ascertained but in the ascertainment of what he gives and permits, in the proof and verification of what powers he has bestowed on us, and what knowledge he has placed within our reach? While regarding with shame all pride of intellect, and with fear the presumption of ignorance I deeply feel that the truest humility is evinced by those who most simply accept and use the talents placed in their hands; and that the most child-like dependence upon their Creator appears in those who fearlessly apply the knowledge he discloses to the furtherance of that great consecrated object the welfare of the family of man.

HARRIET MARTINEAU.

These letters of Miss Martineau are hard pills for the "old ladies in breeches" to swallow and it is amusing to see the wry faces they make in contemplation of the dire necessity which awaits them. The Editor of the London Lancet has had the ludicrous vanity to express his astonishment at the temerity of Miss Martineau in resorting to the remedial agency of mesmerism, after *he* forsooth! had exposed what he arrogantly assumed to be its "arrant, trickery and scandal." It appears, however, that this vaunted exposition was not very satisfactory even to the venerable sisterhood in inexpressibles, with which he has latterly identified himself; and it is perfectly evident to every discerning reader of his flippant and inconsequential remarks upon this case, that he has not only superciliously dismissed it without investigation, but is blankly ignorant of the whole subject of which he coolly usurps the umpirage. But even this conduct is tolerable, perhaps only laughable, when compared with the outrageous brutality of the attack upon Miss Martineau, committed by a Dr. Robert Hull, of Norwich, in England, where that distinguished lady resides. It is far too indelicate, both in expression and allusion, for reprint in this work, and is only equalled by the meanest blackguards. Yet this coarse and unmanly piece of obscene scurrility, together with the Lancet's arbitrary contemptuousness, with a few garbled extracts from Miss Martineau's letters, is eagerly selected and hashed up by the Boston *Medical Journal*, for the benefit of its readers or the musty fraternity in this country to whom we have referred. [*Editor Dissector.*

The Presence of Animalculæ in the Blood.

Dr. Goodfellow relates, in the *Medical Gazette*, a case of fever in which he discovered a great number of animaculæ in the contents of the stomach and in the blood. The following is a condensation of his remarks:—

"On examining the fluid ejected from the stomach during life, and on the day following that on which the vomiting commenced, by the aid of the microscope, myriads of animalcula were observed in very active motion. These minute organisms appeared to vary in length from 1-5000th to the 1-3000th of an inch, and their diameter (which I am convinced was the same throughout their length) from about 1-40,000th to about 1-2000th of an inch. Nothing was observed by which I could distinguish the head from the tail, although sometimes one extremity appeared certainly larger than the

other; close observation enabled me to discover that this appearance was owing to one extremity being a little out of focus; when the whole of one animalcule was in focus, no difference could be detected. Their movements, when active, closely resembled those of the small naiades so frequently seen in river water after rain, but when they became sluggish from the inclosure of the animalcula between slips of glass for several hours, they resembled those of the larvæ of the common meat fly, *musca vomitoria.* The fluid ejected after every attack of vomiting was found to contain the animalclua in as large numbers as when it was first examined; they were also found in the sanguineous exudation from the lining membrance of the mouth and nostrils. The vomited matters also contained a considerable quantity of altered blood corpuscles, epithelial cells, and a small quantity of mucus, but no trace of bilious admixture. Simular animalculæ were observed in blood taken from the capillaries of the skin, but in such small numbers that they escaped my notice for several examinations. Repeated observation, however, ultimately convinced me of their existence in the blood taken from the capillaries during life. At the autopsy, forty-eight hours P. M., they were still seen in large numbers in the contents of the stomach, and in the blood taken from both sides of the heart, and the aorta, carotid, venæ cavæ, pulmonary artery and veins, brachial artery and veins, and the femoral artery and vein. They were also found, during life, in the fæces, but here they were never seen to exerciee any movement.—None could be detected in the gall-bladder or biliary ducts, in the pancreatic fluid, in the urine, or in the frothy mucus in the large bronchial tubes.

Dr. Goodfellow expresses his ignorance of the manner in which those animals got into the blood-vessels. He does not believe that they were introduced into the blood from the stomach, but rather that they passed, and they could do this readily, owing to their minute size, from the blood-vessels into the stomach.—*London Lancet.*

Means of Arresting Hæmorrhage from Leech Bites.

The "Journal de Chirurgie" contains the details of an interesting case, narrated by Dr. Bordes, in which the twisted suture was successfully used to arrest hæmorrhage from leech bites. The operation is a trifling one, and, it appears, always successful, and consequently deserves to be better known. M. Bordes was called one evening to attend a young English lady, twenty-two years of age, who had had forty leeches applied to the abdomen at seven o'clock in the morning. Seven or eight of the leech bites were bleeding in the same manner as if veins had been opened with the lancet. She had lost all consciousness. Compression was impossible, and cauterization was not likely to succeed with so abundant a flow of blood. M Bordes, recollecting the manner in which veterinary surgeons close the vein after bleeding horses, resolved to try the effect of the twisted suture. Pinching the skin at the orifice of the wound he passed a small needle through it, and then tied a thread around. The slight operation was repeated for each orifice, and effectually arrested the bleeding. It was only the following day that the lady recovered her senses, and the convalescence lasted three months. M. Bordes has since frequently resorted to this plan, and always with success.

On the consequences of Insects or Foreign Bodies gaining admission into the auditory passages, and on the best modes of extracting them.

By W. Wright, Esq., London.

The case mentioned by Mr. Hatfield, in The Lancet for April 13th, quoted by Sir B. Brodie, of a child in whose ear there was a pea, the *attempts* to remove which *caused death*, is by no means a singular unfortunate instance, and probably had not those *attempts* been made so injudiciously, the case would not have terminated fatally. I had under my care, in 1818, a young gentleman who had had a pea in his auditory passage four years and a half, which I extracted without pain. I gave the particulars of the treatment in several medical journals: he is now alive, and filling a responsible station abroad.

The case of the boy who died, after suffering great agony, through injury inflicted by the endeavors to extract the head of a nail from his left ear, which was not found during his life, or after the most rigid post-mortem examination, is interesting In that instance, an efficient examination before the cutting and laceration began, would have probably saved the poor boy's life.

A girl who died at London hospital, from the opperations for extracting a pebble from her ear, was destroyed by gross ignorance.—I have pebbles, and even a small shell, which I removed from the ears of patients without pain or inconvenience. It is not necessary to mention more of those cases which have

terminated fatally through the *maladroit* endeavors of well-intentioned but incompetent men. The proper method of examining the auditory passage is so little known, that I cannot but commiserate the poor patients who are the subjects of examination by funnel-shaped spring forceps, as suggested by Kramer, and with equal stolidity imitated by other writers, some of whom give plates of this most absurd contrivance; whereas nothing is more simple or easy to the patient or practitioner than the examination of the ear, or the extraction of any substance from it. The syringe, however, is not always to be depended upon, even in the hands of the most competent operators: hence I use small steel hooks, with the handles marked, and these being passed down flatwise beyond the substance, and then turned, never fail of success; of course I have them of all sizes and shapes.

It is very injudicious to endeavor to remove any large live insect, because its struggles are so violent as to affect the brain, through the fibres of the portio dura becoming excited, and communicating that excitement to the base of the nerve. Want of attention to this caused the death of a boy in the Bristol Infirmary, several years ago; whereas had the ear been filled with oil, the insect would have been killed, and might easily have been removed. In the case of a man in Ireland, who had a horse-leech in his ear, and died an hour and a half after it was extracted, such a termination might have been prevented by either injecting salt and water, or sprinkling salt, into the ear.—*Lancet.*

Physiological and Pathological Researches on Tuberculosis.

BY H. LEBERT, M. D.

(*Muller's Archives, Nos.* 2 *and* 3, 1844.)

SUMMARY.

1. The pathological peculiarities of tubercle are exhibited in its microscopical structure.

2. The constant elements of tubercle are, molecular granules, an adhesive hyaline mass, and peculiar tubercle cells, from 0.05 to 0.01 of a millimetre in diameter—of irregular form, containing no nucleus but molecular granules.—Water, æther, and weak acid, scarcely change them. Concentrated alkalies, liq. ammonia, dissolve them completely.

3. The dimensions of tubercle cells undergo many variations, which depend rather upon the different organs than upon differences of age. They are most easily recognised in crude yellow tubercle.

4. Tubercle corpuscles consist of cells having a very low power of development.

5. The opinion that tubercular substance is a modification of pus is contradicted in the most positive manner by the microscope.

6. Tubercle corpuscles are distinguished from undeveloped pus globules, by the spherical form and greater diameter of the latter. Cancer cells are clearly distinguished by their being two to four times as large, and consisting of a cell wall, and a large clear nucleus, often containing nucleoli.

7. When tubercle softens, the adhesive matter becomes fluid, and the corpuscles rounded; their opposition to each other is destroyed, they become distended, and hence appear larger. This, however, is not the result of growth, but the beginning of decay.

8. The pus which surrounds softened tubercle never originates in the tubercle itself, but is formed directly in the surrounding parts.

9. The microscope can determine whether we have to do with softened tubercle, with purulent matter, or whether there be a mixture of both.

10. Pus appears to destroy quickly tubercle corpuscles, and thus to make their individuality undistinguishable.

11. When the irregular outline and close apposition of tubercle cells, in their first stage of development, present the second stage of separation from each other, distention and roundness, then the third stage of disintegration commences. The corpuscles are broken up into a granular, half-fluid mass, and lose their individuality.

12. Tubercle becoming hard and calcareous (*etat cretace*) is a natural process of cure. The peculiar elements of tubercle disappear, and become in part absorbed. In their place, small mineral granules, and sometimes crystals of cholesterine, are deposited. The deposition of lime is generally accompanied by an increase of pigment. According to the chemical analysis of M. T. Boudet, there exist, as principal elements, chlorate of sodium and sulphate of soda; salts of lime only in small quantity.

13. Among the occasional elements of tubercle may be mentioned melanosis, which is the most frequent; further, fat, filaments, dark olive-colored globules, and crystals. Sometimes we find mixed with tubercle, but in no way belonging to its substance, the products of inflammation, serum, pus, and the elements of epithelium in various forms.

14. The seat of tubercle in the lungs is generally the elastic cellular tissue. Yet it

is also found in the air vesicles, and in the bronchial capillaries.

15. The tissue of the lung surrounding tubercle may be sound, but is mostly in a state of congestion or inflammation. The last is either globular, or spread over a large portion of a lobe.

16. The pus found surrounding tubercle is often not the result of grey hepatization, but comes from the mucous membrane of the small, partly destroyed and open bronchi, in the substance of the lung.

17. The pneumonia surrounding tubercles has nothing specific; there is found in it the same elements of the exudation as in ordinary pneumonia—viz. aggregrate globules, fat vesicles, pus corpuscles, &c. Tubercle corpuscles are not generally found among the products of exudation.

18. Sometimes there is found surrounding tubercle a peculiar form of chronic inflammation, with yellowish hepatization, and increased consistence of the tissue. The vesicles of the lung, small bronchi, and parenchyma, are partly filled with coagulated fibrin, and a formation of new fibrous filaments, partly with aggregate and pus corpuscles, and in the centre of the chronic slightly vascular hepatization there is found a highly vascular acute lobular pneumonia.

19. The degree of consistence of acute or chronically inflamed lungs depends upon the amount they contain of fibrin, fluid blastema, and corpuscles. Much fibrin, with a small quantity of blastema and corpuscles, produce induration; much fluid blastema, with a small number of corpuscles, cause softening. An equal proportion of these different elements produces a medium degree of hardness.

20 Lungs rendered compact from the pressure of a pleuritic effusion often exhibit throughout no appearance of inflammation.

21. The grey semi-transparent granulations of the tissue of lung are also a true form of tubercle. Their color and transparency are partly dependent on the apposition of the tubercle corpuscles to each other, throughout the intact fibres of the lung, partly on the existence of a large quantity of adhesive material.

22. The grey granulation is not always the commencement of the formation of yellow tubercle; the last is often primarily developed as such.

23. The vascular network found surrounding the grey granulations is neither a proof of inflammation nor of a new formation, but rather results from the pressure on many capillaries, occasioned by the tubercular deposition, and the consequent distention of the remaining capillaries, which are reduced in number.

24. The opinion that grey granulations may be the result of inflammation is opposed by positive observation.

25. The process of ulceration is throughout different from that of suppuration. Thus we find on the mucous membrane of the bronchi, suppuration without ulceration, and on the intestinal mucous membrane, ulcers without suppuration. The last cause of ulceration is from inflammation by parasitic deposition, sometimes from causes unknown to us, producing obliteration in a certain number of capillary vessels.

26. The tubercular ulcer of the lung is not physiologically different from the tubercular ulcer of the intestines or of the skin.

27. In tuberculosis a general ulcerative diathesis is found to take place even in organs where tubercles appear very seldom. This is clearly established by the excellent labors of Louis.

28. The internal fluid layer of the contents of a cavernous ulcer of the lung, contains—*a*, tubercular substance, seldom intact, the corpuscles for the most part in a state of distention, or broken down into granules; *b*, pus corpuscles sometimes in small quantity; *c*, "puridea" corpuscles; *d*, aggregate corpuscles; *e*, purulent mucus; *f*, blood corpuscles; *g*, filaments of the lung; *h*, black pigment; *i*, epithelium; *k*, sometimes crystals; and *l*, adipose tissue.

29. Amongst this thick fluid are generally found pseudo-membranes, consisting of coagulated pus elements inclosing fibrin.

30. Among the pseudo-membranes covering the diseased tissue of the lung is found a true pus membrane, consisting of filaments inclosing small corpuscles. It generally becomes partly destroyed by a new irruption of tubercle occurring in the same.

31. This membrane is a natural effort towards cure, isolating the ulcerous tissue of the lung, and thus favoring its cicatrization.

32. Between the pus membrane and the tissue of the lung is often found newly-formed filamentous tissue.

33. Surrounding the cavernous ulcer is generally found a deposition of recent crude tubercle.

34. The healing of caverns takes place,—*a*, from isolation, by means of the pus membrane, and shrinking of the cavern; *b*, by deposition of fibrin, which fills up the cavern, grows to its walls, and so forms a fibrous cicatrix; *c*, by mineral deposition in the cavity, and formation of a filamentous tissue around the same.

35. There are no peculiar mucous bodies; what has been described as such are nothing but pus corpuscles secreted from diseased

membranes. Pus tests are thus henceforth useless.

36. In the sputa of phthisical individuals the following elements are found—*a*, mucus; *b*, pus corpuscles, existing in large quantity—they are sometimes found in a shrunken state, and may easily induce error; *c*, epithelium in its various forms; *d*, granular substance in great quantity, probably consisting of broken down tubercle corpuscles; *e*, small yellow shreds, pieces of pseudo-membrane; *f*, filaments of the lung; *g*, fat vesicles; *h*, blood corpuscles, sometimes combined with coagulated fibrin; *i*, aggregate corpuscles; *k*, small infusoria, vibrios, but this seldom, and only accidentally.

37. The peculiar tubercle cells are not commonly found in the expectoration of phthisis. There are also no constant means of distinguishing the sputum of phthisis pulmonalis from that of other diseases.

38. Filaments of the lung in sputum indicate an ulcerous cavity. Their presence, however, is rather exceptionable than otherwise.

39. The greatest portion of the sputa in phthisis does not come from caverns, but is secreted from the bronchi.

40. The copious mucus and purulent secretion of the bronchi, so frequent in phthisis pulmonalis, is one of the ways nature adopts in order to prevent the great destruction of the circulation which would necessarily result from the complete imperviousness of one portion of the capillary system, and distention of the rest.

41. A portion of the broken down tubercle of the ulcerous cavity mixes itself with the expectoration; another portion is reabsorbed.

42. The law announced by Louis, that after the age of 15 years the lungs contain tubercles, when they are found in other organs, is throughout correct. It may, however, be so far modified, that if very extensive tubercular deposition has occurred any where in an organ—as, for instance, in the liver, the kidneys, or the peritoneum,—the lungs often contain very little.

43. In childhood, tubercles are more frequent in the membranes of the brain, the glandular system, and the peritoneum, than in adults.

44. The thickening of the pleura in tuberculosis of the lung, not only originates in inflammation, but also in increased nutrition, from its greater vascularity, dependent on the diminution of blood in the lungs. Thus a supplementary organ for the circulation of the lung is produced, and at the same time, from its growth to the thoracic walls, the anastomosis with the great circulation is increased.

[Nothing can be more erroneous than this old astrological theory, which imputes the thickening of the pleura in tuberculosis of the lungs to inflammation. *Ed. Dis.*]

45. It results from embryological and pathological researches, that neither around the tubercle, nor in the pseudo-membrane of the pleura, are new vessels formed independent of the general circulation. New vessels in diseases are rather formed centrifugally from the general circulation.

46. The apparent transformation of the pseudo-membrane into cartilaginous substance consists only in the filaments being pressed together, without the formation of the peculiar cartilage elements. In the same manner the so-called ossification of the pseudo-membrane only consists in the deposition of an amorphous mineral formation.

47. The three principal forms of glandular tubercles are those of the more superficial—the bronchial and mesenteric glands: the last have a very slight tendency to soften.

48. The tubercular matter in the glands is throughout the same as that in other organs.

49. The existence of a sensible scrofulous matter we cannot admit; what has been considered as such is either the result of common inflammation or of suppuration—certainly under the influence of cachectic elements, but without a peculiar material or tubercular deposition accompanying the inflammation or suppuration.

50. Tuberculosis in the osseous system is a much more rare disease than is generally supposed at present. There is frequently found here a difficulty in determining between concrete pus and tubercular matter. In doubtful cases, the microscope can alone determine the diagnosis.

51. True scrofulous diseases, which are mostly distinguished by inflammatory and suppurative eliminations, are to be separated, on the one hand, from tuberculous diseases, and on the other, from idiopathic chronic inflammations of the eye, skin, glands, bones, joints, &c. The last category is often confounded with scrofula in children.

52. In a word, the positive diagnosis and abstract separation of scrofula are most urgent desiderata in modern medicine.

[The magnetic symptoms always give a positive diagnosis, but no abstract separation of scrofula. There are no such distinctions in nature or in fact. Compelled at last to acknowledge that the common cases of

chronic disease of the organs and limbs, or of the serous membranes and tissues, called chronic inflammations, are cases of scrofula, an attempt is made to set up distinctions where there are no real differences. All the cases of scrofula, in all its forms, and in all ages and conditions, are distinguished in an instant by the same symptoms, and are constantly cured by the same remedies, and these facts, which are now known to hundreds of physicians in this country, are fatal to the assumptions on which these distinctions are founded. *Ed. Dis.*]

53. The grey granulations of the membranes of the brain—viz. of the pia mater, exhibit clearly between the filaments of the serous membrane depositions of tubercle corpuscles. They present themselves, besides, frequently in the brain, together with yellow miliary tubercle; with tuberculous infiltration, as well as with large tubercles.

54. In the liver, tubercles are often found in very considerable masses, and even with true caverns. These cases are easily confounded with cancer. In like manner, the change into softening and breaking down of certain cerebriform tumours of the liver often present a similar appearance to tuberculous depositions.

55. Besides the fatty depositions in the liver, fatty degeneration of the heart is sometimes present in phthisis; also a tendency to internal depositions of fat, whilst, for the most part, it disappears from the external parts.

56. The kidneys also may be almost entirely filled with tuberculous degeneration. In these cases fewer tubercles are found in the lungs.

57. In tubercles of the peritoneum there are found, together with tubercle corpuscles, several filaments of the serous membrane. Peritoneal tubercles have little tendency to softening. They are mostly accompanied by a considerable pigmentary deposition.

58. Tuberculosis of the peritoneum produces sometimes perforation of the intestine, which is generally fatal; but in very rare cases, life is maintained by the formation of an artificial anus.

59. The consistence of crude tubercle in the intestines is usually less thick than it is in other organs. No pus is found upon tuberculous intestinal ulcers.

60. The microscopic elements of tubercular ulcers of the intestines, besides broken down tubercle cells, are cylinder epithelium, broken down granular mucous membrane, and the filaments and bundles of the muscular coat. The young epithelial cells are not to be confounded with pus corpuscles.

61. On the diseased mucous membrane of phthisis are occasionally found polypi, melanotic and tubercular excresences.

62. In extremely rare cases, tubercles are found deposited between the coats of arteries, an exceedingly important fact for (in favor of) the excretion of tubercle from the blood.

63. Tubercles are also found in the pericardium and heart. An extensive adherence often thus takes place, and a vascular anastomosis of the branches of the coronary artery with those on the surface of the lungs, a remarkable communication between the vessels of the larger and smaller circulations.

64. Tubercles in the cavity of the chest, as well as of the abdomen, can open themselves externally, and thus form fistulæ of the lungs and of the intestines.

65 Tubercles and cancer do not exclude one another, or even interfere with their separate march. Both morbid processes can at the same time run through their stages of development in the same person.

[We have investigated long since and very thoroughly the subject of cancer connected with scrofula with the magnetic symptoms, dissections and the microscope, and have little doubt but there will hereafter be found a fallacy in those investigations, which will be fatal to the distinctions that are here attempted to be established. It is only in the second stage of tubercular disease of a gland, a membrane or tissue that cancerous degeneration is developed, and then only when every other contiguous membrane, fibre, tissue or substance becomes equally involved in the disease, and this condition appears to be always necessary to the true cancerous formation.

We will not affect to conceal the fact that we republish the above comprehensive summary of elaborate researches on Tubercular disease, with a degree of satisfaction partaking of a sense of personal triumph. It is now many years since we advanced the self-same doctrines of the all-pervading character of Tuberculosis, in calm and confident independence of the ignorant sneers and arrogant denunciations of a large portion of

the profession. To scoff them as "visionary theories" and "arrant quackery," was, even within a recent period, deemed almost essential to professional respectability among those who condescended to advert to them, or in whose hearing they were mentioned. It was of no consequence that we had traced and demonstrated them in the most "regular" and legitimate manner, and by a process of induction as severe and scrutinizing as is ever adopted in any scientific investigation; it was a matter of no weight with these inflated scorners that we had verified and matured these doctrines by the ocular evidence of many continuous dissections, and by the results of experience in a long, extensive, and laborious practice, both in town and country. All this was of no value with such opponents, first, because they had not made these discoveries themselves; secondly, because they were new; and, thirdly, because they had not received the approving stamp of *foreign* authority. Now, however, that our original views, publications and practice upon these subjects, and our most novel and even startling propositions, have been confirmed by such men as Lugol, Louis, Lisfranc, and others of the eminent Parisian schools; now that our long-proclaimed doctrine that the ganglia of the posterior spinal nerves are connected with the ganglia of the great sympathetic nerve; and as the latter are connected with the organs, so external pressure on the former would indicate the seat of disease in those organs—now that this connection has received full and irresistible confirmation by the dissections and microscopic determinations of Volkman and Bidder, the German anatomists, behold! our lofty medical *savans* stroke their chins, knit their brows, and look as sage and as comical as the carved heads of their canes. With what grotesque caprice of physiognomy they will peruse the above synopsis of Tuberculosis, by Lebert, from *Muller's Archives*, it is rather difficult to imagine; and it is to be regretted that it cannot be caught by the Daguerreotype process, for the embellishment of the medical journals of the schools. [*Ed. Dis.*

On the cure of Deafness by puncturing the membrana tympani.

Sir Astley Cooper wrote a memoir on this subject in the "Philosophical Transactions," and shewed that the cases likely to be relieved by the practice were those in which the Eustachian tube was permanently closed, or when blood had been extravasated behind the membrane. To those cases other pathologists have added "a morbidly thickened and cartilaginous condition of the membrana tympani" itself. In the last number of the *Northern Journal*, we find an interesting communication on the results of the operation, by Dr. Mercer. This gentleman has performed it in several cases. He gives a table, which includes fifteen. Of these, six were performed for chronic thickening of the membrane, and the remaining nine for obstruction of the Eustachian tube. One case alone, and that of the latter affection, succeeded in the restoration of hearing. The operator then agrees with Itard in saying that "nothing is more rare than the cure of deafness by perforation of the membrana tympani." He then details at length the history of an instance of idiopathic hæmorrhage into the cavity of the tympanum. In this case, deafness, which was complete, was removed by the operation. As the example is an instructive one, we shall allow the author to describe the local appearances, the mode of operating, and the instrument:—

"The membrana tympani, instead of its normal, transparent gray appearance, had a dull brown colour, and was slightly congested at the margin; the vertical line, indicating the handle of the malleus, was lost in the surrounding colour, and the membrane, instead of presenting its concave appearance, seemed pushed outwards into the meatus. On touching it with a probe it was almost insensible, and pressure against it produced an elastic pitting. The head was carefully supported with the left ear turned up, and the auricle drawn towards the vertex. The speculum being introduced as far as the second curve of the meatus, and then expanded with a clear and steady light, the anterior and inferior part of the membrane was perforated, and a small portion of it removed by an instrument, which consists of a fine but strong steel needle, two inches and a half long, and the handle of an octagonal form, one and a half inch in length. The cutting or drill head is spear-shaped, one sixth of an inch long, and one-eighth in breath at the shoulders, where the edges are turned over. The point and edges are very sharp Each of these edges is hook-

shaped; one turned forwards and the other backwards; and when thus viewed longitudinally at their broadest part, they resemble the italic letter *f*. On being brought in contact with the membrana tympani, the handle is made to rotate between the thumb and fore-finger, and this being communicated to the cutting point, it perforates the membrane similar to a drill, at the same time that the averted edges are causing a considerable loss in its substance."

The subsequent treatment consisted chiefly in injections of warm water, and inflating the cavity with air, through the Eustachian tube. Dr. Mercer observed that the average time for reproduction of the membrane, when allowed to take place, was about four days.—*London Lancet.*

The Scalp Issue in Cerebral Diseases.

Instead of the long and frightful incision made through the scalp for the purpose of establishing this issue in chronic cerebral disease, Dr. James Johnson has adopted with success "a more simple and less painful practice."

"It consists merely in drawing a line of the kali purum along the course of the sagittal suture—poulticing till the slough clears away—and then inserting a few threads of silk or cotton daily, imbued with the ceratum lyttæ. A purulent drain is thus established with very little trouble, and with great benefit in obstinate cerebral affections."—*Medico-Chir. Review.*

Statistics of Obstetric Practice.

In the last number of the *Dublin Journal* we find a communication from Professor Murphy, which contains several points deserving attention. We shall refer to them in the order of their occurence.

1. *Menstruation.*—Dr Murphy has ascertained *the age* at which this function commenced in 559 individuals. This inquiry has been already pursued in 450 instances by Mr. Robertson, and in 1160 by Dr. Lee. A total of 2169 cases shews,

"That there is a great variety in the age at which the catamenia first appears; 9 years [14 cases,] and 23 years [1,] seem to be the extremes; the most frequent period of its occurrence is between the ages of 12 and 18; and of those recorded, it commenced, in the greatest number of instances [417,] at 15."

The interval of the catamenial function was recorded in 591 cases by the author, and by Mr. Robertson in 100. In 557 of those cases the interval was found to be 28 days; in 105 it was 21 days; and in the remaining 29 it was irregular, varying from 14 days to 42. It should be observed, that Dr. Murphy's inquiries were addressed to pregnant females, in whom probably the menstrual period would be found to have been more regular than in the same number of females taken indiscriminately.

2. *Pregnancy.*—Its duration was made by the author the principal subject of inquiry; some curious and useful facts are the result. The number of cases in which accurate information was procured was 186; in each the catamenial period was noticed; and

"To prevent error arising from uncertainty as to the exact date of conception, this interval was deducted from the whole number of days of pregnancy; thus, 328—28 would make the duration of pregnancy 300 days."

The results thus ascertained establish 301 days as the average limit of gestation. To this there are, however, three remarkable exceptions. In the first a fully developed child was borne after an interval of 261 days. The evidence of this instance (an unmarried female, stating herself to be pregnant after one connexion) is not to be wholly relied on. In two other cases the duration of pregnancy extended to 342 and 352 days, or deducting the menstrual period to 324 and 314 days respectively. The histories of those cases given in detail are such as to lead to the conclusion that pregnancy may be prolonged to this extended period—a fact of great importance to the medical jurist. The relation of pregnancy to previous menstruation is referred to, and some exceptional cases are recorded. Thus in one instance pregnancy occurred without previous menstruation; in another menstruation ceased on marriage, and in a few cases periodic discharges resembling the catamenia were present during pregnancy.—*Dublin Journal.*

The Administration of Medicines in a State of Fluidity.

"It has been found that fifteen grains of sulphate of quinine exhibited in infusion of senna, are more efficacious, as a *tonic*, notwithstanding the aperient quality of the reliefs, than twenty-four grains of quinine taken in pills. M. Pannezza accounts for this difference by supposing that the senna, by augmenting the peristaltic action of the alimentary tube, and increasing the secretions of the bowels, excites the production of a fluid well adapted for perfectly dissolving the quinine, and in that state it is applied to a much greater surface of absorption than if it passed along the canal in the form of pills.—*Medico Chir. Review, from Medical Examiner.*

On the Method of taking Plaster Casts.

We have frequently heard medical men express their regret at not knowing how to take plaster casts of various objects in which they felt interested. The method is sufficiently simple, as shown by the following directions, given by Mr. Butler, in the "*Zoist*," and copied into the "*Phrenological Journal.*" Referring more particularly to casts of the head taken during life, they are equally applicable under all other circumstances.

"In taking casts of the head from life, precaution is necessary, to prevent adhesion of the plaster; for this purpose a lather of soap and water is employed, of a consistency similar to that used in shaving, or even stronger. With this the hair must be saturated and combed or brushed down close to the head, after which the soap and water is again applied abundantly to the smoothed surface, and, sometimes, if any doubt exist of perfect security against adhesion, the lather may be applied even a third time.

"In mixing the plaster, let a basin be nearly filled with water, and the plaster carefully and gradually but quickly scattered in with the hand until it rise to the surface, when it may be stirred with a common iron spoon. Care is necessary, in doing this, to prevent the formation of lumps.

"It will be understood that the mould must be removed from the head in sections. The simplest form of division is in two parts; the line of separation running from the throat to the back of the head, so dividing the whole into two equal portions. For this purpose, and before the application of the plaster, a thin string is passed over the face, dividing it down the centre of the nose, and again passing over the head down to the nape of the neck. This string should be arranged before the plaster is laid on. Divide the plaster into two portions; one of which place in any earthen vessel approaching in shape the back of the head, and sufficiently large to admit of immersion for the greater facility of applying the plaster. The person should be in a recumbent position, and the back of the head immersed in the vessel provided for the purpose, while the other portion is to be gently but quickly laved over the face, previously moistened with a little sweet oil. The eyebrows it will be necessary to moisten with soap lather, as also the whiskers and the eyelashes with a little oil. The whole of the head is thus covered, the nostrils of course being left open; it would, however, be advisable that novices should place quills just within the nostrils, to avoid inconvenience. The mould should be consolidated by the repeated addition of plaster, until it is of the thickness of about half an inch, when it may be divided by drawing up the string; this must be done before the plaster acquires too great a degree of induration; then the mould may be removed without difficulty.

"The greatest care must be observed in casting the ears; in order to prevent the plaster from adhering internally or even externally. Let the whole of the crevices be well stopped with a mixture composed of soap and oil, of about the consistency of thick paste; and it may be well to observe to the inexperienced operator, that should any of the plaster form internally, it would be productive of, at least, extreme inconvenience.

"*To take casts from the mould.*—Immediately after the removal of the mould, tie it together and saturate it with water by steeping it during three or four minutes; and before the moisture has disappeared from the surface, pour in at the opening at the throat a quantity of plaster of the same consistency as before, and this, by turning the mould around, must be made to flow into every part of it. The plaster will be thus added until the cast be of the thickness of about half an inch. When this substance has been thus acquired, let the whole stand for a few hours, after which the mould may be removed from the cast by the careful use of a mallet and chisel.

"*The multiplication of casts.*—Dry the original casts thoroughly; then with a brush and some boiled oil go over the surface two or three times, after which the cast must stand a day or two, to allow it to dry, when it will be in a fit condition for the formation of the mould. For ordinary purposes the mould may be made in three pieces, of which the back of the head as far as the ears, but not including them, constitutes one, and the face, equally divided as before, affords the other two, an ear of course attaching to each. This operation is performed piecemeal. The part receiving the plaster must first be thinly coated with a mixture of oil and grease, (hogs-lard or tallow,) to prevent adhesion. When the piece is of the necessary thickness, remove it, and trim the edges with a sharp knife, after which replace it on the cast, and having greased the edges, proceed to the formation of another portion, which of course will adapt itself to the edge already prepared. When the mould is made, put it together, dry it perfectly, then oil it in the manner before described with reference to the cast, and in the course of two or three days it will be in a fit state for casting, taking care to coat it with oil and grease before taking each cast."—*Lancet.*

ON THE TREATMENT OF FEMORAL HERNIA.

By J. Sebastian Wilkinson, Esq., Surgeon, London.

The following case of femoral hernia occurred to me in the course of my practice some years ago; and having met with similar cases since, in the treatment of which I have been equally successful, I beg the favour of its insertion in the widely-circulated journal, The Lancet.

Mrs. W———, aged forty, affected with femoral hernia, applied to me in the early part of the spring of 1833, to know if I could afford her any relief, as her case was pronounced irreducible and incurable. The subjoined is her own history of the case:—

"The swelling in the groin first appeared in the year 1823. It could then be easily returned into the abdomen. I thought nothing of it, and neglected to apply a truss. About four years before I applied for medical advice, I could not return the swelling. It was occasionally painful, especially when the bowels were confined. About three months before I consulted you, I became alarmed, owing to the increased size of the tumour, and the pain I experienced in walking. I was obliged to be particular in my diet, and keep the bowels always relaxed. I then lived as cook and housekeeper in a family residing at Newport Pagnell, who called in their family surgeon. He said he could do nothing for me, but sent me to London to Mr., now Sir Benjamin Brodie. This gentleman examined me, and said it was quite irreducible and incurable, and that my life would be endangered by any blow upon the part, or from inflammation arising from walking. He, however, considered it advisable to wear a piece of thick leather, beat out in the form of a cup, over the tumour, to be confined by a strap round the lower part of the body."

When I saw the patient, the tumour was as big as a large walnut, doubled over Poupart's ligament; moveable, but confined at the femoral ring. It consisted of intestine and omentum, and quite irreducible. Having observed in the dissecting-room, subjects with old herniæ, with both abdominal and crural rings of a large size, I considered it feasible that dilatation might gradually be accomplished in an inverse direction.

The patient being very fat, I first reduced her in substance by bleeding twice a week, to eight, and afterwards to five ounces; low diet, consisting of broth and gruel, with warm baths, three times a-week, and occasional doses of castor oil. When the skin had become flabby, and her size reduced, I used daily manipulations, pressing the tumour downwards and then upwards. In this way I proceeded for nearly six months, and at last succeeded in returning the rupture. I tied my silk handkerchief in a large knot, which I placed in the groin of the patient, and confined the ends on the opposite side of the pelvis, thus affording a temporary truss. I put her into a coach and sent her to Mr. Brodie, who returned me the following note:—

"My dear Sir,—There appears to be nothing left but the sac, and probably a small portion of adhering omentum. There can be no objection to the patient wearing one of Salmon and Ody's trusses.

"J. S. Wilkinson, Esq."

Mrs. W——— soon afterwards got married, and is now living in good health, with her husband, who is a farmer in Herefordshire.—*London Lancet.*

Medical Memoranda.

Quinine in Ague.—Dr. Stratton thinks a single large dose in the interval, cures more rapidly than repeated small doses.

Treatment of Neuralgia.—Dr. Jacques, of Antwerp, recommends inoculation, by means of a vaccinating lancet, with a solution of sulphate of morphia.

M. Lafargue recommends inoculation in the same way, with a solution of veratria: and M. Roclauts, a Dutch physician, gives nux vomica, in doses of from three to ten grains in the twenty-four hours.

Succinate of Ammonia in Delirium Tremens.—M. Scharn has seen the most furious delirium overcome as by enchantment, and the disease removed in a few hours, by the use of this remedy alone.

Arsenic in Peritoneal Dropsy.—Dr. Debavay has treated a case successfully. One-twentieth of a grain was given twice a day. The improvement was notable in six weeks, and in six months all symptoms had ceased, and the catamenia, which had been suppressed, was restored.

Mustard in the Convulsions of Children.—Dr. Triplu was led to the employment of this remedy as an emetic, and finding it arrest in a few minutes an attack of convulsions that had lasted five hours, he has employed it in three other cases with complete success.

Prophylactic Remedy against Ptyalism.—Dr Schoepf recommends the following tooth-powder during the administration of mercury, to prevent salivation. Dried alum, powdered, ℈ij.; powder of cinchona, ʒj.; to be used by means of a soft brush, morning and evening.—*Northern Journal of Medicine.*

POLYPUS OF THE WOMB.

BY M. LISFRANC, PARIS.

[In an able notice of Lisfranc's clinical surgery in the British and Foreign Medical Review, we find some excellent and practical remarks on this subject. A polypus descending from the womb is said to be insensible, whilst an inverted uterus is very sensible. If, however, a polypus descend with a covering from the inner surface of the womb, it is evident that its sensibility will be more or less retained.]

In partial inversion of the uterus, M. Lisfranc thinks favorably of the mode of examination proposed by M. Malgaigne, which we shall describe. In this affection the bladder and a portion of the intestines are lodged in the concavity formed by the depression of the fundus of the uterus; if, then, a curved catheter is passed into the bladder with its concavity downwards, and the beak of the instrument is directed to the most depending part of the bladder, its extremity will be readily felt by the finger in the vagina, if the case is one of inversion, unless, indeed, the intestines have become adherent to the womb in such a way as to prevent the catheter penetrating into the depression formed by the inverted organ, a circumstance of very rare occurrence. But M. Lisfranc thinks that the best way of discriminating between polypus and inversion of the uterus, is by a mode of examination similar to that above recommended, in the case of an intra-uterine polypus or of a commencing inversion. If we seize and depress the tumor with two fingers passed into the vagina, and then introduce the index-finger of the other hand into the rectum, no tumor can be felt through the gut above the one which is grasped in the vagina, if the case is one of inverted uterus. But if, on the contrary, we feel through the rectum, a second tumor similar in shape to the uterus, above the vaginal tumor, then this latter tumor is a polypus. In one instance, indeed, M. Lisfranc was misled by this mode of examination; he diagnosticated inversion of the uterus, but the patient having died, a small fibrous tumor was discovered implanted on the uterus, which was flattened and reduced to the tenth part of its natural size. It appears that attempts have been made to defraud the author of the honor due to this suggestion, as he subsequently "begs leave to thank the authors who have appropriated his ideas, or with characteristic candor cited them as dating from the eleventh century." It is not stated who are the delinquents here alluded to, and we are not able to supply the omission.

M. Lisfranc has on several occasions removed by *enucleation* both polypi and fibrous tumors which were not pedunculated, whether situated completely within the cavity of the uterus, or having partly (or in the case of polypi entirely) made their way into the vagina. To use his own words, he "dwells on this important point of practice which he believes to be new." We need not occupy space in showing that the practice is not new, but as we believe M. Lisfranc has adopted it with more boldness than his predecessors, and under circumstances in which it was not previously applied, we shall give a summary of a few of the cases by which he illustrates this practice.

In one case having drawn a fibrous polypus almost entirely through the vulva, he perceived that its envelope, which consisted of a thin layer of the tissue of the uterus, was lacerated, and passing the index-finger through the rent, enucleated the tumor with the greatest facility. In another case enucleation was effected almost accidentally: M. Lisfranc, while examining a polypus, found the envelope give way beneath the nail of the index-finger, and by an easy manipulation enucleated the tumor in a few seconds. On examining the uterus immediately afterwards, he found that the part of that organ to which the polypus had been attached, had singularly contracted, that the depression caused by the tumor had diminished greatly in depth, and at least two-thirds in in breadth, it seemed to be diminishing while the finger was in contact with it, and in ten hours the uterus had regained its natural size, and the cervix would not admit the finger. We mention these latter facts, as we conceive they have an important bearing on the question of hemorrhage after excision of polypi. M. Lisfranc has also frequently enucleated with the nail of the index-finger, small cellulo-vascular polypi occupying the neck of the womb. In a case where a fibrous tumor as large as the clenched hand projected into the vagina, its envelope was lacerated with the nails, and the contained tumor turned out. But enucleation must generally be preceded by an exploratory incision; and by this combination of means, M Lisfranc has removed fibrous tumors while still completely included within the cavity of the uterus. A lady was reduced almost to extremity, by protracted uterine hemorrhage caused by a fibrous tumor, which could be felt through the dilated cervix uteri. The neck of the uterus was seized with Museaux's hook, depressed almost to the vulva, and a more perfect examination being then practicable, the tumor was found to extend from the middle of the body of the uterus almost to its lower extremity, and to be lodged in its posterior wall, from which it was commencing to disengage itself. With a straighi, blunt-

pointed bistoury passed along the forefinger, a vertical incision was slowly and cautiously made over the tumor until the finger was enabled to be insinuated beneath the envelope and complete the enucleation, which was not accomplished without some difficulty. Occasionally enucleation may be more easily achieved by substituting a spatula for the finger. If it is necessary to enlarge the incision in order to effect the removal of the tumor, a grooved director will often guide the knife more conveniently and safely than the finger. In some cases where the cervex uteri was insufficiently dilated, M. Lisfranc divided it anteriorly. Whenever the peduncle of a polypus is very broad, we should incise the envelope, and endeavor to enucleate the tumor, in this, however, we cannot always succeed. If the tumor is removed, the envelope sometimes contracts and cicatrizes, sometimes sloughs in whole or in part.

[The removal of polypi by *ligature*, M. Lisfranc condemns in common with most French surgeons.]

Symptoms and Pathological Appearances in a Case of Spinal Meningitis.

The following case, from the *Guy's Hospital Reports*, affords a good illustration of this rare form of disease :—

"T. M——, aged nineteen, of small, but well-formed frame, of temperate and regular habits, generally having good health, until eighteen months before his death, when he was treated in Guy's Hospital for pleurisy; this was followed by scarlatina; from both he recovered; but he subsequently complained of wandering pains in the *neck* and *loins*, and general *malaise* Three months before his last admission, he had erysipelas of the face, and was confined to his bed for a few days, but perfectly recovered in about a month, at the expiration of which period he became an out-patient, the pains continuing in the *back, neck, and loins*, and being regarded and treated as rheumatism, without relief. On the Friday before admission, the pains became very much aggravated in the *neck, back*, and *loins*, causing him to scream violently, with great restlessness, alarm, and dread, if any one approached to touch any part of his body. These symptoms were more severe on Saturday; and on the following morning, May 7, he was admitted, with symptoms of fever, and complained of the *pains* in the *neck*, and *loins*, which were less severe; had great disinclination to turn in bed; and, on being raised, maintained almost a tetanic rigidity of the *muscles of the neck*, but these symptoms were not very marked until two or three days afterwards. On the Wednesday, he lost the use of his arms for a time, and then the pains left him, but became again severe with the return of motion. On Thursday, convulsions came on; he had foaming at the mouth; the features were distorted; the hands were clenched, and he was insensible: the tonic rigidity of the neck continued. He had frequent recurrence of the convulsive attacks during the next day, when he died, trismus having been present during the two hours preceding his death.

"*Sectio Cadaveris.*—The skin, generally, and conjunctivæ, were slightly jaundiced. On opening the head, the veins and sinuses were seen large and congested; and on dividing the spinal cord, just below the medulla oblongata, some puriform-looking fluid exuded from, apparently, the centre of the cord, the cut surface of which was looser in texture than natural.

"The spinal canal being opened from behind, there was some light *ecchymosis between the muscles*, and extravasation of blood, with effusion of lymph, between the vertebræ and dura-mater: an effusion of lymph, and some puriform albuminous matter, were also seen between the arachnoid surfaces, and beneath the arachnoid itself, rendering these membranes slightly adherent and opaque. This opacity was seen especially in some spots, and evidently of *no very recent character*. These appearances were most observed at the *fourth* and *fifth* cervical vertebræ.

"The surface of the liver was rather pale; the edge rather rounded; and some yellowish spots, of the size of half-a-crown, surrounded by an areola of darker vascularity, were observed: these extended to the depth of half an inch. On incision, the structure was yellowish, with an occasional mottling of florid red. The lobules were universally of a pale-yellow colour; and in those parts which were of a brighter red hue, the interlobular fissures were the seat of florid vascularity. The organ was lacerated and tore with a granular appearance. This was regarded as an inflammatory condition of the liver.

"The peritoneal surface of the bladder was corrugated, thickened, and the seat of ecchymosis, which was also observed internally, in the submucous tissue."—[Lancet.

The above is a plain case of serosis or tubercular disease of the liver, bladder and muscles, extending to the membranes of the brain and spinal cord, as every physician who practices the magnetic symptoms would have known without a post mortem examination.

[*Ed. Dis.*

A SUBSTITUTE FOR WOOD ENGRAVING.

By Richard Lewis Bean, Esq., M.R.C.S., London.

Having been engaged lately in some photogenic experiments, I tried the following method of engraving, which, although not of use in photography, appears to be an excellent substitute for wood engraving, as it takes so little time, (two or three hours,) and only costs a few pence; those who can draw a little may avail themselves of it, and I have no doubt, surgeons and others publishing would find it of great service, as the trouble and expense are so light.

I take a piece of black glass, or glass with a black ground behind; melt common wax, so that there may be a coat about the thickness of a sixpence; when this is cool, rub it over with a preparation of salad oil and white lead, mixed into an ointment; this is to give a white ground for etching upon. Trace the drawing so as to leave a red outline on the ground; proceed to etch with needles, (taking care to make the grooves perpendicularly through the wax;) when this is done, lay some water gently over the wax, and if there are any minute globules of air sticking to it, they are to be removed by gently heating with a lamp, great care being taken not to melt the wax; sprinkle some of the finest sulphate of lime, (plaster of Paris,) which is best got at the casting shops; let it combine with the water, and set. When this is done, it should be made of a convenient thickness, by adding more to the back of it; now dry, and deepen the broad lights in the same manner as a wood engraver's block; boil in glue, which will sink into the substance of the plaster, and enable it to bear pressure in printing. After this, proofs must be taken, and gradual improvements made.—*London Lancet.*

Reciprocal influence of the Nervous and Sanguiferous Systems.

The bloodvessel and the nervous fibre are the first parts which receive life, and the last which lose it. Anatomy shows that they are always associated together in the cellular substance, which serves as a bond of union between them. Physiology displays them invariably acting in unison—and Pathology finds them very generally acting one upon the other Let us cite a few examples in illustration of these propositions:—

A young girl, returning home one morning, was insulted by a soldier, who clasped her round the waist. She chanced to have the catamenia upon her at the time; the secretion was at once checked, and did not again return.

The mother of one of the young soldiers in the army of Italy, 1798, was told of the death of her son: she started up for a second, and the menstrual discharge ceased that very moment.

These are instances of the action of the nervous on the sanguiferous system: the following exhibit the action of the sanguiferous on the nervous.

A young Creole girl, of an histerical constitution, was seized with spasm of the throat, which for two days prevented her from swallowing anything. She was bled; and from the moment that the blood began to flow, the spasm gave way, and she could swallow with ease.

A plethoric woman is advanced beyond the middle of pregnancy without having quickened; draw a few drops of blood from her, and the first movements of the fœtus will probably be felt forthwith —*Medico Chirur. Review.*

PRESTAT'S ADHESIVE PLASTER.

The following composition is said never to crack, and not to inflame the skin:—Empl. Diachyl. Gum., 400 grs., Purified Rosin, 50 grs., Tereb. Venet., 38 grs., are mixed together at a gentle heat, and then 12 grs., of Gum Mastic, and 12 grs. of Gum Ammoniac incorporated, and the mass spread on linen. In winter it is advisable to add 10 grs. more turpentine, and 12 grs. of Ol. Amygdal.—Lancet.

SCROFULA,

BY M. LUGOL, PARIS.

M. Lugol looks upon scrofula as an heriditary cachexia of the entire system with the intimate nature of which we are wholly unacquainted, but the manifestations of which may be followed from birth in the diseases of every tissue and of every organ. The maximum of the scrofulous diathesis is the production of tubercle, which may be generated in any region of the economy. The tubercle in M. Lugol's eyes is an organised abnormal formation, endowed with a life and nutrition of its own, and passing through the various phases of its existence like all other abnormal tissues. The developement of tubercle takes place in different parts of the human economy at different periods of life, owing to various modifications of local vitality. Accompanying the production of tubercle, anteriorly or posteriorly to it, various forms of disease occur in the different tissues of persons laboring under the cachexia. These various morbid

forms are all manifestations of the scrofulous diathesis. Thus, the mucous and cutaneous surface, the bones, cellular tissue, joints, &c., are attacked with chronic inflammations, viz. ophthalmia, coryza, catarrh, diarrhœa, &c.. lupus, acne, pustular and papular eruptions; osteitis, caries, necrosis; white swellings, cold abscesses, &c. These constitute the *cortege* of the scrofulous cachexia. These are the diseases which, more or less developed, accompany the martyr of scrofula from his birth to his grave, rendering manifest to the medical observer the cachexia under which he labours, even in the absence of tubercular formations.

The characters of hereditary scrofula in a family are the existence of the scrofulous complexion among its members—the great mortality which is observed in such families more especially during infancy. These two characters may be studied—in the family itself, in the different branches which originate from the same stock, in the children of different marriages. With reference to parents who procreate scrofulous children, their giving birth to such children may be owing to their original health, in which case either they are scrofulous or affected with pulmonary tubercles; have been scrofulous during their infancy, and have ceased to appear so; have brothers and sisters who are scrofulous;—or it may be owing to an acquired state of health. Thus, syphilitical parents, parents who have given themselves up with excess to venereal pleasures; who are too young or too old; whose age is disproportionate; who are suffering from epilepsy, paralysis, or insanity, all give birth to scrofulous children; also the father whose strength is disproportioned to that of the mother. In some instances the disease is evidently transmitted by heredity without the original or acquired health of the parents being such as at first to explain the circumstances. Parents may only show symptoms of scrofula after the birth of scrofulous children. Hereditary scrofula never skips a generation.* The hereditary causes of scrofula may be united, in variable number, in the same individual. Marriage is the most ordinary cause of the propagation of scrofulous diseases. Scrofula is very frequent among foundlings and orphans.—The seeds of scrofulous disease may be transmitted by the nurse to her nursling.

Scrofulous families says Lugol, may be recognized by the general impression of debility which all the children present; their state of health being at the most negative, and always exclusive of the attributes of health and strength, and of good organization. Their physical forms are devoid of harmony; there is no proportion between the limbs and the trunk; the former are badly attached to a body too long or too short. The development of the similar regions of the trunk is unequal, often giving rise to deformity. The size of scrofulous children is generally short, although sometimes they grow to an extreme height. The mouth is small, and the teeth are black, and soon decay. The spongy tissue of the bones is hyperthrophied, so that the joints are disproportionately large. The spine and bones of the pelvis often give way more or less.—The digestive functions are frequently in a continued state of atony, of inertia: such children have no appetite, and do not take enough food to support the economy; others present a voracious appetite, by which, however, they do not seem to profit. The face is pale, the breath fœtid. Constipation alternates with diarrhœa, in which latter case a considerable portion of the food passes through the intestinal canal only partly digested. The skin and cellular tissue is extremely emaciated, or in a peculiar state of unhealthy, hardened hypertrophy. It is often dry, and covered with papulæ of lichen, or prurigo. Children who present these characteristics are generally idle, apathetic, and have no inclination whatever for exercise. Menstruation is very late with girls, and the age of puberty with both sexes is retarded. Writers on scrofula have generally considered a certain degree of *enbonpoint* and freshness of complexion to be peculiar to scrofulous constitutions, especially with women. This peculiar kind of beauty is certainly observed, but much less frequently than is generally supposed, and generally co-exists with some scrofulous symptom which reveals its nature, such as a too-dilated pupil; slight epiphora; habitual coryza; obstinate chilblains; a small mouth, of an ogee form; teeth too long and too close, often black and carious; too short and thick a neck; habitual leucorrhœa; dysmenorrhœa; anorexia; frequent sore throats, &c. This state of freshness and fulness seldom lasts long; it disappears early in life, leaving behind a wrinkled skin, which disfigures women who ought still to be in the bloom of youth.

Parents who are not themselves scrofulous, may, under certain circumstances, procreate scrofulous children. The abuse of venereal excitement will lead to this result; and instances of this kind are frequently seen in the higher walks of life. Early marriages are followed by the generation of scrofulous children. A man ought to be five-and-twenty before he marries; before

* Here Lugol is mistaken. [Ed. Dis.

that period his organization is seldom sufficiently manured to enable him to procreate healthy children. This law holds good throughout nature. The first year or two a fruit-tree bears, the fruit is small in size, indifferent in quality. Such marriages are principally seen in the lowest and in the highest classes of society. Scrofulous children are still more frequently the result of late marriages. If either of the parents has arrived at the time of life when the system begins to decay, their children are generally scrofulous. At the age of forty-five the procreative faculty begins to decline in man. For a few years, however, he is still able to procreate healthy children, but after fifty-two they seldom present the conditions of health. Thus, when a healthy man, advanced in life, marries, his first children are healthy, but they deteriorate as they increase in number. The same remark applies to women. As they approach the critical age their powers of reproduction diminish, and after forty their children are often scrofulous. Disproportion between the ages of the parents is a cause of scrofula among children. The wife ought to be a few years younger than the husband; if she is older the children are generally scrofulous. A man whose bodily strength is not that of his sex, especially if it is much less than that of his wife, will generally have scrofulous children; consequently the popular opinion that the children of a weak scrofulous man married to a strong robust woman will be healthy, is a fallacy. Diseases of the brain appear to modify the reproductive powers.—Those who are laboring under insanity, paralysis, or epilepsy, generally procreate scrofulous children.

Scrofula may be inoculated by suckling—a fact which has been remarked by various authors. Nurses, however, should only be made responsible for scrofula occurring in children whom they suckle, when, on the one hand, it is quite evident that no traces of that disease exists in the child's family, and when, on the other, the diseases can be traced clearly to the nurse. When the constitution of a child is contaminated from this source, its health will form a striking contrast with that of the other members of the family. As a necessary consequence of the above fact, scrofulous mothers ought never to suckle their own children.—*Lancet.*

CLAIRVOYANCE.

Dear Sir—There is in this place a Clairvoyant, Jackson Davis, whose wonderful powers have for a long time astonished many of our citizens. This young man is eighteen years of age, is uneducated, and has resided here for the last six years, and is very generally known.

What is perfectly astonishing is, when in the Clairvoyant state, he is complete master of the general sciences, such as physiology, pathology, anatomy, geology, hydrology, phrenology, astronomy, medicine, &c. He is conversant with all these sciences—distinctly points out their fundamental truths, and exposes their incidental errors. He has spoken also in as many different languages, and, whilst in that state is able and willing to give instruction on any subject which will be of benefit to mankind. He has already explained many phenomena in nature which the learned have been unable to fathom, such as for instance the cause of the *variation of the Magnetic Needle*

Of late, he has given us four lectures on Animal Magnetism. The theory of Magnetism, as given in these lectures, is entirely new, and beautiful beyond description. He shows in a clear and lucid manner that Mesmerism is a science, and that all its phenomena are accounted for on natural principles, thus removing all the mystery in which the subject has been shrouded, and completely reversing all former theories which have been put forth—and he has given Mesmerism a new name, expressive of this fact, that of "*Clairmativeness.*"

Within the last twelve months, this young man has examined and prescribed for upwards of one hundred persons, and has restored them to health.

The names of these persons can be given if called for. Among the number, I will mention Dr. Charles Thatcher, an eminent physician of this town. This gentleman, for four years past, was afflicted with ulceration of the bowels, in consequence of which he was obliged to give up the practice of medicine. He is now restored to health.

This young man has often astonished and confounded me by revealing to me my own thoughts when I have been sitting beside him, in the trance state. And he has frequently done the same with others, in the presence of many witnesses.

He is still engaged in giving us lectures on various subjects, and these lectures in due time will be given to the public.

By giving the above a place in your paper, you will much oblige myself and many of your readers in this vicinity.

GIBSON SMITH,
Pastor of the First Universalist Society.

Poughkeepsie, Feb. 16, 1845.

[*N. Y. Tribune.*

Bursal Swelling of the Wrist and Palm of the Hand.

By James Syme, Esq.

There are few subjects of surgical practice that have occasioned more trouble and disappointment than morbid distension of the bursa, which accompanies the flexor tendons of the fore-arm, in their course under the annular ligament of the wrist, towards the fingers. The resistance of the ligament prevents any enlargement of the bursa where lying under it; but the wrist and palm become distended, so as to occasion an unseemly swelling, and weakness of the hand. The fluid effused into the cavity is generally associated with numerous small cartilaginous-looking bodies, of a lozenge or lenticular figure.

In treating this form of ganglion, the means generally employed prove very unavailing. Punctures either heal without producing any improvement, or remain open, so as to occasion obstinate sinuses. Incisions of larger extent, caustics, and setons, have all been carefully employed with very uncertain benefit, and frequently great suffering; indeed I have known the continued irritation so induced prove fatal. As the treatment of similar derangements in other parts of the body is not attended with such troublesome consequences, the question naturally presents itself, what local peculiarity is concerned in causing the obstinacy of this particular case? The reply suggested by what has fallen within my observation is, that the constriction caused by the annular ligament produces the effect in question, by preventing the portion of bursal sac corresponding to it and the subjacent tendons from undergoing the healing process. Impressed with this conviction, I tried the following experiment, the complete success of which encourages me to hope that the method pursued will be found to afford an effectual remedy for a complaint which has hitherto proved so troublesome.

Janet Preston, aged 20, was admitted on the 13th of February, complaining of pain and weakness in her left hand. The wrist and palm of the hand were much swelled, but not discoloured, and pressure on these parts caused distinct fluctuation, with the jarring sensation that characterizes effusion into the bursal sheaths. She stated that pain had been first felt about two years before, and that for the last twelve months she had had hardly any use of the hand, in consequence of the swelling, and weakness attending it. I made a free incision from the wrist into the palm of the hand, dividing the annular ligament. This gave vent to a quantity of glairy fluid, with many small flat cartilaginous-looking bodies, and exposed to view the flexor tendons, separated and surrounded by thickened bursal membrane. The cavity was filled with dry lint, supported by a bandage moderately compressing the hand and wrist. In the subsequent treatment care was taken to prevent protrusion of the tendons, by drawing the edges of the wound together, and applying a compress over the seat of the annular ligament. Not the slightest disagreeable symptom followed the operation, and three days after it the patient was able to sew, which she had been prevented from doing for many months previously. In the course of a few weeks the wound healed, and the limb was in every respect perfectly sound.—*Lond. and Ed. M. J. of M. S., Oct.*, 1844, *p*, 825.

Caoutchouc as a Remedy for Toothache.

Caoutchouc, becoming very smooth and viscous by the action of fire, has been proposed by Dr Rolffs as an excellent remedy for filling hollow teeth, and alleviating the toothache proceeding from that defect. A piece of caoutchouc is to be put on a wire, then melted at the flame of a candle and pressed, while warm, into the hollow tooth, and the pain will disappear instantly. The cavity of the tooth should first be cleaned out with a piece of cotton. In consequence of the viscosity and adhesiveness of the caoutchouc, the air is completely prevented from coming in contact with the denuded nerve, and thus the cause of the toothache is destroyed.—*Medical Times.*

An Extraordinary Fact.

A case has been communicated to the Liverpool Pathological Society by Dr. Gill, of an altogether extraordinary kind. A man by the name of McIvor was dying, and the nurse who was tending him made the following statement:

"Nov. 16th, 11 P. M.—Nurse observed a '*red-hot coal-like streak* on M.'s mouth, and (playing) on his right cheek and top lip,' as he lay in the insensibility of approaching dissolution. This flame lasted for about twenty minutes—i. e. until death.

"The impression on the mind of the nurse was, that *he was insensible during the whole of this luminous combustion* of his breath. He lay with his eyes open, on his back. The 'flame was *red, just like red-hot coal-fire,*' to which the nurse and the other man (McIvor) both compared it. Nurse pointed to the centre of the clear fire then burning in the ward when these notes were taken; it was '*not blue,*' it was *persistent* with the breath of *ex-*

piration, ('when he breathed out,' and not *lambent*, 'not flickering, coming and going.') There was in the room a common 'raked' fire in the fireplace at the one end, close to which the nurse stood, and a gas jet burning low, (very low) suspended from a rafter in the middle of the room, and about twelve feet from the dying man's bed. M. had not been taking any phosphoric medicine at all, or any alcoholic stimulant during that day, or for six weeks previous, though he bore the character of being a drunkard. Nurse and McIvor were both terrified so much, that they dared not stir from their places until the flames had ceased."

General Laws Regulating the Displacement of Fractures.

M. Ed. Lacroix has published an interesting and philosophical paper on this subject, to which we beg to direct the particular attention of our surgical readers. His general conclusion is, that "the displacements of bones occur in angles which have the same sines directed in the same planes and in the same sense as the natural curves of the bones implicated."

Clavicle.—Displacement variable according to the point broken; forwards when the two external thirds are broken off from the inner thirds; backwards when the two inner thirds are severed from the outer third; upwards so as to form an angle with its apex superior, where the seat of fracture is the middle of the bone. When the clavicle is broken in two places, one towards the sternal, the other towards the acromial extremity, the natural curves of the bone are replaced by two angular knees, one of which corresponds to each of the solutions of continuity.

Humerus.—Displacement generally outwards, so as to form an angle the apex of which is external when the shaft of the bone is broken, not outwards and upwards as is commonly said by writers; the inferior portion of the bone is most apt to get in front of the superior. In fractures of the inferior extremity the displacement is mostly forwards, and there is generally an increase of concavity inwards, of convexity outwards; the inferior portion is also very apt to rotate outwards and inwards.

Forearm.—Tendency to displacement, outwards and backwards, when both bones give way in the middle. The ulna alone fractured in its upper portion, the tendency is to displacement backwards and outwards; in its lower portion, to displacement forwards and inwards. The radius having given way singly in its upper third, the tendency to displacement is inwards, to the formation of an angle, the apex of which looks inwards; the bone having yielded in the middle, the angle of displacement will regard backwards; and having failed in its lower third, the angle will turn inwards and backwards.

Femur.—Wherever seat of the fracture, the extremity of the superior portion of the bone tends to get in front of the inferior, and to form an angle projecting outwards.

Tibia.—When the bone is broken in its lower moiety, there is a general tendency to rotation, in which the inner malleolus becomes more anterior; and to the formation of an angle, the apex of which looks backwards.

Fibula.—Constant tendency to form an angle whose apex regards inwards, and more or less backwards.

Tibia and Fibula.—General tendency to the formation of an angle, with its apex turned posteriorly and internally. Less disposition to rotation than when either of the bones is broken singly.

But we must refer to the original and very ingenious paper of M. Lacroix for other and more particular information, in *Annales de la Chirurgie Francaise, &c.*, Mars, 1844.

[*Medical Gazette.*

Varicocele Treated by Compression.

Mr. Curling publishes some cases of this kind to show the valve of compression at the external ring in curing the enlarged veins. The cure seems to depend not so much on the pressure as on the removal of the hydrostatic pressure of the blood in the dilated veins by means of the presence of the moc-main truss. In one case "there was a large bunch of dilated veins above and behind the left testis. There was a dull aching pain, which became worse towards evening."—The moc-main lever truss was applied day and night, so as to compress the spermatic veins at the external abdominal ring. This ended in a complete cure. Another case of the same kind is related, which was equally benefitted by the compression.—*Lancet.*

Inoculation with Strychnia in Amaurosis.

BY DR. VERLEGH.

The subject was a lady, twenty-seven years of age, of nervous temperament, affected with incomplete amaurosis of the left eye, and commencement of the same disease in the right one. The disease was of three months' standing, and of rheumatic origin; after two months' fruitless efforts, Dr. Verlegh tried inoculation with the sulphate of strychnia in the neighborhood of the orbit. A grain of the salt was dissolved in two drops of water; the first day twelve inocula-

tions were performed, six above the eye in the course of the supra-orbital nerve, six under, and on the side of the nose where the ethmoidal filaments and nasal branch terminate, and whence arise the filaments which go to the iris. There was no effect that day; but next day some slight tremors occurred in the neighborhood of the inoculated spots. After two days rest the inoculations were repeated and the number of punctures increased to eighteen. Tha patient now became sensible of a slight haziness. After five successive inoculations, carried to the length of thirty punctures, she commenced to distinguish objects; after the eighth, vision was completely restored; the contraction of the pupil gradually increased, and the other symptoms diminished after five grains of the sulphate had been used; during the same time inoculations were had recourse to in the neighborhood of the right eye; after the lapse of two months the patient continued perfectly restored; and this the author conceived sufficiently long to warrant him in considering the cure as permanent.—*Gazetta Medica de Milano.*

The Styptic Power of Ergot.

[Mr. Liston, in his lectures on surgery, relates the following case to show the efficacy of this medicine as a styptic.]

Mr. Wright, of Nottingham, an excellent surgeon, told me of a case in which a strong decoction of the herb proved immediately efficacious in a case of very profuse and alarming bleeding. The case was a very odd one. A man in the country had been suspected of unfaithfulness to his wife, and she caught him at last in the embraces of another woman. She was in a great rage, snatched up his fowling-piece, which he had put down in the room, loaded, and when he had got fairly upon his legs, she presented it at him, and blew away one side of his face. He went on recovering very well, for a time, from this dreadful and dangerous wound, but one day very profuse hemorrhage took place. The wound was so extensive that it was impossible to say where the blood came from; it was doubtful whether even the ligature of one carotid would suffice. Knowing the powerful astringent effects of the ergot, Mr. W. begged of Dr. Sibson, the intelligent and active resident medical officer, to have a decoction of the remedy injected into the wound, and amongst the ethmoid cells, and some dossils of lint, soaked in the decoction applied to the wound. It had the effect of instantly stopping the bleeding; a clot was formed, there was no recurrence of it, and the case did very well. The oil of ergot is as I have said, reputed to be very effectual as a styptic, and I shall certainly use it on the first favourable opportunity that presents itself.—*Lancet, Aug.* 31, 1844, *p.* 691.

EXTIRPATION OF THE MAMMA OF A FEMALE IN THE MESMERIC SLEEP, WITHOUT ANY EVIDENCE OF SENSIBILITY DURING THE OPERATION.

By L. A. Dugas, M. D. Professor of Physiology in the Medical College of Georgia.

On the 3d of January, 1845, Mrs. Clark (wife of Mr. Jesse Clark, of Columbia county, Georgia,) came to this city for the purpose of getting me to remove a schirrous tumor off her right mamma, which had been gradually increasing for the last three years, and which had now attained the size of a turkey's egg. The tumor had never caused any pain of consequence, was not adherent to the skin, nor did it implicate any of the axillary glands.—Mrs. C. is about 47 years of age, has never borne a child, and her health, though by no means robust, was pretty good, and had not been impaired by the evolution of the tumor. The operation having been determined upon for the following day, Mrs. C. remarked to me that she had been advised by Mr. Kenrick to be mesmerized, but as she knew nothing about it, she would like to have my advice, and would abide by it. To which I replied that there were several well authenticated cases on record, in which surgical operations had been performed under mesmeric influence, without the consciousness of the patient; that I would be happy to test the subject in her case, and that I would endeavor to mesmerize her, instead of operating as had been proposed on the day following.

On the 4th of January, at 11 o'clock, A. M. I called on Mrs. C. and was informed that on the preceding evening she had been put to sleep by Mr. B. F. Kenrick, at whose house she resided. I then mesmerized her myself, and induced sleep, in about fifteen minutes. Finding my patient susceptible to the mesmeric influence, and reflecting that it would not be convenient for the same person to maintain this influence and to perform a surgical operation at the same time, I requested Mr. Kenrick to mesmerize Mrs. C. morning and evening, at stated hours, until insensibility could be induced. This was regularly done, with gradually increasing effect, when, on the evening of the 6th of January, sleep was induced in five minutes, and the prick of a pin was attended with no manifestation of pain. The sittings were continued, and the patient's insensibility daily tested by myself and others in various ways. On the 9th of January I invited Professor Ford to be present, and, after pricking and pinching strongly

the patient without evidence of pain, the mesmerizer was requested to leave the room, when we exposed the breast, handled it roughly in examining the tumor, and re-adjusted the dress, without the consciousness of the patient. We then held to her nostrils a vial of strong spirits of hartshorn, which she breathed freely for a minute or two, without the least indication of sensation, unless the fact that she swallowed once be regarded as such, instead of a mere reflex action. On the 11th of January, in presence of Professors Ford and Means, in addition to the usual tests, I made, with my pocket-knife, an incision about two inches in length, and half an inch in depth, into the patient's leg, without indication of sensation.

Fully satisfied now of our power to induce total insensibility, I determined to operate on her the next day at noon, but carefully concealed any such design from the patient and her friends, who did not expect its performance until several days later.

On the 12th of January, at twenty minutes past 11, A. M., Mrs. C. was put to sleep in forty-five seconds, without touch or pass of any kind, the facility with which the mesmeric influence was produced having gradually increased at each sitting. At 12 o'clock, in presence of Profs. Ford, Means, Gavin and Newton, and Dr. Halsee, the patient being in a profound sleep, I prepared her dress for the operation, and requested my professional brethren to note her pulse, respiration, complexion, countenance, &c. before, during, and after the amputation, in order to detect any evidence of pain or modification of the functions. As Mr. Kenrick had never witnessed a surgical operation, he feared he might lose his self-possession, and requested to be blindfolded; which was done. He now seated himself on the couch near the patient, and held her hand in his during the operation. This was accomplished by two eliptical incisions about eight inches in length, comprehending between them the nipple and a considerable portion of skin, after which the integuments were dissected up in the usual manner, and the entire mamma removed. It weighed sixteen ounces. The wound was then left open about three quarters of an hour, in order to secure the bleeding vessels, six of which were ligated. The ordinary dressing was applied, and all appearances of blood carefully removed, so that they might not be seen by the patient when aroused.—The amount of hemorrhage was rather more than is usual in such cases.

During the operation, the patient gave no indication whatever of sensibility, nor was any of the functions observed by those present modified in the least degree. She remained in the same sound and quiet sleep as before the use of the knife. Subsequently the pectoral muscle, which had been laid bare, was twice or thrice seen to contract when touched with the sponge in removing the blood. About fifteen minutes after the operation, a tremulous action was perceived in her lower jaw, which was instantaneously arrested by the application of the mesmerizer's hand to the patient's head. This phenomenon recurred in about ten minutes after, and was again in the same manner quieted. Professor Ford, who counted the pulse and respiration, states that before any preparation was made for the operation, the pulse was ninety-six, and the respiration sixteen per minute; that after moving the patient to arrange her dress for the operation, and just before this was commenced the pulse was ninety-eight, and the respiration seventeen; that immediately after the detachment of the breast, the pulse was ninety-six, respiration not counted; and that after final adjustment of the bandages and dress, which required the patient to be raised and moved about, the pulse was ninety-eight and the respiration sixteen. All present concur in stating that neither the placid countenance of the patient, nor the peculiar natural blush of the cheeks, experienced any change whatever during the whole process; that she continued in the same profound and quiet sleep, in which she was before the operation, (with the exceptions above noted,) and that, had they not been aware of what was being done, they would not have suspected it from any indications furnished by the patient's condition.

The patient having been permitted to sleep on about half an hour after the final arrangement of her dress, the mesmerizer made passes over the seat of the operation, in order to lessen its sensibility, and aroused her in the usual manner, when she engaged in cheerful conversation with Mr. Kenrick and myself, as though she had no suspicion of what had taken place. I then introduced to her the gentlemen who had placed themselves so as not to be seen by her on awakening, and observed, that I had invited them to come in during her sleep, in order that we might fully test her insensibility, preparatory to the operation. After a few minutes of conversation, I asked her when she would like to have the operation performed? to which she replied, the sooner the better, as she was anxious to get home. I added, "Do you really think that I could remove your entire breast, when asleep, without your knowledge?" Answer.—"Why, doctor, the fact is, that from the various experiments I am told you have made on me, I really do not know what to think of it. "Well, madam, suppose I were to perform the operation one of these days, and

to inform you of it when you would awake, would you believe me, and could you control your feelings, on finding that it had been done?" Answer. "I could not suppose that you would deceive me, and of course I would be very glad, but would try not to give way to my feelings." "Have you perceived since your arrival here, or do you now perceive, any change in the ordinary sensations of the affected breast?" "No, sir; it feels about as it has done for some time back." About a quarter of an hour having elapsed since she woke, I then told her that, as we found her in a proper state for the operation, I had performed it, and that the breast was now removed. She expressed her incredulity—said I was certainly jesting, as it was impossible that it could have been done without her knowing it at the time, or feeling any thing of it now. She became convinced only on carrying her hand to the part, and finding that the breast was no longer there. She remained apparently unmoved for a few moments, when her friends approaching to congratulate her, her face became flushed, and she wept unaffectedly for some time. The wound healed by the first intention.

In laying the above narrative before the profession, it is due to the cause of truth to state, that it has been submitted to all the physicians present at the operation, and that I am authorized by them to say that it accords in every particular with their own observations so far as they were present I should also add that, having no other object in view than the establishment of the fact that a surgical operation may be performed under such circumstances, without the consciousness of the patient, I have designedly avoided any mention of the various and interesting mesmeric phenomena manifested prior and subsequently to the operation.

Augusta, Ga., Feb. 1st, 1845.

[Southern Med. and Sur. Jour.

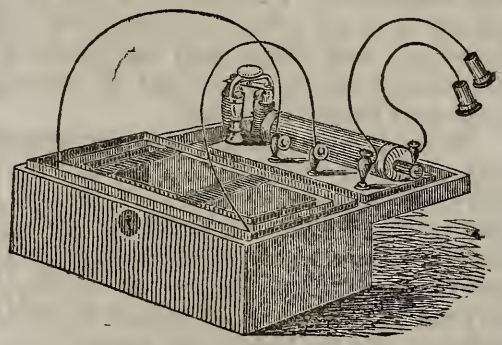
MAGNETIC SLEEP.

(*Continued from Page* 45.)

The internal organization of the pole in the centre of the brain, as disclosed in the somniscient state, is a subject of great interest; for the interior inverted cone, described by clairvoyants, is the magnetic miniature *germ* of the form of the brain. The heart, lungs, stomach, and other organs, as well as the limbs, have magnetic miniature germs of their organizations, which are varied, according to the variations in the forms of the organs and limbs, as seen by clairvoyants. These organizations are also seen to be connected together by magnetic axes and interlacings, irrespective of the organization of the nervous system, and constitute a perfect magnetic, spiritual, or immaterial form, corresponding with that which is material. They are purely spiritual forms, connected with, or inclosed in, those that are material, and according to the concurrent testimony of clairvoyants, these spiritual forms are raised in all the beauty of their earthly tenements.

The germs with which the human system was formed and perpetuated, are, therefore, magnetic or immaterial forms, inclosed in those that are material; and according to the same concurrent testimony, the entire animal and vegetable kingdoms were formed, and perpetuated in the same manner. Hence we infer a corresponding cosmogony of the solar system, and of the stars in the heavens.

VIBRATING MAGNETIC MACHINE.



We have substituted a spring, as seen in the above figure, which vibrates so fast as to make the motion of the forces continuous. The power of the instrument is also greatly increased, and, with the continuous motion of the forces, makes them greatly superior to the rotaries, or any other instruments for magnetizing. We have also made other important improvements connected with these machines, in which no expense has been spared to render them every thing that could be desired for the purpose for which they are intended.

The construction of these machines is so simple as to make any instructions for running them apparently unnecessary. We may, however, observe that the solution of sulphate of copper, with which the instrument is run, should be a saturated solution, or as strong as it can be made, and should be poured into and nearly fill the space surrounding the zinc: when, on adjusting the conducting wires from the battery to the instrument, as seen in the above engraving, the armature or spring will commence vibrating, if the screw presses moderately upon it.

If the pressure, however, is very strong, strike the spring downwards with the end of the finger, when it will vibrate unless the screw presses too hard.

A very little attention to the effect of the

screw upon the action of the spring, will enable any person to understand it, and to see that the intensity of the forces from the machines may be varied by the screw as well as by the piston.

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CASES.

CHRONIC MUCOSIS* OF THE LUNGS.

Chronic Bronchitis.

Mr. J. G. of Sixth Avenue, New York, aged 40 years. Called to see him Nov. 17th 1844, and found him in the last part of the last stages of chronic mucosis of the lungs. He had severe hemorrhage from the lungs about three months before, about a year after the disease commenced, and was now raising large quantities of matter—was emaciated, had night sweats and sleepless nights—was sinking fast under the ordinary treatment, and in this state abandoned by his family physician as a hopeless case.

There was no pain or tenderness produced by pressure on the ganglions of the spinal nerves connected with the lungs or any other organ.

We now magnetized his lungs in the most thorough manner, and directed Mrs. G. to repeat the operation morning and evening, and give him a pill of the following prescription, morning, noon and night.

Hard Bal. Copa and Cubebs, - - 3 iiiss
Ext. Hyos. - - - - - - - - 3 ss
Make one hundred pills.

We also directed the use of Port wine or strong beer morning and evening, and brandy at dinner, with the most nourishing diet. Mrs. G., after having recovered from her frightful apprehensions of a return of the hemorrhage, from the gormandizing beverage we had prescribed, promised a faithful adherence to our advice, and afterwards called upon us once a week with buoyant spirits to advise us of the favorable progress of the case.

At the end of four weeks a messenger called to inform us that "a gentleman whom we had cured of consumption" had that day "examined Mr. G. and found he had tubercles in his lungs, and required the gold pills."† I had, however, no hesitation in declaring my belief that the gentleman was mistaken, but promised to call and see the patient, when, on applying pressure upon the ganglions of the spinal nerves connected with the lungs, we found them very sensitive, and consequently that tubercles had formed in his lungs, as they frequently do in the last stage of mucosis. His cough and expectoration had, however, been gradually decreasing—his night sweats had disappeared, and he had gained flesh and strength.

We now added to our prescription in this case the magnetized gold pill morning and evening, and in five weeks from this time his cough and expectoration ceased, and he is now, Feb. 20th, attending to his daily routine of business.

We have selected this case for notice from among many others, to show the effect of the treatment in chronic mucosis, and also as an example of the development and treatment of tubercles in the last stage of the disease.

—

CHRONIC SEROSIS* OF THE UTERUS, STOMACH, AND LIVER.

Tubercula; Chlorosis; Green Sickness; Pallidus Morbus.

Miss J. S. of Newark, N. J., aged 22 years. On an examination of this young lady in June, 1844, there was found great sensibility to pressure on the ganglions of the spinal nerves connected with the heart, stomach, liver, and uterus, and it was two years since her health began to decline, and a year and a half since the last recurrence of the catamenia. She was greatly emaciated—her skin perfectly blanched—was very feeble, and in the last part of the last stage of the disease. She had been a long time under the ordinary routine of treatment of the schools, but the disease continued to make progress.

The gold pills were now prescribed, with the action of the Rotary Magnetic machine, and we magnetized the diseased organs from one to three times a week. It was, however, five or six weeks before the disease began to give way, when she began to gain strength, and to show some color in her skin.† Her appetite began to increase, and she now began to gain a little flesh, and more color in the skin. In about four months her breasts began to expand, and in about six months the catamenia appeared, after an absence of more than two years, and her health was soon re-established. As a matter of curiosity, we have since looked into a number of recent medical works of high reputation, to see the notions of the writers on the subject of the fatal disease called *Chlorosis*, with which our patient was affected; and we have no hesitation in saying that none of them knew a word of the true cause of the phenomena presented in such cases, or of the proper treatment of the disease.

—

CHRONIC SEROSIS OF THE ABDOMEN.

Ascitis Dropsy.

In the last stage of chronic disease of the organs, their serous surfaces excrete an albuminous serum, which accumulates in the

* Chronic diseases of the mucous membranes.
† We did not learn the name of the gentleman.

* Chronic disease of the serous membranes.
† This young lady required constantly two of the gold pills a day to keep her from sinking.

cavity of the abdomen, and distends it. Serum is also excreted by the serous surfaces of the facia of the muscles, when the feet ankles, and legs, begin to swell, and sometimes, with the abdomen, become very large.

We commenced magnetizing a perfectly hopeless case of this kind about seven weeks since, of a lady aged 40 years, and the results have been such as to leave little doubt that the forces from the magnetic machines will be found greatly superior to any other remedy in such cases. It was a case of serous disease, and very great enlargement of the left kidney.

We placed the negative button over the ganglion of the spinal nerve connected with the organ, and moved the other, repeatedly, all over the abdomen, under the full power of the instrument. We then placed the positive button over the ganglions of the spinal nerves connected with the stomach, and repeated, with the negative button, the operation over the abdomen, and then magnetized the feet and legs in the usual manner, under the full power of the instrument.

We repeated this operation nearly every day, with a daily progress of improvement, without any other aid than that of Homæopathic medicines, and the swellings have now nearly disappeared, and the lady's general health and strength greatly improved.

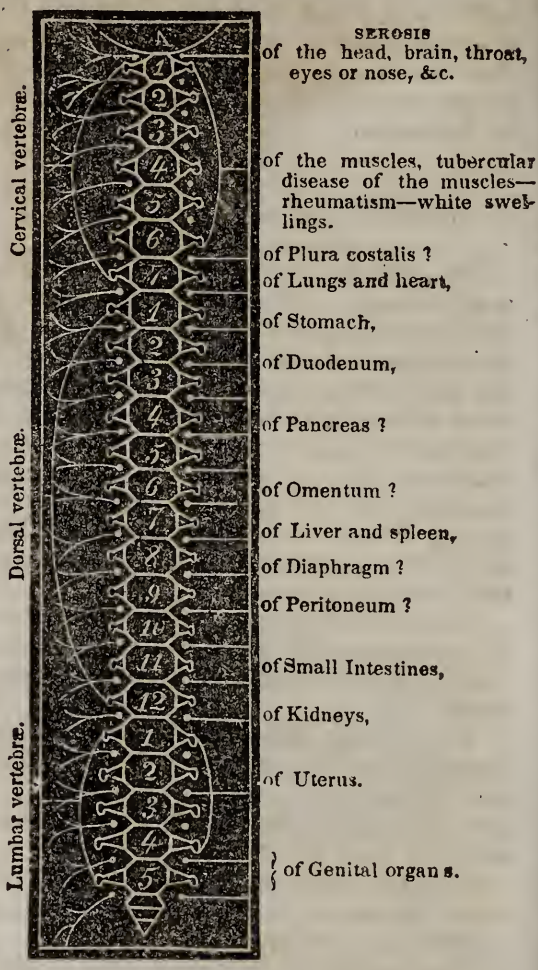
On reading over this case, I find I have described it so as to make it appear not more than about half as bad as it really was, or would have appeared had it been described by her family physician, who prescribed the medicine required during the time we were magnetizing her.—[Sherwood's Manual for Magnetizing, fifth edition.

ANATOMY AND PHYSIOLOGY.

It is now more than thirty years since we ascertained by the magnetic symptoms, and by post-mortem examinations, that there was a direct connexion between the ganglions of the spinal nerves, and the serous surfaces of the organs, as well as with the muscles.—These ganglions were thus found to be connected with the different organs, and with the muscles, in the order described in diagram A.

The intermediate ganglions are no doubt connected with the different viscera, and a physician of this city has, at our request, directed his attention to this subject. He has been trying to determine these connections by the action of the magnetic machines, and the result thus far makes the probable connections as marked with interrogation points.

When the doctor found tenderness on applying pressure over the ganglions, thus



marked, he placed the positive button over the ganglion thus indicated; and then passed the negative button over the entire surface of the chest and abdomen, under a moderate power of the instrument, by which sensations, more or less painful, were produced on different parts of these surfaces, and which induced him to locate the connexions as above described.

No opportunity has, however, occurred to test their correctness by post-mortem examinations, and we would now suggest to physicians who are practising the magnetic symptoms, and using the magnetic machines, the importance of these scientific investigations, and of ascertaining, and publishing, as soon as possible, the true connections of these ganglions with the viscera.

The connections of the spinal nerves between the 3d and 4th, 5th and 6th, and 10th and 11th dorsal, should also be ascertained, as well as the connection of the lumbar vertebræ in males, corresponding with those that are connected with the uterus in females

This is a fine field for investigation and for distinction, and we hope that the enterprising young men of the profession will not fail to enter upon it.—[Ib.

Letter to the Editor from J. D Friend, M. D.

Middletown, N. Y., March 6, 1845.

Dr. Sherwood—*Dear Sir*:—I am much gratified with the Magnetic Machine. I consider it, from the opportunities I have had of testing its virtues, an *invaluable* assistant to the practitioner: and these opportunities have not been few; for I have used it, during the last two months, in more than thirty cases; and in each instance the effect has been more or less salutary. In the first case which I used it, I was astonished at the *immediate* relief it afforded the patient. This was a case of Tic Douloureux, and abscess of the Alveolar process. The patient was a lady nearly sixty years of age, and had been afflicted for more than six years. The pain was so severe that I was assured by her relatives she had not for three months previous to my being called, slept *five minutes* during the night. After the first application she rested well and sent for me early to repeat the operation. The result is that she is nearly as well as she ever was, with every prospect of her complete restoration. In cases of Rheumatism, Head-ache, Bronchitis, and Prolapsus Uteri, I can confidently recommend the Machine as a remedial agent which will not disappoint the practitioner. I may mention, in closing this brief communication, that a severe case of *colic* which came under my observation was completely cured in less than ten minutes by the application of the machine.

I have been very much amused at the reports which have been circulated in reference to the supernatural effects which have been attributed to this beautiful piece of mechanism, which is rather a matter of surprise since there is such a wonderful propensity in the human mind to reject everything which does not come recommended for its antiquity; and it can be for this reason and for no other that mankind have adhered with such pertinacity to the absurdities and contradictions and barbarisms of a false school of medicine; and it is a fact that the inquirer after truth who endeavours to arrive at *practical* knowledge by an examination and study of the countless volumes which have been issued by as many ambitious aspirants, must of necessity become lost and bewildered in the search, without having the satisfaction of knowing that he has, by concurrent testimony, established in his mind *one important principle*–one universally acknowledged opinion!

Knowledge and science are ever progressive; and he who with a self-satisfied and egotistical air laughs at the pretensions of any fresh discovery, without previously investigating its merits, may aptly be compared to the snail, which inhabiting its own narrow shell, thinks the whole universe lies within the scope of its limited vision. He who will not read and compare and investigate must remain in ignorance; and while it is the duty of every man to deal justly with every subject that may be presented to his mind, he acts unwisely when he *takes that for granted*, which the testimony of centuries even has stamped with the seal of approval. *For the reason*, simply, that a certain dogma comes down to us dressed up in the habiliments of age, and loaded with the "dust and cobwebs of time" is no *real* evidence of its correctness. Doubt, Ignorance and Stupidity have ever been at work, rearing boundaries and barriers to the advancement of the human intellect: and they have been arrested most arduously by our "Medical professors" and the host of "blind leaders of the blind." In the study of medicine we have taken too much for granted. And we have found it easier to follow than to lead. The *ipse dixit* of the celebrated Doctor such-an-one has been received with all the meekness and servility of an urchin in the school room. The scientific conclusions of the learned Sir John Somebody, have placed the capstone upon a given science: and sacrilegious are the hands that dare attempt to hurl it from so proud an eminence or carry the structure to a more grand and dazzling height.

The "science of medicine," if it could be embodied, would be found to have upon its huge trunk ten thousand wounds and bruises and putrifying sores that can never be "bound up or mollified with ointment!"

But, thanks to the "dawning intelligence" of the age, men are beginning to break away from the restraints of the schools, and are weighing and investigating for themselves. They are beginning to discover the absurdities and gilded ignorance of those schools, and to follow more closely the dictates and teachings of plain experience and nature.

Yours, truly,

John Wesley and Electricity.

The individual whose name stands at the head of this article was one of the most remarkable men of the past century. For depth of scholarship, consistent piety, abundance of labors, and a rich harvest of success, he has been excelled, or even equalled, by few men since the days of the apostle Paul. The general wisdom of his plans and arrangements is manifest from the fact that more than a million of his followers are found in this country, and nearly that many more in Great

Britain and Ireland, whose consistent piety is read and known of all men. He died at the advanced age of 88; and although not a day was given to repose, nor an hour to unnecessary leisure, for 70 years he did not lose a night's sleep, and such was his capability to endure fatigue, that in his eighty-fifth year, he speaks of that day as a day of leisure, in which he preached only twice. It was the misfortune of this distinguished man, quite early in his public life, to be the subject of a severe pulmonary affection, bringing him almost to death's door This fact, in connexion with many others which came under his observation, induced him to pay particular attention to the economy of nature and the laws of life. His work entitled, "*Primitive Physic*," or "*An easy and natural method of curing most diseases*," reached its twenty-third edition before his death in March, 1791. It is not my intention to notice at length more than one of the remarkably simple and therefore efficient remedies there suggested for the relief of human suffering;—one only shall claim our attention: it is *Electricity as a remedial agent.* It was soon after the very interesting experiments of Drs. Franklin, Lovett, Hoadly, and others, were published, that Mr. Wesley collected together the sum of what had been written on this subject, and published it with this title: "Desideratum: or Electricity made plain and useful. By a lover of mankind and common sense." His opinion of its efficacy is thus expressed:

"Indeed there cannot be in nature any such thing as an absolute panacea—a medicine that will cure every disease incident to the human body. If there could, Electricity would bid fairer to do it than any thing in the world; as it takes place in such a vast number of disorders, some of them so widely different from the others."

On the 20th of February, 1753, there is the following statement in his journal. "I advised one who had been troubled many years with a stubborn paralytic disorder, to try a new remedy. Accordingly she was electrified, and found immediate help. By the same means I have known two persons cured of an inveterate pain in the stomach; and another of a pain in his side, which he he had had ever since he was a child. Nevertheless who can wonder that many gentlemen of the faculty, as well as their good friends the apothecaries, decry a medicine so shockingly cheap and easy." In perfect accordance with this, on the 9th Nov. 1756, I find the following: "Having procured an apparatus on purpose, I ordered several persons to be electrified, who were ill of various disorders; some of whom found an immediate, some a gradual cure. From this time I appointed, first, some hours in every week, and afterwards, an hour in every day, wherein any that desired it might try the virtue of this surprising medicine. Two or three years after, our patients were so numerous that we were obliged to divide them. So part were electrified in Southwark, part at the Foundry, others near St. Paul's, and the rest near the seven dials. The same method we have taken ever since; and to this day, while hundreds, perhaps thousands, have received unspeakable good, I have not known one man, woman, or child who has received any hurt thereby: so that when I hear any talk of the danger of being electrified, (especially if they are medical men who talk so,) I cannot but impute it to a great want either of sense or honesty."

As the work to which I have alluded is entirely out of print, I beg leave to make the following quotations from its preface:

"And yet there is something peculiarly unaccountable with regard to its operation. In some cases where there was no hope of help, it will succeed beyond all expectation; in others where we had the greatest hope, it will have no effect at all. Again, in some experiments, it helps at the very first, and promises a speedy cure; but presently the good effect ceases, and the patient is as he was before. On the contrary, in others it has no effect at first; it does no good; perhaps seems to do hurt. Yet all this time it is striking at the root of the disorder, which in a while it totally removes Frequent instances of the former we have in paralytic, of the latter in rheumatic cases.

"But still one may, upon the whole, pronounce it the *Desideratum.* The general and rarely failing remedy in nervous cases of every kind (palsies excepted) as well as in many others. Perhaps if the nerves are really perforated (as is now generally supposed) the electric ether is the only fluid in the universe which is fine enough to move through them. And what if the nervous juice itself be a fluid of this kind? f so, it is no wonder that it has always eluded the search of the most accurate naturalists.

"Be this as it may, Mr. Lovett is of opinion, 'the electrical method of treating disorders cannot be expected to arrive at any considerable degree of perfection, till administered and applied by the gentlemen of the faculty.' Nay, then *quanta de spe decidi!* All my hopes are at an end For when will it be administered and applied by them? truly *ad Græcis Calendis.* [Never.]

"Therefore, without waiting for what probably never will be, and what indeed we have no reason to expect, let men of sense

do the best they can for themselves, as well as for their poor, sick, helpless neighbors. How many may they relieve from racking pain or pining sickness, by this unexpensive and speedy remedy! restoring them to ease, health, strength, generally in a few minutes, frequently in a moment! And if a few of these lovers of mankind, who have some little knowledge of the animal economy would only be diligent in making experiments, and setting down the more remarkable of them, in order to communicate them one to another, that each might profit by the others' labor, I doubt not but more nervous disorders would be cured in one year, by this single remedy, than the whole English MATERIA MEDICA will cure by the end of the century."

The above testimony is valuable not only because of the source from whence it comes, but because it is confirmed by recent experiments, and is entirely disinterested: as such it is commended to the attention of the public. R.

Newark, N. J., March 1, 1845.

DR. SHERWOOD:

Sir—For more than a year past, I have been in the constant use, in my practice, of the Electro-Magnetic Machine, and I must acknowledge it has more than met my expectations in its effects. It exerts a most surprising influence in reducing inflammations, soreness and pains. It seems ts exhilarate the nerves, excite the absorbents, dissolve and remove obstructions in many instances in an extraordinary manner.

I applied it to an elderly gentleman who had a large tumor on the lower point of the sternum, of some thirty years standing. It caused it to suppurate in a few days, and entirely removed it. I applied it to a Mr. L. for a tumor on the side of the neck, of some ten years standing, and in a few weeks it caused suppuration, and completely cured it.

I have given permanent relief to several cases of Tic Douloureux, and restored the senses of hearing and smelling. In one or two cases of mucous diseases the effect has been astonishing.

I have recently applied it with wonderful effect in a very severe case of hip disease, using also your Electro-Magnetic pill at the same time.

I have just relieved two severe cases of St. Vitus' dance; and I might multiply the cases, but this must answer for the present.

As ever,

L. D. FLEMING.

MAGNETIC MISCELLANY.

In magnetizing a boy aged 12 years on the 23d of March inst., with recent paralysis of the *left* arm, tongue and face, and tetanic rigidity of the muscles of the neck, &c., we placed the positive button in his *left* hand, and the negative button in our *left* hand, while we made passes with the right hand over the face during four or five minutes. In about five minutes from the time we finished the operation, our *left* arm began to *ache*,* and the intensity of this sensation increased so rapidly as to completely paralyze the arm in one minute, and in about two minutes it was so great as to be insupportable. A sinking sensation began to pervade the system, when we called for assistance, and had the negative button quickly placed in the left hand, and the positive on the neck, under the full power of our largest machine. We soon felt a pleasant sensation from the action of the instrument—the horrible aching sensation began to give way, and in about five minutes it had ceased very nearly, and the motion of the arm restored. In this case the disease in the left arm of the boy was conducted to our left arm by the current from the positive button in an opposite direction from the current which was at the same time moving from the negative to the positive button.

This manner of magnetizing is a very pleasant one for patients, but sometimes, as we have how learnt, a very dangerous one for magnetizers.†

The most severe cholic pains are reduced with great rapidity by the action of the machines, as we are informed by several physicians. Two cases of recent dropsy—one from chronic serosis or tubercular disease of the heart and muscles, and the other from chronic serosis of the liver and right kidney, have, we are also informed, been promptly removed by the action of these instruments.

Asthma's which have long defied every

* ACHEING is the sensation produced by the prevalence of the positive over the negative force and PAIN the sensation produced by the prevalence of the negative over the positive force.

† We have taken disease in mesmerizing patients, and in each case it was the exact counterpart of the disease with which the patients were affected.

other remedy, have readily yielded to the action of these machines. In these cases patients should be magnetized as in Bronchitis.

The importance of a scientific application of the buttons may be seen in the fact that many cases of disease which resisted an empirical manner of magnetizing, have yielded readily to a scientific application of the buttons.

Dr. Cox, of Williamsburg, N. Y., has cured a bad case of white swelling of the knee,with the Savage Rotary Machine alone.

Dr. Baker, of Brooklyn, New York, has brought a child about two years old to life, and saved it with one of these machines, after it had been apparently dead ten or fifteen minutes.

Dr. —— brought a child to life under similar circumstances. It breathed a few minutes, but in consequence of some difficulty in running the machine, the child was lost. On learning these circumstances, we determined, if possible, to have a machine which should not be subject to such accidents, and we have succeeded in the Vibrating Machine with the assistance of the ingenious Mr. Cornell, of the Magnetic Telegraph.*

Salt Rheum. The worst cases of this disease are quickly cured by the action of the machine. Dilute Sulphuric acid is the remedy to use at the same time. One drop of the acid to ninety of alcohol—magnetize. Dose three to five drops two or three times a day, in a wine glass of water.

Dr. Milspaugh, of Orange county, N. Y., has cured a case of Amaurosis with the Savage Rotary Machine.

There are some cases of rheumatism in which pain in a limb or other part of the system commences or is increased on becoming warm in bed at night. In these cases the Tincture Rhus Toxicodendron† is the remedy which should be used in conjunction with the action of the machine. Dose 1 to 3 drops in a wine glass of water, three times a day, according to the age and condition of the patient.

* Impostors are already engaged in attempts to impose on the public miserable imitations of these machines.

† Weismann & Cassebeer, German Apothecaries, New York.

Bilious Fevers.—A number of physicians of this city and country, have reduced violent paroxysms of fever with these instruments, in from five to ten minutes. The excessive action of the instrument on persons in health, produces fever.

The blood is dark colored in fevers and in acute and chronic diseases, and becomes more florid under the action of the instrument.

In the Vibrating Magnetic Machines, the circuit of the forces is broken so fast as to make their motions continuous, without variation of intensity except by the action of the piston, and they consequently accumulate in the system with great rapidity.

In from five to ten minutes from the time we commence magetizing patients, the pores of the skin are generally opened by the action of these forces, and they begin to perspire. It is commonly only necessary for patients to hold the buttons in the hands, under a moderate power of the instrument, to obtain these results.

Nothing can be compared to the curative action of these machines in acute diseases, or in inflammations. The Lancet, Calomel, and Blue Pill, which entail diseases on millions of the human race every year, may now be laid aside with perfect safety to patients, and abiding benefit to their posterity.

Some physicians think these instruments are of greater importance in acute diseases than in those that are chronic, from the great rapidity of the cures in such cases. They should, however, never forget the fact, that chronic diseases are slow in their progress, and consequently necessarily so in the cure.

Ulcerated Ears.—℞. Jamaica spirits, a wine glass. Honey, a tea-spoon full. Mix, and introduce a little into the ulcerated ear morning and evening, with a feather:—[Dr. Van Buren.

Rheumatism.—The nitrate of potash (salt petre) is far superior to the hydriodate or iodide of potash in rheumatism or tubercular disease of the muscles, as well as in other scrofulous affections, or tubercular disease of other parts of the system. Yet physicans will prescribe the hydriodate until it goes out of fashion.

THE DISSECTOR.

VOL. II. JULY, 1845. NO. III.

FALLACIES OF THE FACULTY.

Lectures delivered at the Egyptian Hall, Piccadilly. London, 1840

BY S. DIXON, M. D.

LECTURE VI.

Present State of Medical Practice in England.

Dyspepsia—Hysteria and Hypochondria—Insanity—effect of Ligatures—Faint—Congestion, its nature—Infantile Convulsions.

GENTLEMEN:

After a long intercourse with the world, and a rigid examination of what, in his day, was called its wisdom, the great Lord Bacon, musing doubtless over his own philosophical discoveries, thus writes:—"It is a view of delight to stand or walk upon the shore-side, and to see a ship tossed with tempest upon the sea, or to be in a fortified town, and to see two battles join upon a plain; but it is a pleasure incomparable, for the mind of man to be settled, landed, and fortified in the certainty of truth; and from thence to descry and behold the errors, perturbations, labours, and wanderings up and down of other men." But, Gentlemen, however exciting this kind of pleasure be to him, who should be content with merely making a discovery to himself—the making of it public has its drawbacks; for "whoever," in the words of Johnson, "considers the revolutions and the various questions of greater or less importance, upon which wit and reason have exercised their power, must lament the unsuccessfulness of inquiry, and the slow advances of truth, when he reflects that great part of the labor of every writer, is only the destruction of those that went before him. The first care of the builder of a NEW SYSTEM, is to demolish the fabrics that are standing." But how can you brush away the cobwebs of ages from the windows of truth, without rousing the reptiles and insects that so long rejoiced in the darkness and secrecy these cobwebs afforded—the bats and spiders, to whom the daylight is death! Truth, like a torch, does two things; for not only does it open up to mankind a path to escape from the thorns and briars which surround them; but breaking upon a long night of ignorance, it betrays to the eyes of the newly awakened sleeper, the bandits and brigands who have been taking advantage of its darkness to rob and plunder him. What has Truth to expect from these?—What, but to be whispered away by the breath of calumny, to be scouted and lied down by the knaves and fools, whom interest or intercourse has leagued with the public robber as his partizans. Who will talk to me of conciliation? Who will tell me that mild and moderate measures ever brought over such implacable enemies to the ranks of their destroyer; or that robbers rioting in the spoils of their victim, will listen to the voice of the charmer, charm he never so wisely? Surely people must be out of their senses, who imagine that any exposition of Truth will be acceptable to men whose emoluments are chiefly derived from a course of studied and systematic mystification—Professors, who lure the student by every possible promise to their schools, and, when once in their net, keep him there by every possible artifice and pretext which collusion and corruption can devise! one day entangling him in a web of unmeaning sophistry—another, stimulating him to waste his time and labor in splitting straws, or in magnifying hairs—now encouraging him in a butterfly chase after shadows—now engaging him in a wordy and worthless disputation with his fellows! Gentlemen, I appeal to you, if this is not the mode in which, in most cases, from four to six years of the best part of a young man's existence are passed in our medical schools—passed in the fruitless endeavor to know a profession, upon the exercise of which he is too often compelled to enter with no other pretensions to a knowledge of its principles than the trumpery certificates and diplomas *for* which he has been duped and deluded.

How is that student to be repaid the capital of time and money he has expended upon what he calls his education? How, but by deluding and mystifying in his turn the suffering sick who apply to him for relief. For relief?—Vain hope! Look at the numbers of persons who live, or try to live by physic,—doctors, surgeons, apothecaries, druggists, cuppers, nurses—and ask yourselves how even one tithe of these can do so, but by alternately playing upon the passions and prejudices,—the hopes, fears, and ignorance of the public? in one case inflicting visits too numerous to be necessary; in another, employing draughts, mixtures, or measures, too expensive, too frequently and too fruitlessly repeated, to be all for the benefit of the patient! Think you, that the members of the medical profession are different in their feelings from every other human being—that their minds are so constituted, that, under the most terrible temptations, they can so far set at defiance the stern law of necessity, as in their present crowded and starving state, receive with open arms a system that threatens so many of their order with ruin? Is it in the nature of things that they will welcome a practical improvement, by which the practitioner may, in a few hours, cut short cases and chances, which, by daily visitations, or by three draughts a-day, might be profitably protracted to a month, if the system on which it is based were only advocated in calm, mellifluous, and complimentary language! As soon may you expect a needy attorney to be prevailed upon by his client's tears to cut short a chancery suit; or the master of a sailing-smack to listen patiently to the praises of steam; or a coach-proprietor to admit the safety and superiority of railroad over coach conveyance, when estimating each the losses they shall respectively sustain by the too general use of the superior motive power. What, though the present condition of medical practice be less the crime of the profession, than the fault of the legislature, that permits men clothed with collegiate authority,—professors enjoying the sanction of its protection,—annually to lure, by misrepresentation and lying promises, thousands of credulous and unsuspecting youths into a path strewed, even in the very best of times, with thorns and briars innumerable? Better far that one half of these should at once abandon a walk of life, where the competition is so keen and close, that comparatively few in the present day can live honestly by means of it,—than, that they should hereafter have to eat their precarious bread, at the daily and hourly sacrifice of their own honor, and their patients' interests. Who will tell me half-measures can be of any avail, under circumstances like these? Gentlemen, in corrupt and difficult times, half-measures, so far from succeeding, have either been taken as a sign of weakness in the cause, or as a symptom of timidity on the part of the advocate. Away then, with half-measures!—away with the idea of conciliating men, the already rotten tree of whose sustenance you sap—the long-cemented system, whose existence depends, not on a virtuous adherence to nature and truth, but upon a collusive and fraudulent perversion of both! When persons little versant with the present state of medical affairs, see men of established name supporting a system of dishonesty and error, they too often doubt the light of their own reason. "Would Dr. So-and-So," they ask, "and Mr. Such-a-One, hold this language, if they did not themselves believe it—men so respectable, and so amiable in private life?" But tell these simpletons, that Dr. So-and-So's Bread depends upon his Belief—that Mr. Such-a-one's family would wither with his fading fortunes, if the father, in the language of Hazlitt, "ceased to support that which he had so long supported, and which supported him"—and you bring an argument which, though not quite convincing in itself, will at least compel a closer investigation of the system it is your wish to expose and crush. Gentlemen, I have been blamed for the tone and spirit in which I have spoken of my adversaries—I have been asked why assail their motives—why not keep yourself to their errors? But in this particular instance I have been only the humble imitator of a great master—a man whose name will at once call up every sentiment of veneration—the indomitable Luther. *Magnis componere parva*, I have followed in his wake—I hope soon to add *passibus æquis*. Think you, the Reformation of the Church could have progressed with the same rapidity, had its most forward champion been honey-mouthed—had his lip been all smiles, and his language all politeness—or had he been content, in pointless and unimpassioned periods, to direct attention solely to the doctrinal errors of Rome? No—he thundered, he denounced, he heaped invective upon invective, and dealt in every form of language which could tell best against his enemies, whether in exposure or attack. Too wise to leave them the moral influence of a presumed integrity, which they were far from meriting, he courageously tore away the cloak of sanctity and sincerity with which, in the eyes of the vulgar, they had been too long invested. Had he done otherwise, he might have obtained the *posthumous* praise of moderation, at the price of defeat and the stake.

Gentlemen, let it not for a moment be supposed that in thus sweepingly arraigning the present system of medical polity, I can have the remotest wish to degrade the profession of the physician. On the contrary, it has been my endeavor throughout to improve his *morale*, and to elevate his condition,—to render him a useful, honorable, and honored person,—to make him what neither the mere lawyer, nor the mere churchman can possibly be—a student of nature, and an intellectual expounder of his Maker's works; one from whose ranks kings may still, as they once did, choose their counsellors. And how can this be done but by rescuing the art of medicine from the hands of the miserable creatures who at this moment principally usurp its practice? Nor do I for an instant wish to insinuate that among the individual members of the profession, there are not numerous exceptions to the line of conduct pursued by these creatures. In every one of its grades and conditions,—apothecary, surgeon, and physician,—I have had the pleasure to meet practitioners who not only heartily join me in deploring the present shameful state of practice, but who aid me with their best efforts to expose and correct it. One and all of these honorable persons acknowledge that unless some great and speedy change in the mode of educating and remunerating medical men be introduced by the legislature, Medicine must shortly cease to be regarded in the light of a liberal profession; for as things now stand, the only sure path to lucrative popularity in physic is a complete sacrifice of conscience and principle on the part of the physician. How often have I been told, in my own case, that by courting the apothecary, and offering up incense at the false shrine of the professors, I might easily and cheaply obtain the bubble reputation, to be blown me by their breath: while by exposing the intrigues of the schools, and the collusions and corruptions of the professional world, not only do I stand as one man to a host, but I lay myself open to the secret stabs of a thousand unseen assassins. To tempters of that sort this has been my answer;—let it be yours also—

> Slave! I have put my life upon a cast,
> And I will stand the hazard of the die.

That hazard now, thank Heaven is small—for the daily increasing number of upright and honorable practitioners who espouse my views, place me already sufficiently far above the reach of my enemies, to enable me to despise them thoroughly; and at this moment I feel as secure of victory, as at one period of my life, I feared defeat! As yet, I have only assailed the System—carefully avoiding individual attack. True, I have repelled the attacks of others, somewhat strongly too; but that was all in self-defence. If, in tearing away the veil of iniquity, I have not altogether remained unscathed, I have, at least, the satisfaction to know, that my enemies have done every thing but laugh at the blows I dealt them. If it be said I have used language too strong for the occasion, I answer in the words of Burke: "When ignorance and corruption have usurped the Professor's chair, and placed themselves in the seats of science and virtue, it is high time to speak out. We know that the doctrines of folly are of great use to the professors of vice.—We know that it is one of the signs of a corrupt and degenerate age, and one of the means of insuring its further corruption and degeneracy, to give lenient epithets to corruptions and crimes." What reformer has not been called a "violent person!"—none that I ever heard of. Now, Gentlemen, to the more orthodox matter of this lecture.

We have hitherto spoken of the Brain as a unity—yet this organ is divided into two hemispheres. Like the features of the face it is two-fold. We have two eyebrows, two eyes, two nostrils, two ears, and in the early fœtal state, the mouth and chin are separated in the middle—you have the marks of this original separation in the infant,—I may almost say in the adult: Now though a man may lose one eye, he is not therefore blind; or, though he lose the hearing of one ear, he is not necessarily deaf. It is just possible that a small part of one of the hemispheres of the Brain may in like manner become diseased, and the subject of it shall appear to reason very fairly to the last. But that must be a shallow observer indeed, who from such a possible fact should draw the fictitious inference that even one hemisphere of the Brain may be disorganized throughout its entire substance, without the intellectual powers being at all disturbed! If you read of such facts, set them down as false facts. The Brain then, like the body, in some of its parts is double, yet like the body in its integrity, the Brain is a unity, and like the same body it also has a diversity of parts. That the scalpel has hitherto failed to trace any well-marked divisions betwixt the various cerebral portions to which phrenologists have ascribed variety of function, is no argument against this doctrine. Do not all the different parts of the frame merge into each other—the elbow into the arm, the arm into the hand, &c.? What more clearly a unity than the Hand?—Yet do we not frequently find from the weakness of one or more of its joints or muscles, inability

on the part of its possessor to do a particular work, though he may still accomplish many others by means of it.—It is the same thing with the head. Partial disease of the Brain produces partial intellectual injury, and you see the effects of such injury in those persons who reason rightly upon every subject but one,—monomaniacs as they are called. Oh! I want no better proof of diversity of parts in the Brain than this. Like every other organ, the Brain of man commences its fœtal existence in the lowest type of the same organ of those animals that possess a brain—gradually assuming by additions and superadditions, the form of the infant Brain. In some instances, as in the case of other organs of the body, one or more of the superadditions are never properly developed. The result you can anticipate. Idiocy, according to the degree of the defect; and yet there are medical twaddlers who say the Brain is not the organ of intellect! This much I have thought it right to premise before entering upon the subject of

Dyspepsia, or Indigestion;

for to the state of the Brain and nervous system we shall have to ascribe the disease. When treating of Pulmonary Consumption, at a former meeting, I explained to you, that no individual could possibly suffer from any complaint whatever, without his digestion being more or less implicated. The patient who labors under any severe form of disease, such as Gout, Consumption, or Erysipelas, has all the symptoms or shades of symptom, that medical men group together under the head of Indigestion; but the gravity, prominence, or locality of the superadded symptoms, which may dispose the physician to term the disease Consumption, Erysipelas, or Gout, may also dispose him to overlook, or esteem as insignificant, the coincident errors and disorders of the digestive apparatus. In the lower and more subdued forms of Fever, the patient very often has no particular tendency to decomposition in any organ or locality, but from every function being more or less wrong, he very naturally turns his attention to his stomach or bowels, the errors of which come more particularly under the immediate cognizance of his feelings. Such a patient will complain to you of flatulence and acidity, or of that distressing symptom termed "water brash." If you ask him about his appetite, he will tell you it is "so-so," or "he cares nothing about eating," or it is positively "excellent"— which last, I need scarcely tell you, means that it is morbidly craving. Ten to one, it is capricious,—the patient now wishing for this, and now for the other, and rejecting what he desired most, the moment it comes before him. Perhaps he has thirst. He is wearied upon the least exertion; has little inclination to get up in the morning, and when he does get up, he is indolent, and dawdles his time away. He is apathetic in mind as he is indolent in body; and he has often a great disposition to sleep, especially after meals. Others again will just be quite the reverse of all this; these perpetually harp upon some particular topic—fidget themselves and every body else about trifles, and look always at the dark side of life. Some fly in a passion for nothing, or upon the least contradiction, and in a few minutes after the gust of passion has passed away, they lament their mental weakness. Their nights are either sleepless or broken and disturbed by unpleasant dreams. One moment they dream of robbers, from whom they cannot escape; or they are on the eve of tumbling down a precipice; dreaming sometimes within a dream—asking themselves, even in the very act of dreaming, whether they dream or not—and they will satisfy themselves by a process of unreason, that they are actually awake and walk the air. Even during the day many of these patients have their dreams or reveries—pleasurable sometimes, but more often the reverse;—they see things either as if "through a glass darkly"—or their perceptions are all exaggerated and unnatural. Phantoms may even pass before them at mid-day, phantoms such as they see in their dreams of the night. The very colors of things may be altered to their eyes—red appearing to them green, and vice versa. Even the shapes and dimensions of bodies may be quite changed to their sight—though the greater number have sufficient judgment remaining, to know this to be an optical delusion merely. John Hunter had the sensation that his own body was reduced to the size of a pigmy!—I have met with some patients who have even at times doubted their own existence.—Light and shade have wonderful effects upon most invalids of this class. One is perfectly miserable, except when he is in the sunshine—another cannot bear the light at all. Ringing in the ears, or partial deafness, is a common complaint of dyspeptic persons. Some can only hear distinctly during the noise of passing carriages, or in the hum of a city, or of falling waters; while others hear so acutely, that they complain of the ticking of the clock. The sense of touch is very often similarly vitiated; one patient having partial or general numbness,—another, his feelings so sensitive, that he shrinks with pain if you merely touch him. Occasional-

ly, though more rarely, you have examples of a reverse kind; the patient in that case will say—"Oh, do not take your hand away the pressure does me good—it acts like magnetism.

All kinds of aches are complained of by dyspeptic patients—headache perhaps most frequently,— headache, for which, on the hypothetical assumption of fulness of blood in the brain, the leech, lancet, and cupping-glass are so frequently in requisition. But to what end? In the words of Abernethy, supposing such assumption to be correct—"Does blood-letting cure diseases in which there is a fulness of blood in the head? It must be granted, that in many instances, it temporarily alleviates them, but in others, it fails to relieve, and even aggravates them."—What are those headaches, those night and day dreams, all those various signs and sensations, but the effects of a great instability of Brain, now brought on by one thing, now by another? I have known the most severe and distressing headaches arise from loss of blood, and I have known them originate in a long fast. Surely for such diseases, the leech and the lancet are not the proper remedies. But, Gentlemen, there are many other ways by which the brain may be weakened. You may as certainly exhaust it by prolonged literary or other mental labor, as by starvation or loss of blood; for there are times to think, and times to cease thinking: and if the brain be eternally harassed by an over anxiety in any of the pursuits of life; if it be always at work on one subject, not only will there be headache or confusion of head, but the constitution must be injured. How can this organ painfully revolve again and again the occurrences of the external world, and give the proper attention to the internal economy, over which it presides? When you listen to an orator or a preacher whose discourse powerfully affects you, the brain becomes so engaged, that it cannot at the same time attend to the breathing—and you are, therefore, compelled ever and anon to draw a long breath—you must take a deep sigh, to make up for the ordinary succession of short inspirations and expirations, which constitute the natural art of breathing. Now, Gentlemen, if the function of the lungs be so easily disturbed in this way, can you doubt that the heart, stomach, bowels, and other parts, may be similarly influenced? What are the complaints of men who have much on their minds, of bankers, merchants, and great lawyers?—what the diseases of aged persons—persons whose brains become weaker and weaker by the slow but certain operation of time? Do not these patients constantly complain of their stomachs and bowels? Do not many of them suffer from palpitations of the heart,—from giddiness and sensations like fainting, with a fear of falling? Now, Gentlemen, this giddy sensation, this disposition to fall, is most commonly felt upon suddenly raising the head, or in rising from a chair. What surer sign of cerebral weakness? Yet, not long since, two gentlemen each upwards of seventy, informed me, they had been bled and leeched by their respective apothecaries for this disease of pure cerebral exhaustion. Bless my life, you may bleed or purge a healthy man into this state any day!

In these diseases, one patient will tell you he is troubled by a feeling of sinking and pain of stomach, which is only relieved by eating. Another suffers from spasm, and pain of the heart or stomach, with acidity or flatulence, the moment he begins to eat; and in either of these cases the pain may sometimes become so violent, that if it did not soon go off, the patient must die. Now, this kind of spasm, whether affecting the stomach or heart, is a disease, for which you are expected to give immediate relief, and nothing will do so more readily than a glass of hot water—water as hot as the patient can possibly drink it. This point of practice we owe to John Hunter, who having frequently suffered from spasm of the stomach, tried every thing he could think of, and among others hot water. The ease which this gave him, led him to extend its use to his dyspeptic patients; and my own experience of its virtues, enables me to bear him out in the encomiums he has passed upon it. To this simple means, palpitations, spasms, head-aches, wind and acidity, will all sometimes yield as to a charm. Is not this another instance in proof, how mere change of temperature acts on the body under disease? Now, as hydrocyanic acid very frequently gives the same immediate relief in every one of these affections, we at once see that its medicinal power must depend upon the change of temperature which it electrically produces. Of the various cordials to which you may have recourse for spasmodic pain of the heart or stomach, there is none so good as noyeau, and the virtue of this "strong water" depends very much upon the prussic acid it contains. Of all the remedies with which I am acquainted there is none equal to this acid, in convulsions and spasms of every kind. But spasms of the stomach and heart are not the only ones of which dyspeptic patients complain. Some are troubled with a sense of tension of the brain—others with a tightness of the throat or chest, and some, partic-

ularly females, suffer from a spasmodic affection of the gullet, which gives them a feeling as if they had a ball there. Others are subject to stitch or pain of the side, produced by cramp of the muscles of the ribs. How correctly Shakespeare described the nature of these pains, when he made Prospero say to Caliban in the Tempest,

> For this be sure, to-night thou shalt have Cramps,
> Side-stitches, that shall pen thy breath up!

The common practice in these cases is to say, "draw your breath," and if you cannot do so for the pain, "inflammation" is the imaginary goblin of the doctor, and blood-letting in some of its forms the too ready remedy (?) to which he flies:—how vainly for the patient—how profitably for himself, truth must one day tell! To small doses of nitrate of silver, prussic acid, or quinine, such pains will often yield, after having resisted every form of depletion, with all the usual routine of blisters, black draught and blue pill to the bargain. The great error of both patient and practitioner, in dyspeptic cases, is to seize upon some of the most prominent features as the Cause of all the others. In one instance they will blame wind—in another acid. But as it happens, these, instead of being causes, are only the common and the coincident effects of a great cerebral weakness, and not the product, as many imagine, of fermentation of the food—they are morbid secretions from the lining membrane of the alimentary canal. And of this you may be assured, not only by the mode of their production, but by the manner of their cure, when that happens to be accomplished. Just watch a dyspeptic patient when he receives a sudden or unexpected visit; his "heart burn," as he calls his acidity, comes on in a moment, and his bowels commence tumbling and tossing about, and will often guggle so audibly as to make even the bystanders feel sorry for him—showing you clearly that this acidity, as well as the gases so suddenly extricated, are the effects of a weakened nervous system,—that they are, in a word, the common effects of wrong secretion. Now the term Secretion is so constantly associated in the mind of the student with the notion of a Liquid, that some of you may not all at once comprehend how gas can be secreted; but, Gentlemen, is not every tissue of the body the result of secretion?—are not the hair and the nails as certainly secreted as the saliva or the bile? Only place your naked arm for a few minutes under water, and you will find bubbles of air constantly forming upon it—such air being in that case actually secreted before your eyes by the glandular apparatus of the skin! Can you be at any difficulty now, to conceive how flatus is a secretion from the alimentary canal? If a doubt remain, you have only to debilitate the brain of an animal by bleeding him slowly, and his bowels will become full of flatus even to bursting. Then again, as regards the cure of dyspeptic patients, a drop or two of prussic acid, twice or thrice a-day for a week, or a short course or treatment by quinine, nitrate of silver, or alternations and combinations of these medicines, will often do away for months, and even years, with every symptom of wind and acidity—while cordials, alkalis and mild laxatives, seldom do more than give a temporary relief. Oh! I never saw much good done by that placebo mode of practice—nor is this at all to be wondered at, if you reflect, that every part of the constitution of a dyspeptic patient is more or less disordered. In every case of this kind there is an unnatural temperature of body; some patients complaining to you of chills or heats, or alternations of both in the back, stomach, hands, and feet, &c. In these cases the skin, partially or generally, is either more moist than in health, or it is harsh and dry—perspiring, if at all, with difficulty. In the latter case, some other secretion may be morbidly active. The urine or the bile may be in excess; or the natural fatty or watery deposit of the great cavities of the chest and abdomen, may be in superabundance. The looker-on may even have a false impression of the patient's case and condition from the increase of either in the minute cells of the investing membrane of all the cellular substance. Should such a patient complain of being ill, he is sure to be laughed at for his pains—for nobody has any sympathy with him—and this is one of the many cases in the world, where "appearances are deceitful."

The dyspeptic patient is either torpid, and with difficulty roused to exertion, whether corporeal or mental, or he is acted upon by every thing he hears. The last person that speaks to him is the man for him. His spirits are depressed by the merest trifle, and raised again by a straw or a feather. Then, as regards his actions or his promises, you can scarcely depend upon any thing he tells you. What he is dying to do to-day, he is miserable till he can again undo to-morrow; he spends his life betwixt acting and regretting;—hesitating, hoping and fearing by turns—one moment all confidence, the next all suspicion. Now, is not this one of the strongest of many striking proofs how much our mental workings are the effects of our material state—the result of our brain's con-

dition, and its atomic relations and revolutions? It is in perfect accordance with what we observe in all our corporeal motions. If the muscles be tremulous, can you wonder that the mind should be vacillating and capricious?—or when these are cramped and spasmodic, why should you be astonished to find a corresponding wrong-headedness, and pertinacious and perverse adherence to a wrong opinion?—*mens sana in corpore sano.* You may argue for hours to no purpose whatever with some patients;—for how can you expect the wrong brains of wrong bodies to reason rightly? These persons are like the inebriated, who see two candles when there is only one—their perceptions being false, so also must be their mode of reasoning. The plunge bath, or a short course of chrono-thermal treatment will make them alter their minds sooner than the most powerful and pursuasive arguments of a Cicero or Demosthenes.

Lady Mary Montague held the notion that the whole world hate more or less to be told the truth. She formed her opinion, doubtless, from observing how badly the Public had for the most part treated its best benefactors. From what I have seen of mankind myself I cannot help thinking of the ass that kicked the good-natured man, when trying to relieve it from the weight of its panniers! Never yet did I attempt to open the eyes of a person imposed upon, but he was sure to abuse me. The poet was therefore right when he said,

> The pleasure surely is as great,
> Of being cheated, as to cheat.

In all my experience, the more unscrupulous and unprincipled the imposter has been, the more certainly he appeared to fascinate his dupes All he had to do was to hold out an impossibility to them, and they were sure to dance attendance at his door for months. Taking advantage of a popular but puerile prejudice against Mineral medicine, the medical charlatan is very careful to prefix the word Vegetable to his nostrum; and this, he tells the public, is SAFE in every form, dose, and degree—which being in utter repugnance to every thing in nature, is greedily swallowed by the multitude as an undisputable truth! Can weight, measure, heat, cold, motion, rest, be so applied to the human body with impunity? Can you without injury cover yourselves with any weight of clothes, or swallow any measure of food? Or can you retain any part of the body in perpetual motion or repose without that part suffering? No, truly! responds the same dyspeptic, who believes that such and such a medicine is safe in every form, dose and degree! When treating patients of this class, it is better not to tell them what they are taking; but should they chance to find out that you have been giving them arsenic, prussic acid, or nitrate of silver, you will be sure to be worried to death by questions, dictated sometimes by their own timidity, and sometimes by the kind feeling of some "damned good natured friend" secretly set on by some equally damned good natured apothecary. Now, as these patients are for the most part great sticklers for authority, your only course is to tell the truth—which after all, in nine cases out of ten, will make no impression—and that is the reason why the quack and the subordinate practitioner who can keep their medicines secret, have an advantage over the honorable physician—an advantage so great, that in a few years, if matters do not take a turn, I doubt if one such will be found practising medicine at all. You may say then what, if it have no effect with patients themselves, will at least appear reasonable to their friends—that the medicines you ordered are all contained in the pharmacopeiæ of the three Colleges of Edinburgh, London and Dublin, and that they are therefore recognized as medicines of value by all physicians who have a character to make or a name to lose—that the dose in which you give them is perfectly safe, inasmuch as, if it disagree with their particular constitutions, it will only cause a short temporary inconvenience; and to sum up all, you may quote Shakspeare, who says, and says truly "In POISON there is PHYSIC."

And again:

> "Oh mickle is the powerful grace that lies,
> In herbs, plants, stones and their true qualities,
> Nor nought so vile that on the earth doth live,
> But to the earth some special good doth give;
> For aught so good but strained from that fair use,
> Revolts from true birth, stumbling on abuse.
> Virtue itself turns vice, being misapplied,
> And vice sometime's by action dignified,
> Within the infant rind of this small flower,
> POISON hath residence, and MEDICINE power!"

So that Poison and Physic—whether vegetable or mineral, are either Poison or Physic according as they are wrongly or rightly applied.

But to return to Dyspepsia, or that low Fever so termed In cases of this kind, my practice is to combine the chrono-thermal remedies with what you may call, if you please symptomatic medicines. For example, where flatulence is the most prominent symptom, I prescribe quinine, hydrocyanic acid, or nitrate of silver, with aniseed or cardemoms. In acidity, either of the two first remedies will often answer very well with soda or potash. Where the bowels are slow and torpid, rhubarb, aloes, or both are very good medicines with which to combine any of the

chrono-thermal medicines. In such cases purgative effervescing draughts are also useful. Should the patient complain of muscular or other pains, you may add colchicum or guiac, and so proceed in a similar manner with other symptomatic remedies for other local indications; keeping in mind, however that these symptomatic medicines are merely a means of secondary importance in the treatment of a great constitutional totality of derangement. In addition to these measures plasters to the back or stomach may be very beneficially resorted to in many cases of dyspepsia, and you may also run the changes upon various kinds of baths. The cold plunge and the shower bath are my favorites, though I need not tell you that the feelings of the patient, after he comes out of it, are a better guide to you in your choice and continuance of any bath than all the theories of all the doctors that ever wrote or reasoned upon disease and its treatment.—"How do you think me now, doctor?" is a question I am asked every day, and every day I give the same answer: "How do you feel?" If the patient is better, he says so; if worse, he will be sure to tell me he is not so well: and according to his answer do I change or continue his physic. Now, whether this be common sense or not, I leave you to judge. Heaven only knows it is not science, or what very learned people call science; for when the patient says he gets worse and worse every day, science generally tells him to continue his medicine, for that he has not taken enough of it, and that he will be worse before he be better, which I need not tell you is a lie, or more politely to speak, a piece of imposture.—Should the patient die, why, then, he dies a natural death, and he has had the first advice, for not only did Mr. So-and-so, the fashionable apothecary, attend him, but Dr. Such-a-one, the great physician, was also called in and he said all was right, and that nothing better could be done. Had the doctor said all was wrong, he might perhaps have been nearer the mark—but, in that case, what apothecary would either call him in again himself, or let him in again when requested, where he could by a little gentlemanly trickery keep him out! In my own particular case, the custom of the apothecary has been *secretly* to play upon the fears of the patient or his friend against "strong medicine," to shrug his shoulders and smile contemptuously. "Oh I can tell you something of Dr. Dickson," he has said "but you must not give up me as the author: whereupon he has proceeded to lie Dr. Dickson's life away; and when he had thus, to his own thinking, sufficiently poisoned the ear of his patient, he has turned round in this manner to him—"But if you still want a second opinion, why do you not call in Dr. This, or Sir Thingumy T'other, they are leading men, you know!" Now that only means, that the physicians in question are the fashionable puppets whom he and all people like him, call in to conceal their bad work—men, who would as soon think of differing with the opinion of their supposed subordinates but real patrons, as of quarrelling with their breakfast, because it was purchased with the shilling of a dead man's guinea!

What a just observation was that of the author of Lacon. "The rich patient cures the poor physician much more often than the poor physician the rich patient: and it is rather paradoxical, that the rapid recovery of the one usually depends upon the procrastinated disorder of the other. Some persons will tell you with an air of the miraculous, that they recovered although they were given over, when they might with more reason have said, they recovered because they were given over." But in very truth "the great success of quacks in England has been altogether owing to the real quackery of the regular physicians." What does that mean? Just this, that the morality of many legalized practitioners even of the highest grade, is not one remove above that of the Morisons and St. John Longs, whose dishonest practices they are so constantly decrying! Now, this you will say, is a startling statement, and much will doubtless depend upon the character of the person making it, whether you treat it with a laugh of contempt or listen to it with something like respectful attention. Gentlemen, the man who deliberately put that on paper, (and I quote him to the letter) was no less a person than Adam Smith, the author of the Wealth of Nations! If such, then, was the certain and settled conviction of that very keen-sighted observer of mankind, will any assertion, any asseveration on the part of individuals interested in declaring the contrary, weigh with you one straw against the evidence of your own senses, when you choose to examine this matter fairly and fully for yourselves? So far as my own experience goes—that is, from what I have seen of the profession in London and the English country towns, eminence in medicine is less a test of talent and integrity than a just reason of suspecting the person who has attained to it, of a complete contempt for both! I say suspecting, for I have met with exceptions, but not many, to the rule. Could you only see as I have seen, the farce of a medical consultation, I think you would agree

with me, that the impersonation of Physic, like the picture of Garrick, might be best painted with comedy on one side and tragedy on the other. In saying this much, not only have I acted against everything like medical etiquette—but I shall be sure to be roundly abused by the medical profession for it. The truth, however, I maintain it to be—but not the whole truth; for the world must have its eyes a little more open before it can believe all I happen to know upon the subject. By and bye I shall tell the English people something will make their ears tingle!

To return to the consideration of Disease. You now see that in all the cases of which we have been speaking, the constitution is for the most part primarily at fault, and that the names of disorders depend very much upon the greater or less prominence of some particular symptoms—which symptoms, or their shades, may be readily detected in all diseases. With every case of Dyspepsia, depression of spirits, and more or less mental caprice, with hasty or erroneous notions upon one or more points, will be found to be associated. When such depression amounts to despondency, medical men, according to the sex of the patient, change the word DYSPEPSIA into

HYPOCHONDRIA, OR HYSTERIA:

and some professors are very particular in their directions how to distinguish the one from the other! Gentlemen, what is the meaning of Hysteria? It is a corruption of the Greek word (*Hystera*) the *womb;* and it was a name given by the ancients to the particular symptom we are now considering, from a hypothetical idea that in such cases the womb was the principal organ at fault. From the same language we also derive Hypochondria, a compound word formed of (Hypo) under, and (Chondros) cartilage, from the supposed seat of the disease, being the liver or stomach; for both of these organs, as you know, are situated under the cartilaginous portions of the lower ribs. So that when a female suffers from low spirits and despondency, with occasional involuntary fits of laughing, crying sobbing, or shrieking, you must call her state hysteria; and when a male is similarly affected, you must say he has hypochondria. Now it so happens, that medical men sometimes pronounce even their male patients to be hysterical! And this brings me in mind of an honest Quaker of the profession, who being very ill, had three doctors to attend him—Mr. Abernethy, Dr Blundell, and a physician whose name I now forget. Each of these had his own notion of the disease; Mr. Abernethy of course said, it was all owing to the state of the "digestive organs." Dr.- ——, being a stethoscope man, maintained that the "heart" was affected, and Dr. Blundell, in the true spirit of a man midwife, declared that their patient was only "hysterical." Now the patient, though a Quaker, was a humourist; so he ordered in his will, that when his body should be opened after his death, his digestive organs should be presented to Mr. Abernethy, his heart to Dr.———, and to Dr. Blundell his womb, if he could find one! Gentlemen, that the brain is the principal organ implicated in all disorders, which come within the physician's province, more especially in such as are termed hysteria or hypochondria, the smallest reflection will convince you. Suppose a person of either sex had been accidently debilitated by loss of blood—a person who previously was strong in nerve as in muscular fibre; suppose a letter comes with a piece of bad news—the patient in that case bursts into tears, laughs and cries time about, and then sinks into a state of dismal and gloomy despondency.—And all this, forsooth, you must put down to the state of the womb or digestive apparatus, according to the sex of the patient, instead of placing it to the account of the brain and nerves, without which the ill-timed letter, the cause of all, could not, by any possibility, have affected the mind in the least! Another class of practitioners, scarcely less unreasonable than those to whom we have just alluded, will have it, that patients coming under the head of hysteria and hypochondria, are not ill at all.—"Oh! there is nothing the matter with this man:" they will say, "he is only hipped!" and if the female, "she is only hysterical." Dr. Radcliffe, when he refused to come to Queen Anne, declared he would not stir a foot "for there was nothing the matter with her but the Vapours!" Such was the term by which the doctors of that day characterized the shifting shades of symptom now called Hysteria. Gentlemen, do I require to tell you that no man or woman suffers from melancholy, or indulges in whims and fantasies, without being positively ill. Whoever labors under mental delusion or despondency, has alternate chills and heats; and remissions and exacerbations of all the more prominent symptoms characterize the disorder in every form. The late Lord Dudley, in a letter to the Bishop of Landaff, relates his own case, and it is so like what you will daily meet in practice, that I shall give it to you in his own words:—"It is in vain," he says, "that my reason tells me that the view I take of any unpleasant circumstances in my situation is exaggerated. Anxiety, regret for the past, apprehensive uneasiness

as to my future life, have seized upon me as their prey. I dread solitude; for society I am unfit; and every error of which I have been guilty in life stands constantly before my eyes. I am ashamed of what I feel when I recollect how much prosperity I still enjoy, but it seems as if I had been suddenly transplanted into some horrible region beyond the bounds of reason or of comfort; now and then I enjoy a few hours respite, (the remission ?) but this is my general condition. It is a dismal contrast: for you will remember that I was naturally gay and cheerful." Now, although Lord Dudley recovered perfectly from this particular attack, his disease, at a later period of his life, returned; but this time he was less fortunate, for the symptoms of his disorder gradually deepened in their hue, until they amounted to the most complete

INSANITY,—

a proof to you that the hypochondriac whim, and the hysteric fancy, differ from hallucination and mania, in shade merely, and the chills and heats which precede or accompany them, from the cold and hot stages of the most intense fever, in nothing but degree. Has not the maniac, in every form of his delusion, lucid intervals—remissions? Your schoolmen, your "pathologists," your profound medical reasoners, speak of madness and other diseases, as if they were the effects of some fixed cerebral malformation, instead of being the consequences of external influences acting on an atomic instability of brain. They tell you they are curable or not, according to the CAUSE;—they look in the dead body, for the causes of an intermittent living action, for the origin of hypochondria and mania,—diseases which they have even themselves, perhaps, traced to hard study or a passion! External agencies, then, were the real causes, not the structural deviations detected within after death by the scalpel. Students of medicine! young men honorably ardent in the pursuit of knowledge, for the sake of your profession and your future patients, learn to think for yourselves. Pause, examine, weigh, before you give a slavish assent to the dicta of your teachers. When these tell you that madness with a lucid interval is an inflammatory essence, or that it depends upon some cerebral malformation or tumour, ask them how they reconcile days or even hours of sanity and sense with a cerebral structure thus partially, but permanently malformed or disorganized! That medical men, mystified from boyhood by their teachers, should fall into such errors, is not so astonishing as that the leaders in our periodical literature should be equally unfortunate. What, for example, can be more egregiously absurd than an observation the reviewer of Lord Dudley's letters in the Quarterly Review has allowed to escape from his pen! "The gifts of fortune and intellect," says this writer, "were counterbalanced by an organic malformation of the brain" How can intellectual power even for one moment be compatible with a defective cerebral organization? How can the cause of an intermittent disease be a corporeal entity, or something permanently fixed? Let no sounding words, no senseless sophistry, cheat you of a reply to this question. The maniac who has lucid intervals is curable in the greater number of instances—the hypochondriac who at any time of the night or day enjoys the very briefest immunity from his miserable feelings, may be equally susceptible of improvement from well-devised remedial means. The modern medical treatment of both being essentially aggravant, can you wonder that these diseases should so often remain unrelieved, or that a sceptic smile should be the reward of the individual who tells you that in his hands at least they have ceased to be the opprobria of medicine! What has been the result of the Antiphlogistic treatment of insanity? Let the physicians who attended Lord Dudley in his last illness answer that question, for they spared neither lancet nor leech in his case. In the case of Lord Byron, delirium, which is only another word for mania, was actually produced by the lancet. But the better to open your eyes to the effect of such cruel treatment in this disease, I will read a short extract from a letter I received from Dr. Hume, the same staff-surgeon whose successful practice I have already had occasion to detail to you. "I lately," he thus writes, "paid a visit with our Depot Pay-master to the Armagh lunatic asylum. Being the receptacle for the insane poor of four counties, namely, Monaghan, Fermanagh, Cavan and Armagh, it generally contains about 150 inmates. Having visited the different apartments, I enquired of the manager, Mr. Jackson, the treatment pursued. His answer was: 'Although I am not a professional man, I have paid great attention to the treatment of the insane for the last five and twenty years, and the result of my observation is, that the usual practice of bleeding, leeching, cupping, &c., only aggravates the condition of the patients. Of those who were BLED on admission I *never* saw one recover.' Now this is a curious fact elicited from a plain practical man of great experience, who, had he known I belonged to the medical profession, might not perhaps have been so candid in his remarks." Dr. Conolly, in his

Report of the Hanwell Lunatic Asylum, is obliged to admit that great numbers die shortly after their admission into that establishment. The large abstraction of blood which he so lauds in his work on Insanity, will easily account for the unsuccessful termination of his cases.

Well then, Gentlemen, Hysteria, Hypochondria, Mania, are merely modifications, or developments of chronic or habitual low Fever. And since I commenced to treat them as such, I have had a practical success and a mental satisfaction, that contrast somewhat strongly with the poor opinion I entertained of the resources of our art, and the vexation I experienced when first entering upon my professional career. This much you should know, however, that in all such disorders you will be obliged to change your remedies frequently—for in chronic disease what will often succeed to admiration one day, may as often have an opposite effect the next; and this is strictly in accordance with what you find in every thing in life. The toy that will stop the cry of the weeping child to-day, may make it cry more loudly to-morrow. You must, in that case, change its rattle for some other gew-gaw; and so it is in the diseases we have been now considering—diseases where the temperament of the body, like the temper of the mind, is constantly varying. The great secret of managing chronic diseases properly then, consists in the frequent change and right adjustment of the chrono-thermal and other remedies, to particular cases;—and this also explains the good effect of Travelling upon many of these patients, for to the constantly shifting scenes and to the frequent repetition of novel cerebral excitement produced by these scenes, we must ascribe the chief advantages of such a course; clearly proving that the Brain in this instance, as in every other, is the true key to all good medical treatment. Whatever then, be the name by which you choose to designate your patient's complaint, you will be sure to meet with nothing but disappointment, if you pin your faith exclusively to any one medicine. To-day a mild emetic will give relief—temporary only if you do not follow it up to-morrow, with iron, opium, musk, quinine, or the bath. One week arsenic will be a divine remedy; the next, having lost its power, you may dismiss it for prussic acid, valerian, creosote, strychnine, or silver. In regard to silver, the nitrate is the preparation which I am in the habit of using, and an admirable medicine it is, when properly managed. Boerhaave, the greatest physician that ever lived, speaks in raptures of its remedial powers in "nervous complaints." Cullen, Pitcairn, every medical man but the most ill-educated apothecary or the equally ill-educated puppet who enjoys, at the mercy of his breath, the reputation of being *par excellence* a physician, will readily bear testimony to its safety and value as a medicine. Like every good thing, however, the nitrate of silver has been abused in practice, and in some half-dozen instances it has been pushed to so great an extent as to give the patient a permanent blueness of skin for life; but, Gentlemen, in these cases, the practitioners who employed it committed the double error of giving it too long and in too great quantities, and that people should entertain a prejudice against it on that score, is just as reasonable as that a man should be afraid to warm himself when cold, because his next-door neighbor had burnt his fingers. For myself, I can truly say, that though I have prescribed the nitrate of silver in some THOUSAND cases, I never had the misfortune to give the slightest tinge to the skin of a single individual. But should objections to the use of this medicine still continue to be urged, after a proper explanation on your part, you may be pretty sure that some ignorant or interested rival has been secretly playing upon the timidity of your patient or his friends. In that case you are less to be pitied than the patient; for if you have no remedy for rascality, he may have no relief for his suffering. So much then for one of many annoyances every practitioner must experience when his patient happens to be

——— "the tool
That KNAVES do work with, called a FOOL."

But, Gentlemen, we must not suppose that medicine is the only profession where able and honorable men experience such annoyances. Doctors of divinity, and doctors of law, are equally obnoxious to intrigue and prejudice,—aye, and State doctors too, as Dr. Peel and Dr. Melbourne, could tell you if you would ask them. To return. The shifting shades of mental distress, and the various vagaries and wrong thoughts—to say nothing of wrong actions—of persons whose diseases come under the head we have just been considering, are so many and so multifarious, that to attempt to describe them all would be a mere waste of time and labor—inasmuch as however greatly they may appear to differ from each other in shape and hue, they all depend upon a similar totality of corporeal infirmity, and yield, when they yield at all, to one and the same system of corporeal treatment. A few instances in proof, may suffice to show you this:—

Case 1.—A married lady consulted me under the following circumstances:—Every se-

cond day, about the same hour, she had an unconquerable wish to kill her children, and when she happened to look at a knife, her terror, lest she should do so, was extreme. Now, as every function of this lady's frame was more or less wrong, I prescribed for her quinine with sulphuric acid. From that day she had no return of the homicidal feeling.

Case 2.—A gentleman, every second day, took a fit of suspicion and jealousy of his wife, without the slightest cause whatever, as he confessed to me, on the day of remission, when he called to consult me; and however absurd and unreasonable the idea which haunted him, he found it impossible to drive it from his mind. Prussic acid and the plunge bath cured him completely.

Case 3.—Another gentleman, after a hard contest at the university for prize honours, suddenly became moody and sullen; lost his flesh and appetite, and fancied himself Judas Iscariot. Such was his belief one day—to be laughed at even by himself the next! I saw him six times, at the end of which he was perfectly cured by chrono-thermal treatment. Two years afterwards his sister consulted me for "nervousness," when I learnt that her brother had not had the slightest symptom of return.

Whoever, in his progress through life, takes the trouble to study individual character, must be struck by the perversities, inconsistencies, and other *bizarreries* of the human mind. Many people, for example, commit follies, faults, and crimes even involuntarily and without any apparent object. Some of you may possibly remember the case of Moscati, a person singularly gifted with talent, but who, at the same time, had such an invincible disposition to *lie*, that nobody would believe him, even when by accident he spoke the truth. A lady, who was once a patient of mine, told me that every time she became pregnant she caught herself frequently telling lies, for no end or purpose whatever. I knew a gentleman, with high feelings of honor, who was occasionally in the habit, when under the influence of wine, of pocketing the silver forks and spoons within his reach; you can easily imagine his distress of mind the next day, when he packed up the articles to return them to their owners. From these cases you now see how much the *morale* of every one must depend upon his *physique;* for if I know any thing in the world, I know that attention to corporeal temperature will be found of more avail in mending the morals of some individuals than a well-written homily.

How many pretty things have been said for and against the morality of Suicide! I wish it were always in a person's power to abstain from it. But that the disposition to commit it may, like many other bad dispositions, be cured by medicine, I could give you a great many proofs. However, as our time will not now permit me to enter into these subjects so fully as I could wish, I shall content myself with reading to you part of a letter I some time ago received from Dr. Selwyn, formerly of Ledbury, now of Cheltenham. Speaking of Mr. Samuel Averill, of the Plough Inn, Dynock, Gloucestershire, Dr. Selwyn says: "Before he came to me, he had consulted Mr. ———, of Ledbury, and other medical men, to no good purpose, as you can easily understand when I tell you they principally went over the old routine of cupping, purging, &c. Mr Averill's symptoms were depression of spirits to crying—thoughts of suicide, fears of becoming a lunatic, sleepless nights, and, generally speaking, the greatest possible state of mental wretchedness. He passed immense quantities of urine, as pale and pellucid as the water from the pump. Finding no particular organ in a worse state than another, I thought this a good case for your doctrines; and accordingly I rang the changes on the nitrate of silver, strychnine, musk, prussic acid, creosote, iron, quinine, and opium—varying and combining these according to circumstances with valerian, hartshorn, blue pill, &c. In a fortnight you would have been astonished at the improvement effected upon him. In about six weeks more he had no complaint, and he was with me about a month ago, when I considered his cure complete. I have treated a great many cases of Dyspepsia successfully, by attending to the intermittent principle, and I had lately a case of Tic Douloureux, which, after having been under the successive treatment of several eminent practitioners with no perceptible improvement, yielded to the chrono-thermal remedies. The subject of it, Miss T———, was formerly a patient of your own for some other complaint. I still hold that, in chronic diseases, by keeping your principles in view, we have a great help in many of these anomalous cases, which I would defy a nosologist or pathologist to name or classify; and as I am still consulted in such cases, I do not, I assure you, lose sight of them. Often, indeed, when I should, under the scholastic system, have been completely puzzled what to do, I now proceed at once to act upon the intermittent principle, and I have every reason to be satisfied with my success. Believe me, yours faithfully,

CONGREVE SELWYN."

Gentlemen, that the numerous diseases which medical men group together under the head of Dyspepsia, Hysteria, and Hypo-

chondria, are caused by circumstances from without, acting upon an atomic instability of brain within, might be proved by an affinity of facts. But this instability may be produced or rather put in action by different influences in different individuals—one patient being only susceptible to one agent, while another may be acted upon literally by every wind that blows.

General O'Hara, when he commanded the troops on the Mediterranean, was so sensible of the Levant wind, that before he rose in the morning, he knew if it had set in, by the effect it had on his temper; and during its continuance he suffered from a moroseness and irritability no effort on his part could conquer; by his own desire his servants kept out of his way on these occasions. The different effects of the winds on the human system, Shakespeare well knew when he made Hamlet say,

———"I am only mad *north, north-west,*
When the wind is southerly I know a hawk
from a handsaw."

And in confirmation of Shakespeare's truthfulness to nature in this as in most of his other observations, Sir Woodbine Parish, in his publication upon Buenos Ayres, tells us that "not many years back, a man named Garcia was executed for murder. He was a person of some education, esteemed by those who knew him, and, in general, rather remarkable than otherwise for the civility and amenity of his manners. His countenance was open and handsome, and his disposition frank and generous; but when the *north wind* set in, he appeared to lose all command of himself, and such was his extreme irritability, that during its continuance, he could hardly speak to any one in the street without quarrelling. In a conversation with my informant, a few hours before his execution, he admitted that it was the third murder he had been guilty of, besides having been engaged in more than twenty fights with knives, in which he had both given and received many serious wounds, but he observed that it was the *north wind*, not *he* that shed all this blood. When he rose from his bed in the morning, he said, he was at once aware of its accursed influence upon him:—a dull headache first, and then a feeling of impatience at every thing about him, would cause him to take umbrage, even at the members of his own family, on the most trivial occurrence. If he went abroad, his headache generally became worse, a heavy weight seemed to hang over his temples—he saw objects, as it were, through a cloud, and was hardly conscious where he went. Such was the account the wretched man gave of himself, and it was corroborated afterwards by his relations, who added, that no sooner had the cause of his excitement passed away, than he would deplore his weakness, and he never rested till he had sought out, and made his peace with those whom he had hurt or offended." The same difference of effect upon individuals may take place from any of the common articles of diet. Dr. Millengen in his Curiosities of Medical Experience, tells us he knew a person who could never indulge in tea without experiencing a disposition to commit suicide, and nothing could arouse him from this state of morbid excitement but the pleasure of destroying something—books, papers, or any thing within his reach. Under no other circumstance than this influence of tea were these fearful alterations observed." Coffee effects many people with fever. But if coffee, tea and other things so apparently trifling sometimes set up severe disorder—things equally trifling will sometimes cure it, indeed there is nothing, perhaps, in the whole history of disease more curious than the readiness with which the paroxysm of many complaints will occasionally yield to measures so simple and so apparently powerless in themselves, that it might almost seem puerile to suggest their application. Who, for example, could, *a priori* suppose it possible to stop a fit of mania with a thread? or who would be believed, were they to tell a person that had never heard the like before, that aches and agues had been cured with a song?—Yet in sober truth, such things have been actually done!

Effect of Ligatures.

Of the power of mere words over the morbid motions of the body, we shall afterwards have occasion to speak. Of the efficacy of a thread or ribbon in arresting the maniacal paroxysm, I shall now give you a striking example. "Mr. R., a chemist, naturally of a gentle disposition, voluntarily claimed admission to a madhouse in the Faubourg St. Antoine, on account of a desire to commit homicide, with which he was tormented. He threw himself at the foot of the altar, and supplicated the Almighty to deliver him from the horrible propensity. Of the origin of his disease he could say nothing; but when he felt the *accession* of the fatal desire, he was in the habit of running to the Chief of the Establishment, and requesting to have his thumbs tied together with a ribbon. However slight the ligature, it sufficed to calm the unhappy R——; though in the end, he made a desperate attempt upon one of his keepers, and perished, at last, in a paroxysm of fury."—[*Annales d' Hygiene*

Publique, et de Medecine Legale.] Now, every man of any information in the profession, knows that the application of a ligature to the arm or leg will frequently stop the commencing ague-fit. Dr. Davis, in his account of the Walcheren ague, tells us that he very often arrested it merely by grasping the leg or arm strongly with his hand. Putting aside, then, all consideration of the remittent nature of the case of homicidal mania I have just read, all consideration of the thermal and other changes which usher in the fit of every maniacal case, you could not fail to find, in the very simple measure which may equally succeed in preventing or arresting the fit of mania and ague, a new bond of connection with which to associate ague and mania together in the same category. But, Gentlemen, these are not the only complaints in which the ligature may be thus advantageously employed. In epilepsy, asthma, and other convulsive affections, I have often obtained the same salutary result by its application. Not very long ago, I happened to be in the room of a medical man, when he was unexpectedly seized with severe cramp in his back and loins. Observing him to become pale and shiver all over, I caught him suddenly by the arm and opposite leg. "My God!" he exclaimed, "I am relieved." And his astonishment was extreme; for immediately afterwards he became warm and comfortable, though for several days previously he had been suffering from cold feet and general malaise. Mania, epilepsy, asthma, cramp, ague, then, completely establish their fraternal relationship by means of the ligature; for had we no other facts, no other bond of association than that which the ligature furnishes us, we should still be led to the irresistible conclusion, that those particular diseases, at least, amid all their apparent diversity, have yet some principle in common which determines their unity. When I come to explain to you the manner in which the ligature acts, you will find that the connecting link of the whole is the Brain. They are all the result of a weak and exhausted state of that organ; but not produced, as the late Dr. Mackintosh of Edinburgh supposed by any Congestion or fulness of its blood-vessels. That, you know, was his doctrine of the cause of ague;—and as he was a very eloquent man, and a very pleasant and gentleman-like person to boot, he made many proselytes to his opinion, not only among his own pupils, who were very numerous, but also among the profession generally. To prove his hypothesis, or dream rather, he was in the habit, first of detailing the "congestion," found on dissection of the heads of persons who had died of the cold stage of ague, and then he appealed to the relief which very often followed the practice of bleeding at the commencement of that stage. "Behold the fact," he would say; "behold how the shiverings cease the very moment you open the vein—what can be a more triumphant answer to the opponents of the lancet!" But mark the fallacy of that fact—mark how the too-confident doctor was deceived by his own practice. The relief of which he boasted, for the most part temporary only—instead of being produced by the very trifling quantity of blood which flowed before such relief was obtained, was in reality nothing more than the effect of the ligature by which the arm was necessarily bandaged for the operation! The late Dr. Parr tells us, that when called to a patient in the fit of asthma, he was in the habit of tying up the arm as if he intended to bleed, but that though he never did more than scratch the skin with his lancet, the fit was at once arrested. But Gentlemen, ague, asthma, epilepsy, nay, every one of the non-contagious diseases to which man is liable, have all been produced by loss of blood. In that case, at least, they must have been diseases of exhaustion, the effects in a word, of diminished cerebral power. But when we come to consider that, in every instance in which the causes of the diseases now under consideration have been known, the Brain has been suddenly and primarily affected—as in the case of a blow, a poison, a purge, a passion, we can be at no loss in forming an opinion as to the real nature of these diseases—they are all the effect of cerebral weakness, and have all more or less analogy to faint. Faint, in fact, may be the premonitory symptom of them all; and the Walcheren ague in particular, generally began with a fainting fit, which faint was sometimes so alarming as to cause the greatest possible anxiety in the minds of the attendants for the immediate result. Now, what is the condition of the body you call

FAINT?

Is it not a state very like death! A person from his brain all at once ceasing to act, becomes instantly pale and pulseless;—the blood, having thus suddenly left the arteries and external vessels of the body, must go somewhere else. Had we never dissected a person who had died of faint, we should naturally expect it to settle in the internal veins; and there accordingly, when we do dissect the bodies of such persons, we do find the greater part of the blood. Now, this was what first misled Dr. Mackintosh. On opening the heads of subjects who had died in the cold fit of ague, he almost inva-

riably found the veins of the brain gorged with blood. This constant Effect of every kind of exhaustion he at once presumed was the Cause of such exhaustion. Gentlemen, he did not know that the very same internal vascular fulness may be seen on opening the bodies of those who died of loss of blood! To prove, however, what I say,—to demonstrate to you that this

CONGESTION,—

this bug-bear of medical quidnuncs—instead of being the invariable cause, is in reality the invariable effect of sudden exhaustion, I shall now read to you one of several experiments in which Dr. Seeds bled healthy dogs to death. The editor of the Medical Gazette will pardon me for reading it from his pages; but as my facts have been sometimes said to be "selected facts," I have at least this answer in store, that, in the greater number of instances, they have been selected from the writings of my opponents.

"All the larger veins of the legs," Dr. Seeds tells us, "were opened in a small Dog. At first the pulse was accelerated—soon after it became slow and languid. The heart's motions though feeble, were never irregular; and indeed, long before death, they could neither be seen nor felt. *Borborygmi* [flatulent gurglings] were early heard and lasted a long time. The breathing at first was hurried; soon it became slow and laborious, and at last convulsive. The pupils were frequently examined: they became gradually less and less obedient to the influence of light, and at length ceased to contract altogether. [That is, they became dilated.] Slight spasmodic contractions took place, first in the femoral and abdominal muscles: then the head, neck, and fore-legs, were likewise powerfully affected with spasms, [or convulsions.] At this time a deep sleep seized the animal: he breathed slowly and with difficulty, and, for a little time before death, respiration at intervals was suspended altogether. [All the symptoms of apoplexy!] Whenever the breathing was strong and quick, the pupils recovered their tone, and the blood was more strongly propelled. In an hour death closed the scene." Now for the dissection:—"The Dissection of the Head was first begun. The membranes of the Brain were loaded with turgid vessels, the larger of which were of a very dark color. A bright red spot was observed near the cornua, where some degree of sanguineous effusion had taken place. The sinuses were full of blood. In all the ventricles there was more or less water effused: the base of the brain, and the eighth and ninth pairs of nerves, were inundated with water. A net-work of red vessels was spread round their origins, and the optics were in the same state. In the cervical and lumbar regions of the spinal marrow there was a considerable degree of redness. The right side of the heart was full of blood; the left auricle contained a little. Some blood was found in the large veins, and a few clots in the thoraric aorta. The stomach, and all the intestines were tumid with flatus; the veins of the mesentary were turgid. The turgid state of the veins of the head was very remarkable: indeed, throughout the whole body the veins were tumid."

Now, Gentlemen, if anything in this world could open the eyes of "pathological" professors,—if facts or reasoning of any kind could possibly move those mechanical minded persons, who plan their treatment of living men from what they see on dissecting dead bodies,—this and similar experiments ought surely to do so. For here you not only find dilated pupil, convulsions, deep sleep, slow and difficult breathing, with other apoplectic symptoms, the effect of literally bleeding a healthy animal to death; but, to complete the deception of such as constantly ascribe these phenomena to pressure on the brain, the cerebral and other veins of the same animal were found after death loaded and congested with blood throughout! Nay, in addition there was water on the Brain, with "some degree of sanguineous effusion" even.*

Not long ago, I was shocked with the details of an inquest which took place "before the coroner for Middlesex, Mr. Wakley who is also the editor of the lancet. The inquest, according to the report in that paper was held on the body of a man, who, in the act of disputing with his master about his wages, "turned suddenly pale, and fell speechless and insensible for a time, breathing heavily until his neckerchief was loosed. In falling, his head struck the edge of a door and received a deep wound three inches long, from which blood flowed enough to soak through a thick mat on the floor." Before being taken from his master's shop to his own house, he recovered sufficiently to complain of pain of his head, and this fact I beg you will particularly mark. His wife immediately sent for "a doctor:" and what do you think was the first thing the doctor did,—what can you possibly imagine was the treatment which this wise man of Gotham put in practice the moment he was called

* We constantly hear of children dying of "Water on the Brain." I scruple not to declare, that in ninety-nine of every hundred of such cases, the water in the Brain is produced by the lancet or leeches of the doctor.

to a person who had fallen down in a faint, and who, from injury occasioned by the fall, had lost blood "enough to soak through a thick mat?" Why, to bleed him again! And what do you think was the quantity of blood he took from him? More than three pints! The landlady of the house,—and she was corroborated by other witnesses,—swore that "she thought that about three and a fifth pints of blood was taken besides what was spilt on the floor. The bleeding, she calculated, occupied twenty minutes. The bandage also got loose in bed, and some blood, not much, was lost there before its escape was discovered. He had convulsions on Saturday, after which he lay nearly still, occasionally moving his head. On Sunday he was more exhausted and quiet; in the evening he was still feebler, and on Monday afternoon, at ten minutes to one, without having once recovered his sensibility to surrounding objects, he died." Remember, Gentlemen, he did recover his sensibility rfter he left his master's shop, and only lost it again on repeated bleeding. And how could he possibly survive such repeated bleeding! That he died from loss of blood, was the opinion of every person who heard the evidence, till the Coroner, luckily for "the doctor," had the corsé opened. Then sure enough, just as in the case of the dog that was bled to death, the internal veins were found to be turgid and congested throughout. Deceived by this very constant result of any great and sudden loss of blood, Mr. Wakley and the jury were now convinced, not that the man had been bled to death but that he had not been bled enough! One of the strongest proofs of bad treatment was thus received as evidence of the best possible treatment under the circumstances, and a verdict pronounced accordingly! That an ignorant coroner and an ignorant jury should be imposed upon in this manner, were nothing very wonderful; but that the Editor of the Lancet, who publishes the case, and who from his position knows every thing going on at the present time in the medical world, should in his capacity of coroner pass over, without a word of reprobation, a mode of practice no conceivable circumstance could justify, only shows the lamentable state of darkness in which the profession are at this very moment on every thing connected with the proper treatment of disease! When St. John Long, or any other unlicensed quack, by an over dose, or awkward use of some of our common remedies, chances to kill only one out of some hundreds of his dupes, he is immediately hunted to death by the whole faculty; but when a member of the profes sion at one bleeding takes more blood by three times than is taken on any occasion by practitioners who kill their man every day with the lancet; not from a strong powerful man, but from a person so weakly that during the excitement of a trifling dispute with his master, he fainted and fell, and in falling had already lost blood enough to soak through a thick mat; not a word of blame is said! On the contrary it was all right, or if there was any error, it was on the safe side! If such things be permitted to be done in the heart of the metropolis, not only without censure, but with something like praise even, homicide may henceforth cease to be looked upon as a reproachable act.—The only thing required of the perpetrator is, that he should do it under the sanction of a diploma and secundum artem!

But, Gentlemen, to return to Ague, and the other morbid motions which led to this digression. Some of you may be curious to know how so simple a thing as the Ligature can produce such a salutary effect in these disorders. I will tell you how it does this, and the explanation I offer, if received as just, will afford you an additional proof not only that these diseases have all their common origin in the BRAIN; but that they are all the natural consequences of an arrest or other irregularity of the ATOMIC MOVEMENTS of the different portions of that organ; for to the diversity of the cerebral parts, and the diversity of the parts of the body which they respectively influence, we ascribe the apparent difference of these diseases, according to the particular portion of the brain that shall be most affected by some outward agency. Thus, after a blow on the HEAD, or elbow even, one man shall become sick, and vomit, another fall into convulsions, a third shiver, fever, grow delirious, and become mentally insane. In all these diseases the atomic movements of the brain being no longer in healthy and harmonious action, the natural control which it exercised in health over every part of the body, must be then more or less withdrawn from the various nerves through which it influenced the entire economy. The consequence of all this is, that some organs are at once placed in a state of torpidity, while others act in a manner alike destructive to themselves, and the other parts of the body with which they are most nearly associated in function. We find palsy of one organ, and spasm or palpitation of another. In fact, if I may be permitted to use so bold a simile, the various organs of the body, when beyond the control of the Brain, resemble so many race-horses that have escaped from the control of their riders—one stands still altogether, another moves forward in the right course perhaps,

but with vacillating and uncertain step, while a third endangers itself and every thing near it, by the rapidity or eccentricity of its movements. When the atoms of the various parts of the Brain, on the contrary, act in harmony with each other, there is an equally harmonious action of every organ of the body—supposing of course, every organ to be perfect in its construction. Whatever suddenly arrests or puts into irregular motion the whole cerebral actions, must with equal celerity influence the previous motive condition of every member and matter of the body—for evil in one case, for good in another. Were you suddenly and without any explanation to put a ligature round the arm of a healthy person, you would to a dead certainty excite his alarm or surprise. Now as both of these are the effects of novel cerebral movements, should you not thereby influence in a novel manner every part of his economy? How should you expect to influence it? Would not most men in these circumstances, tremble or show some kind of muscular agitation?—their hearts would probably palpitate—they would change color, becoming pale and red by turns, according as the brain alternately lost and recovered its controlling power over the vascular apparatus. If the alarm was very great, the pallor and tremor would be proportionally long. But in the case of a person already trembling and pale from another cause, the very natural effect of suddenly tying a ligature round the arm would be a reverse effect—for if the cerebral motive condition should be thereby changed at all, it could only be by a reverse movement; and such reverse cerebral movement would have the effect of reversing every previously existing movement of the body. The face that before was pale, would now become redder and more life-like; the trembling and spasmodic muscles would recover their tone; the heart's palpitations would become subdued into healthy beats; and a corresponding improvement would take place in every other organ and function of the body. The ligature, then, when its application is successful, acts like every other remedial agency; and a proper knowledge of its mode of action affords us an excellent clue to the mode of action of medicinal substances generally—all of which, as you have already seen, and I shall still further show, are, like the ligature, capable of producing and curing the various morbid motions for which we respectively direct their administration. It is in this manner that every one of the various passions may cause or cure every disease you can name—always excepting, as I have said before, the properly contagious disorders. The Brain, Gentlemen, is the principal organ to which, in most cases, you should direct your remedial means. When a person faints and falls, whatever be the cause of such faint—a blow, a purge, or loss of blood—the first thing to be done is, to rouse the brain. You must throw cold water on his face, put hartshorn, snuff, or burnt feathers to his nose, and a little brandy, if you can get it, into his mouth. You may also slap or shake him strongly with your hand—if you can only make him feel, you will be almost sure to recal him to life; but to think of BLEEDING a person in such a state—ha! ha! After all, this is no laughing matter; for when we see such things done in the nineteenth century, we should rather blush for a profession that would endeavour to screen any of its members from the contempt they merit, when they have so far outraged everything like decency and common sense. The proper treatment of a fit of fainting or convulsion, should be in principle the same as you may have seen practised by any well-informed midwife, in the case of children that are still-born—children all but dead. You may have seen the good lady place the child on her knee and beat it smartly and repeatedly with her open hand on the hips and shoulders, or suddenly plunge it into cold water: now while this is doing, the infant will often give a gasp or two and then cry—that is all the midwife wants. And if you will only follow her example in the case of

INFANTILE CONVULSIONS,—

which, after all, are the very same thing as Epileptic fits in the adult,—you will often succeed in substituting a fit of crying, which I need hardly say, is attended with no danger at all, for a spasmodic fit, which, under the routine treatment, is never free from it. Only get the child to cry, and you need not trouble yourself more about it,—for no human creature can possibly weep and have a convulsion fit of the epileptic or fainting kind at the same moment. Convulsive sobbing is a phenomenon perfectly incompatible with these movements--for it depends upon a reverse action in the atoms of the brain. The only thing which may prevent some of you from doing your duty on such occasions, is the fear of offending an ignorant nurse or mother, who will think you a monster of cruelty for treating an infant so. Gentlemen, these persons do not know how difficult it is to get a child in convulsions to feel at all;—and in proof of this, I may tell you, that such slaps as in a perfectly healthy child would be followed by marks that should last a week, in cases of this description leave no mark whatever after the paroxysm has ceased. During the fit, the child is so perfectly insensible as to be

literally all but half dead. Now this brings to my mind a case of infantile convulsions, in which I was gravely requested to meet an old woman in consultation—a nurse or midwife, I forget which, who being much with children, must necessarily be wonderfully clever in the cure of their diseases. You smile, doubtless, that I should be asked to do any thing of the kind; but it was in the case of the child of a relative ; and relatives, you know, sometimes take strange liberties with each other. Still it was not altogether to tell you this, that I reverted to the case in question—it was, on the contrary, to show you what a wise person she proved, the female doctor who, on this occasion, was proposed for my coadjutor. On being asked by the mother what should be done in the case of a return of the convulsion fits, the old lady answered, "Oh madam, you must let the child be very quiet and not disturb it by noises or any thing of that sort!"—which sapient advice I have no doubt was found one of the best antidotes in the world to a state in which, if you were to roar till your lungs cracked, you could not by any possibility make the subject of it hear at all.

What is the present routine treatment of an infant taken with convulsion fits? That I can scarcely tell you; but when I settled in London, some four years ago, the Court doctors, who, of course, give the tone to the profession in the country, had no hesitation in applying all at once the Eight lancets of the cupping instrument behind the ear of infants under six months old,—and that, in some cases, repeatedly! In addition, they were in the habit of leeching, purging, and parboiling the poor little creatures in warm baths! If mothers will really suffer their children to be treated in this manner, surely they only deserve to lose them. The strongest and healthiest child in existence, far less a sick one, could scarcely survive the routine practice. But whether you believe me or not, there is nothing more true than what the Duke says in the play of *The Honeymoon*, such fits are

———seldom mortal,
Save when the doctor's sent for.

In the case of adult epilepsy, especially at the commencement of the fit, a very little thing will often at once produce a counter movement of the brain sufficiently strong to influence the body in a manner incompatible with its further continuance. The application of so simple a means as the ligature may then very often do this at once ; but, like every other remedy frequently resorted to, it will be sure to lose its good effect when the patient has become accustomed to it; for in this and similar cases, every thing depends upon the suddenness and unexpectedness of the particular measure put in practice whether your influence the brain of a patient in a novel manner or not. The sudden cry of "fire" or "murder," nay, the unexpected singing of some old song, in a situation, or under circumstances which surprised the person who heard it, has charmed away a paroxysm of the severest pain. In the army, the unexpected order for a march or a battle will often empty an hospital. The mental excitement thereby produced, has cured diseases which had baffled all the efforts of the most experienced medical officers. In the words of Shakspeare, then, you may positively and literally

Fetter strong madness with asilken *thread;*
Cure ache with *air*, and agony with *words!*

Suggestions relative to the cause of sleep.

By William Smith, Esq. Surgeon, Clifton.

Sleep appears to depend on a retardation of the circulation through the brain, thereby producing a venous condition of the blood in that organ, and this diminished or retarded circulation may probably depend on a periodic exhaustion of the propelling powers of the heart. The proofs of the first portion of this proposition are many, and I think satisfactory.

First. Venous congestion of the brain, from any obstacle to the return of the blood will produce drowsiness, stupor, coma, and finally, apoplexy, if its intensity be sufficiently great.

Second. In sleep, respiration and circulation are performed more slowly than in the waking condition: hence a change in the blood of the brain does not occur so frequently.

Third. Animal heat, and its causes, respiration and circulation, are feeble in hybernating animals during their winter sleep.

Fourth. The adult, in whom the respiratory and circulating systems are at the maximum of developement, takes less sleep than the infant, in whom the nutritive or glandular system is in full activity, but in whom the respiratory functions are at their minimum.

Fifth. Motion, with its tendency to increase circulation and respiration, prevents sleep.

Sixth. Hence an easy and quiet position of the body, and all the means which tend to favor a tranquil circulation, are incentives to sleep.

Seventh. Hence the whole class of seda

tive remedies eventually produce slowness of the heart's action after a longer or shorter stage of stimulation.

Eighth. Hence the desire of sleep after exercise, as the circulation becomes so much slower after, in proportion to its acceleration during it.

Ninth. From the same cause, wine and all stimulants act primarily as excitants; and when their stimulation has subsided, the circulation becomes slow, slightly oppressed, and drowsiness supervenes.

Tenth. The same may be said of the warm bath, the pulse at first rising, and subsequently becoming retarded.

Eleventh. Cold, applied to the head, rapidly lessens the circulation, and tranquil sleep is sometimes produced by this means in fierce delirium, and in violent paroxysms of insanity.

Twelfth. Motion is employed as a remedial means in obviating the effects of opium. We walk the patient about, and so keep the circulation excited, till the poison is got rid of, or its effects shall have passed off.

Thirteenth. Intense cold produces slow and retarded circulation, drowsiness, and coma. Hence the necessity not to allow persons exposed to its influence to cease from exercise, which supplies the necessary stimulation to the circulation. A celebrated surgeon, in describing the disastrous retreat from Moscow, says "those who sat down went to sleep, and those who slept, awoke no more."

Fourteenth. Hence the amount of fat animal food which is not only eaten with impunity by those who are exposed to great cold, but is found to be absolutely essential to maintain the proper amount of circulation.

Fifteenth. We have sneezing and yawning as important illustrations of the effect of an accelerated circulation in preventing sleep. The sneeze is a forcible expiration, after which a deep breath is taken in: this of course, produces arterialization and subsequent circulation of the blood. Yawning is a prolonged and deep inspiration, and in the same manner has the effect, for a time, of keeping up the attention, by furnishing to the brain a fresh amount of arterialized blood.

Sixteenth. Immersion in an atmosphere of carbonic acid, or in an atmosphere which contains a large proportion of it, will produce drowsiness, coma, and the sleep of death.

Seventeenth. Breathing oxygen gas, on the contrary, will produce acceleration of the pulse, and all the vital functions, and eventually delirium.

Eighteenth. In delirium, whether attended with symptoms of power or debility, whether of the sthenic or asthenic type, we have an accelerated pulse. In the former case, as we lessen the excitement by depleting measures, and in the latter, or true delirium tremens, as we obtain the same end by the use of narcotics, sleep gradually steals on the patient, and delirium ceases.—In fact, our grand object is to lessen the rapidity of the circulation through the brain, and thus induce sleep.

I trust that these very imperfect remarks may call the attention of the readers of THE LANCET to this most interesting subject, and tend to elicit more observations on a point which, being closely connected with health and disease, is peculiarly worthy of investigation. *Lancet.*

SURGICAL DISEASES.

Dr. ALFRED AUGUSTUS HARVEY, M.R.C.S.E., and formerly surgeon in the Hon. East India Company's Service, has forwarded to us for publication, the following account of the mode of procuring a radical cure for HYDROCELE, without injection, employed by him, at intervals, for thirty years, successfully:—First, discharge the fluid with a trocar, or pocket lancet, and then apply a warm vinegar poultice all over the scrotum, in order to bring on inflammation, which generally takes place in a few hours, and becomes painful. When sufficient inflammation has been excited, remove the vinegar poultice, and apply a bread-and-milk poultice. In a short time, the pain and inflammation generally subside, and the cure is completed. Give a few smart doses of purgative medicine. Dr. Harvey adds the subjoined:

"CURE FOR ENCYSTED TUMOURS,—or Wens of the Head, or other parts of the body, without cutting them out." First, make a longitudinal cut along the scalp. This is performed with little loss of blood. Next press out the contents of the cyst, and apply, freely, alcohol in the cavity, with a camel's hair brush. Then place in the cavity, also, from two to six grains of nitrate of silver, and bring the edges together with strappings when inflammation takes place. Should it inflame too much, apply cold-water dressings, and give a few doses of active purgative medicine. This plan has ever been found to complete the cure in a few days.

FISTULA IN ANO (blind external) can often be cured without cutting, by injecting alcohol the whole length of the sinus, three or four times a-day, until it brings on inflammation; when that takes place, the cure is generally completed in a short time. In

full habits, bleeding by the arm should be practised, if required, and the bowels opened pretty freely, before the alcohol is injected. Should the inflammation become too severe, it should be regulated by poultice or cold-water dressings, and low diet should strictly be attended to. *Lancet.*

The Gastric Fluid, its nature and properties.

M. Blondlot has recently published in Paris a treatise on digestion, detailing very numerous experiments made upon a dog, in which a fistulous opening into the stomach was maintained for upwards of two years. The gastric juice was obtained in very large quantities. Submitted to distillation, the fluid passing over did not exhibit the slightest acid re-action, whilst the residue in the retort was always strongly acid. It is therefore certain that the acid of the gastric fluid is neither hydrochloric nor acetic acid, since both these are volatile. The gastric fluid of other animals gave the same result on being distilled. When chalk or any other carbonate of lime is added, no effervescence ensues, which further proves the acid not to be the lactic. M. Blondlot concludes, that the acid re-action of healthy gastric juice is owing to the presence of superphosphate and biphosphate of lime. He adds, 1st. "That there is no other acid which can remain acid, and fail to decompose carbonate of lime. 2nd. That sulphuric acid, added to gastric juice, precipitates an abundance of sulphate of lime, and oxalic acid precipitates oxalate of lime. 3rd. Potass, soda, ammonia, and lime water, produce abundant precipitates of neutral phosphate of lime. 4th. The calcined ash of gastric juice is not deliquescent, dissolves without effervescence in hydrochloric acid, forming chloride of calcium, it therefore contains neutral phosphate of lime, the excess of acid being drawn off in the calcination.

M. Blondlot also made many experiments, to determine whether, during digestion in the healthy stomach, lactic acid is formed by the transformation of sugar, starch, or other substance, and his conclusion is, that it is never found. He could never find even a trace of it, although he analysed the fluid expressed from the contents of the stomach, after remaining on the stomach various periods. He conceives that the acid of the gastric juice prevents the lactic acid fermentation, just as other acids are known to do under other circumstances. In confirmation of this, M. Blondlot relates many experiments upon birds and ruminating animals, which shew that the formation of lactic acid in these creatures takes place only in those parts of the alimentary canals where no acid is present—namely, in the crop of birds, the first and second stomach of ruminants, and the cœcum of man, and other animals. He first proves that the acid found in these cavities is not secreted by their walls. Feeding sheep, goats, chickens, and pigeons, on food destitute of sugar, and examining the fluid found in the cavities mentioned, he found it invariably alkaline. On the other hand, the addition of sugar to the food produced an acid fluid in the same cavities which proved to be the lactic. The contents of the cœcum are not more acid than those of the small intestines, except sugar has been taken in the food; but when sugar has been taken, it undergoes the lactic fermentation in the cœcum. These experiments agree with those of Mr. Ross, published in The Lancet for January and February, 1844. Tiedemann and Gmelin found acid in the crop of a pigeon, which had fed for several days on nothing but meat; but this, as M. Blondlot shews, probably had regurgitated from the stomach—an accident requiring precautions to prevent, after death.

M. Blondlot believes that the digestive property of gastric juice depends, not on its obvious chemical constitution, but upon a peculiar organic principle. If exposed to a temperature of 104° to 122° F., or higher, it loses entirely and irrecoverably its digestive powers, although to all appearance, and even as to its composition, as made known by analysis, it remains unchanged. With the exclusion of the air, gastric juice may be kept for two years without loss of its activity; but with the free access of air, it putrifies in five or six days, although the chyme which it forms from nitrogenous organic substances may be preserved for two or three months without change. The precipitation of all the lime it contains does not affect its activity, nor are its chlorides indispensable, but whatever acts upon its organic constituents, heat, strong alcohol, or strong acids, or which removes them, such as animal charcoal, chlorine, tannic acid, or acetate of lead, destroys all its digestive properties.

M. Blondlot also shews—A. That coagulated albumen resists the action of the gastric juice only from its compact form. When coagulated in very small particles, as white of egg beaten into a froth and poured into boiling water, it is digested as quickly as soft fibrine. B. That the action of the stomach in coagulating milk is not due to its digestive principle solely, but to its acid, which acts like lactic acid. C. The effect of the gastric fluid upon bones, whether entire

or not, is to disintegrate the animal matter slowly, beginning at the surface, and to reduce the earthy matter into a fine chalky powder, but without dissolving or decomposing it. The earthy matter not being dissolved, proves that no hydrochloric acid has acted upon it, but it all is discharged with the fæces.

The physiological results of M. Blondlot's experiments confirm those of M. Beaumont, which are already familiar to our readers.—*Lancet.*

Indian Hemp in Traumatic Tetanus.

By H. G. Potter, F.L.S. Surgeon to the Newcastle Infirmary, and Lecturer on Surgery, at the Newcastle-on-Tyne School of Medicine and Surgery.

Though the attention of the profession has been frequently directed to Indian hemp as a medicinal agent in the treatment of spasmodic affections, I believe that its powers are not yet sufficiently appreciated. If, therefore, you will allow me a small space in your valuable publication, I will mention a case in which I lately tried this medicine with marked good effect. A young man while engaged at his work, Oct. 29, 1844, became entangled in the belt which moved a large wheel, and thus received a severe laceration on the upper part of right thigh, exposing the femoral vessels. He also received several other injuries. He was immediately brought to the Newcastle Infirmary, when the usual treatment, in such cases, was adopted. The case proceeded most favorably until the twelfth day, when symptoms of tetanus appeared. A large dose of calomel and Dover's powders was then given, and as no good effect followed, I ordered him to have ten grains of extract of Indian hemp, and to repeat the same dose every two or three hours, if required. I saw him again in a few hours, and finding that his bowels had not been acted upon by some purgatives he had taken, ordered two drops of croton oil to be placed on the tongue, and the following injection:—Tobacco leaves, one scruple; boiling water, eight ounces: macerate; strain for an enema. These produced free action in the bowels.

In consequence of the difficulty in swallowing, I determined to give the extract in the form of injection, and therefore ordered him to have the following enema every two hours: Extract of Indian hemp, one scruple; strong beef-tea, six ounces; mix. This was done, and the injections retained. No violent spasmodic actions took place, but the back became gradually more and more arched, so that it was necessary to place a pillow beneath. The extract did not cause any marked symptom of intoxication, though it evidently produced, at intervals, calm sleep.

Without suffering any pain, the disease gradually progressed, death taking place on the fourth day after symptoms appeared.

In this case, four drachms and two scruples of the extract were administered, and to the action of this medicine I attribute the freedom from pain and *clonic* spasm, which surely is sufficient to induce any one to give this remedy a full trial in so fearful a disease.

Before I conclude, it may be well to mention, that no abnormal appearances were detected at the post-mortem, to throw any light on the pathology of this disease.—*Lancet.*

A New Preparation of Cinchona Bark.

Mr. M. Donovan, of Dublin, has collected a considerable amount of evidence from numerous medical authors, tending to prove that the alkaloids of the barks, quinine, cinchona, &c., are not the only constituents which give those barks their medicinal properties, but that their anti-periodic efficacy depends, in part, upon other ingredients, and much upon the combination in which the alkaloids are found in the natural state of the bark. The sulphate of quinine is, at present, the form most commonly employed but many authorities are adduced by Mr. Donovan, to shew that it cannot in all cases be depended on.

Under the impression that these preliminary points are proved, Mr. Donovan proceeds to relate his experiments, made with the view to obtain an agreeable preparation containing all the virtues of the bark in a small bulk. "Hitherto," he says, "there has been no way of exhibiting bark in its full powers, except in the state of powder which, to most persons, is so disgusting a dose that it is rarely prescribed." The following is the preparation which he conceives accomplishes the purpose:—

Let eight ounces of yellow bark, in coarse powder, be digested with a pint of proof-spirit for a week, in a close vessel, with frequent agitation. The tincture is to be fully extracted by the screw-press; the residum is to be digested with another pint of proof-spirit for a week, and the tincture again expressed. The residum is now to be boiled for half an hour with a pint of water, and the decoction strongly pressed out. The boiling of the residum a second and third time, with a new pint of water is to be performed in the same manner, and then the three decoctions, mixed, are to be evaporated by heat to eight ounces. It will be much

the better if this be done in a vacuum. The tinctures, mixed, are to be distilled or evaporated until eight ounces remain; and these, still boiling hot, are to be added to the evaporated decoction. A pint of liquid will thus be produced, the chief ingredient of which is dikinate of quinina.

To this liquid add 315,31 grains of dinoxalate of quinina, and boil for a few moments; then add 21 troy ounces of refined sugar, and four ounces of best gum arabic, both in powder, and previously mixed. The whole is to be kept stirring until solution is effected, and if the resulting syrup, when cold, does not amount to 32 ounces by measure, water is to be added to make up that amount. When cold, filter through flannel.

In each ounce of this syrup there will be 16 grains of anhydrous dikinate of quinina. This syrup is twenty-five times stronger than the decoction of bark.

It remains to offer a few suggestions relative to the pharmaceutical employment of this syrup. In general it may be used in any mixture of compatible liquids, when the powers of bark are required, and when the other liquids are already sufficiently voluminous, and would be altogether too bulky if decoction of bark were employed. Thus, in the simultaneous exhibition of decoctions of bark and sarsaparilla, in equal quantities the smallest efficient dose of the mixture is six ounces three times a day. By altering the formula to fifteen and a half ounces of decoction of sarsaparilla, and five and a half drachms of syrup of bark, the same powers are exhibited in half the foregoing bulk.

The following contains all its energy in a state of perfect development and activity, and is a pleasant carminative tonic:—

Cinnamon water, six ounces and a half; syrup of bark, half an ounce; compound tincture of bark, an ounce. An ounce measure of this mixture is equivalent to thirty-six grains of bark in substance.

When bark and iron are indicated, the following is the formula in which the least chemical action takes places between the tannin and the iron, as no discoloration appears for several days:—

Precipitated carbonate of iron, syrup of bark, of each an ounce. Mix. Dose, the size of a small nutmeg.

The strength of this syrup is such, that one drachm is a full dose, either by itself or in water. Aromatics, such as anise or fennel, are said perfectly to mask the bitterness of preparations of quinina. M. Pierquin says that thirty-two grains of carbonate of magnesia conceal the taste of six grains of sulphate of quinina, without interfering with its virtues.

To conclude: this preparation of bark seems deserving of the attentive consideration of physicians, as it contains all that is valuable in that medicine, in a state of perfect preservation and full energy. It presents the active ingredients exactly in their natural state, which good judges have declared to be in many forms of disease absolutely necessary. It contains nothing but what is an unaltered proximate principle of bark. The form is commodious, not liable to spoiling, is less disagreeable than any other, and may be rendered even agreeable.—*Pharm. Journal.*

Adulteration of Sulphate of Quinine, and a Method of detecting it.

The suphate of quinine of commerce is very frequently adulerated with salicine. If the proportion of the latter alkaloid present be half, or even one-fourth, the fraud may be detected by the addition of concentrated sulphuric acid, which produces, with salicine, a characteristic red color. But if no more than a tenth of salicine is mixed with the sulphate of quinine, this red color is not developed by the addition of sulphuric acid. In order to detect the presence of salicine in this or less proportions, this alkaloid must be isolated. For this purpose, take three or four grains of the suspected sulphate of quinine, and pour on it about six times its weight of concentrated sulphuric acid, which dissolves the salt, and, if salicine be present, forms a solution of a brown color, just like sulphuric acid soiled by some vegetable matter. To this add carefully and gradually some distilled water, until a white precipitate appears. This will probably be salicine, which will not dissolve in a moderately dilute acid solution of sulphate of quinine. Filter the liquid, and collect the precipitate on a watch glass, and it will now produce, upon the addition of concentrated sulphuric acid, the bright-red color characteristic of salicine. If too much water be added, the precipitate will dissolve, and only a loose gelatinous precipitate will form, very difficult to separate. *Journal de Chemie Medicale.*

Epidemic Cholera treated by Transfusion.

In a preceding number of the same journal, several extraordinary cases of recovery from the late epidemic cholera thus treated by Mr. Torrance, are recorded. The fluid injected consisted of—Muriate of Soda, 2 drachms, carbonate of soda, 2 scruples, chloride of potassium, 7 grains, water (temperature 96°,) 2 quarts. Of this solution, as many as 10 quarts were, in some instances, injected into the system, at intervals, during 28 hours!—*Lancet.*

Miss Martineau's repudiation of Mr. Greenhow's Report.

It will be remembered that when inserting our analysis of the pamphlet of Mr. Greenhow, describing the medical facts of the case of his sister-in-law, Miss Martineau, we stated that they had been published by that gentleman, with the full assent and approval of the lady. But it appears from a letter of Miss Martineau, published in *The Observer*, London newspaper, of Sunday last, that Mr. Greenhow, in supposing that he had obtained the consent of the patient, labored under a "mistake;" and the same letter informs us that Miss Martineau considers it to be "impossible for her to remain under the supposition of concurrence" in the publication. She admits, however, that in "the writing and the reading" of the communications which passed between her and Mr. Greenhow on the subject, she is not much surprised that he should have been thinking of one thing and speaking of another. Miss Martineau says, "I have not seen the report, of course, and it was in circulation, I believe, ten days before I received that shock of painful amazement which your declaration occasioned. I understand the matter thus:—You told me that certain attacks on you by some members of your profession would compel you to report the case, *professionally*, in self-defence. By a strong effort I abstained from the slightest expression of my natural reluctance. This respect for your liberty of professional self-defence seems to have been understood by you, not merely as acquiescence but participation. In reply to a note from you, I wrote the following note, which you interpreted (I cannot conceive how) as not only concurrence but as permission to use my name as your sanction:—'I have no right or wish to give any opinion whatever. In fulfilling my personal obligations to truth and science, I have no other wish than that everybody else should do what he believes to be most right. This was one mistake on your part; another arose from a similar misapprehension. Being aware that an account of my recovery by mesmerism must appear, I proposed that you should transmit to the recorder of my recovery, for his private reading, your view of the case, in order that you might have no cause of subsequent complaint of misrepresentation. My note was as follows:—'Dec. 6th, I said send him your statement, doing, I trust, full justice to your excellent temper in the matter. Keep in mind two essential things—that whatever is said about the various diseases attributed to me is pure invention on the part of those who know nothing of the matter; and also that I may have my sense of duty about communicating the benefits I have received from mesmerism.' In July you were so struck as to write to me, 'I cannot but feel a great respect for the influence, whatever it be called, which has so improved your condition.' Your reply was—'As it becomes more and more evident that I must soon lay before the profession a complete report of your case, I must decline furnishing it, in the meantime, to any individual.'

"On this I remarked that your published report would answer all the purposes of a private statement to the recorder of my mesmeric recovery. Of all conceivable ideas, the last I could have found would be that of being made in any degree responsible for the issue of a shilling pamphlet of the kind that I am told yours is. A professional man may be enabled to understand the shock caused by such an act; but I must lament the misapprehension which has caused you to answer for any one but yourself. As a mistake, however, I take leave of it, and shall forget, as soon as possible, the painful occasion of this explanation."

It will now be seen, that Miss Martineau's physician, Dr. Greenhow, was compelled to draw up and publish an erroneous history of her case, to appease the agony of a portion of the medical profession, opposed to innovations or improvements in the theory and practice of the old astrological schools in which they were educated, and known under the familiar appellation of "Old Ladies in Breeches."

ACADEMIE DES SCIENCES.

Researches of MM. Andral and Gavarret on the Composition of the Blood.

MM. Andral and Gavarret have communicated the results of their further researches on the composition of the blood in disease. These researches tend still more to confirm the law which they previously found to exist with reference to the increase of fibrin in inflammatory diseases, and its decrease in adynamic. In four cases of acute meningitis, free from complication, which terminated fatally, (a malady that they had not yet been able to study under this point of view,) the blood drawn from the first bleeding did not present more fibrin than in the natural state. As the symptoms became more decidedly inflammatory, the quantity of fibrin increased from two-eighths to three-fourths, and at last to five-fourths; so that even before the

nature of the symptoms had clearly announced the transformation of a simple continued fever into inflammation of the meninges, the increase in the quantity of the fibrin contained in the blood forewarned it, constituting the first evidence of its manifestation: in these four cases of meningitis, the autopsy rendered it possible to appreciate, to their full extent, the changes which took place in the meninges and encephalon.

In several cases of saturnine epilepsy, the quantity of fibrin was normal, a circumstance which corresponds with our idea of the disease. In a case of jaundice, with pain in the right hypocondrium, tumefaction of the liver, and febrile re-action, the quantity of fibrin had increased: as, also, in women who presented, several months after delivery, the symptoms of a slight degree of inflammation of the uterus, and of the annexed organs; in a case of phlegmon of the right iliac fossa, which appeared on a woman delivered a few weeks previously; in a paralytic female, when an eschar, that had formed on the sacrum, separated; and lastly, in a case of erythema nodosum.

In forty cases of typhoid fever, free from complication, the quantity of fibrin always remained below four, and lowered even as far as two and one. In these forty cases there was a complete analogy between the diminution in the amount of fibrin and the adynamia.

The blood of a person who died from purpura hæmorrhagica, only contained 0.9 of fibrin, and there was only 0.6 in the blood of a man of fifty years of age, who, whilst being treated at the Charite, for cirrhosis of the liver, accompanied by its ordinary symptoms, all at once fell into a state of extreme prostration, with fever and delirium. When the bodies of these two patients were opened, the only anatomical data which had any reference to the last symptoms which they presented, were a liquid state of the blood in the heart and the large vessels, and ecchymoses in different parts of the sub-serous and sub-mucous cellular tissues.

The above results, substantiating the previous researches of MM. Andral and Gavarret in every respect, they are inclined to think that the examination of the varying proportions of the fibrin of the blood in certain diseases, may be of great use to determine the nature of disease, and to assist diagnosis.

MM. Becquerel and Rodier have likewise presented to the Academy an analysis of researches similar to those of M. Andral.—They have arrived at precisely the same results. Bur they have also ascertained two new facts: Firstly, that the proportion of cholesterine increases in the blood from forty to fifty years of age, as well in woman as in man. Secondly, that the proportion of this substance increases along with that of the fibrin in inflammatory diseases, whereas, on the contrary, the albumen diminishes.

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On the Degeneresence of Vaccine Matter.

M. Viard has been performing comparative experiments in order to ascertain the differential characters of the developement, progress, and duration of the eruption of the vaccine matter taken from the cow in 1836 and 1844. The following are the conclusions at which he has arrived: It is not, as is generally supposed, in the degree of development of the vaccinal postules on the eighth or ninth day, that we must look for the degeneresence of the vaccine matter; but in the progress, and more especially in the duration, of the eruption, which diminishes progressively. In 1836, the vaccine of Jenner, after nine and thirty years sojournation in the economy of man, gave rise to postules which, on the twelfth day were perfectly dried; whereas postules, originating from vaccine matter taken from the cow that year, dried only on the seventeenth day. At present, the vaccine of 1836 dries on the thirteenth or fourteenth day; whereas that recently taken from the cow (1844) only dries on the seventeenth. Thus, in sojourning eight years in man, the vaccine of 1836 has decreased in its power of keeping up the eruption. M. Viard consequently concludes that vaccine matter should be procured fresh from the cow every five or six years.

Lancet.

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The Sex of the Child as a Cause of Difficulty and Danger in Human Parturition.

Professor Simpson announces, and very adequately supports, the following propositions in the last number of the Edinburgh Medical and Surgical Journal:—

1. "Of the mothers that die under parturition and its immediate consequences, a much greater proportion have given birth to male than female children."

2. "Among labors presenting morbid complications and difficulties, the child is much oftener male than female."

3. "Amongst the children of the mothers that die from labor or its consequences, a larger proportion of those that are still born are male than female; and, on the contrary, of those that are born alive, a larger proportion are female than male."

4. "Of still-born children a larger proportion are male than female."

5. "Of the children that die during the actual progress of parturition, the number

of males is much greater than the number of females."

6. "Of those children that are born alive, more males than females are seen to suffer from the morbid states and injuries resulting from parturition."

7. "More male than female children die in the earliest periods of infancy; and the disproportion between the mortality of the two sexes gradually diminishes from birth onwards till some time subsequently to it."

8. "Of the children that die in utero, and before the commencement of labor, as large a proportion are female as male."

9. "Of the morbid accidents that are liable to happen in connexion with the third stage of labor, as many take place with female as with male births.

10. "The average duration of labor is longer with male than with female children."

11. "More dangers and deaths occur both to mothers and children in first than in subsequent labors."

The number of facts which Dr. Simpson brings forward in support of his views, extends his communication to a great length. The subject is treated with characteristic ability, and those for whom it has an interest will here find a fund of valuable practical information. The author concludes with the following startling announcement:—

"The official returns of the mortality of England and Wales have only, as yet, been collected for somewhat upwards of seven years—viz: from 1st July, 1837, to the present date. If the calculations we have already given are accordant with truth, (and we believe them to be much within the limits,) there have been lost in Great Britain, during that limited period, as a consequence of the slightly larger size of the male than of the female head at birth, about 50,000 lives, including those of about 46,000, or 47,000 infants, and of between 3000 and 4000 mothers who died in childbed. *Lancet.*

Illustrations of the Importance of Ventilation.

Mr. Squire, in the last month's number of the Pharmaceutical Journal, gives the following

"The usual argand gas-burner consumes about five cubic feet of gas per hour, producing rather more than five cubic feet of carbonic acid, and nearly half a pint of water.

"Shops using thirty of these lights, therefore, in an evening of four hours, produce upwards of nine gallons of water, holding in solution the noxious products of the gas.

"An argand lamp, burning in a room twelve feet high and twelve feet square, containing 1728 cubic inches of air, with closed doors and windows, produces sufficient carbonic acid, in rather more than three hours, to exceed one per cent., which is considered unfit for respiration, and when it amounts to ten per cent., it is fatal to life.

"A man makes on an average, twenty respirations per minute, and at each respiration inhales sixteen cubic inches of air: of these 320 cubic inches inhaled, thirty-two cubic inches of oxygen are consumed, and twenty five cubic inches of carbonic acid produced."

On the use of the Thymus Gland.

"Dr. Picci, after glancing at the theories of his predecessors, suggests that the use of this gland is chiefly of a mechanical nature—viz: to occupy a certain space within the thoracic cavity, while the lungs remain unexpanded in the fœtus; and thus to prevent the ribs and sternum from falling in too much upon these vital organs. The size of the thymus is inversely as the volume of the lungs; and, when the latter become dilated after birth by the admission of air into their cells, the former immediately begins to shrink and become atrophied. In truth, it is only in the adult that the thoracic parietes are moulded completely upon the lungs; for, in infancy and youth, it is rather the thymus gland that is, in their place, moulded upon the thorax.

"The situation of this gland in the anterior mediastinum, and along the median line, the very nature of its tissue, and the greater expansion and developement of its inferior half, are adduced as arguments in favor of the opinion now adduced. Besides the well known circumstance that, in those newborn children in whom the thorax is very largely developed, the thymus continues to increase gradually even to the end of the second year, it deserves notice that all those animals, in which the lungs are similar to those in the human subject, are provided with this gland; whereas, we fiud it to be entirely wanting in those which breathe by branchiæ, or membranous lungs. In hybernating animals, also, the thymus exhibits alternations of enlargement and decrease, according to the state of the respiratory organs. In the amphibia it attains its maximum of development."

"The circumstance, too, of the gland being usually rather larger than ordinary in phthisical patients, may be mentioned as lending some probability to the view proposed."—*Med. Chir. Review.*

Galvanism applied to the treatment of Uterine Hæmorrhage, etc.

Dr. Radford says that he has pursued this practice with great success, in cases of haemorrhage, accidental or unavoidable, accompanied by exhaustion, and occurring before, during or after labor. He adds—

"I am satisfied, from positive trial of the remedy, that it will be found a most important agent in tedious labor, depending upon want of power in the uterus, and where no mechanical obstacle exists. I would also suggest the probability of its proving valuable in originating uterine action de novo, in cases where it may be considered necessary, to induce premature labor. It seems to me also to be worthy of trial in certain cases of menorrhagia in the ungravid state, where, on vaginal examination, the uterus is found to be atonic, as evidenced by its large flaccid condition, and the patulous siate of the os uteri."

The remedy is thus applied:—

"The brass ball of the vaginal conductor is to be passed up to the os uteri, at intervals, on to various parts of this organ; at the same time, the other conductor must be applied to the abdominal parietes over the fundus uteri. Shocks may be also passed transversely through the uterus, by simultaneously applying the conductor on each side of the belly.

"The application should be used at intervals, so as to approximate in its effects, as nearly as possible, to the natural pains. It may be continued until it meets the exigencies of the case."—*Lancet.*

In the same journal, Dr. Radcliff Hall recommends

The Use of Chloride of Lime in Diseases attended with Contagious Discharge.

"Gonorrhœa.—In the first stage, before the discharge has become completely puriform, or the scalding great, a single injection of about two fluid drachms of the strong solution will always put a stop to the disease, either in a first or subsequent clap. In the second stage, when there is considerable discharge of pus, and more pain, several injections are required. In gleet, provided the discharge be not kept up by some structural change in the urethra, the strong injection is likewise useful, but not to so striking an extent. The effects of injecting the strong solution are, sharp pain, and often erection for the moment, slight puffiness and eversion of the orifice of the urethra, and tenderness on pressure, and a feeling of unusual firmness for two or three inches down the corpus spongiosam, where these did not already exist. In a short time, the pain subsides, and in a quarter or half an hour, a serous discharge issues from the mouth of the urethra."

Purulent Ophthalmia, Dr. Hall has treated with like success. He thus uses the solution:—

"The eyelids are slowly and gently separated until the cornea can be seen, when that is manageable, and all secretion is wiped away with a fine soft sponge. A large bushy camel-hair pencil, charged with the strong solution, is then insinuated beneath the upper eyelid and swept round the front of the eye; the pencil is again charged with the solution and applied to the everted lower lid. Unless plenty of the fluid be thus applied, the application will be equally painful but less effectual. There is considerable pain, of a smarting, burning character, for half an hour or longer, and the already swollen eyelids become still more tumid and prominent. This tumefaction is œdamatous in character, the skin losing in some measure its peculiar redness, and becoming more transparent. In a few hours, a serous discharge oozes out from between the eyelids, and the swelling partially subsides. This is followed by secretion of matter, but after two or three applications of the chloride, in perceptibly diminished quantity, the discharge gradually loses its characteristic yellow color, and is seen in flakes on opening the eyelids. After three or more applications, the eyelids no longer swell as they did after the first, and the pain is much less. The eyes are kept clean with warm water, matter never being suffered to collect beneath the upper lid; a little spermaceti ointment is smeared on the edges of the eyelids, and the strong solution is applied once in every twenty-four hours, until the secretion ceases to be in the least degree puriform. No other treatment whatever is necessary."

Contributions to the Diagnosis and Pathology of Chest Diseases.

Under this title Mr. Mac Donnell offers some valuable facts and observations in the last number of the Dublin Journal. At page 74 of the Lancet for April, 1844, we gave an analysis of an essay, by the same Gentleman, on the "Diagnosis of Empyema." Of this form of disease his present communication affords another example. This case is chiefly remarkable for the close resemblance which it presented in its origin, in its general symptoms, and in many of its physical signs to tubercular consumption. There were present, emaciation, purulent expecto-

ration, hectic fever, mucous rales at the apex of the affected side of the chest, and various other signs, which would at once have led a superficial or ignorant inquirer to arrive at the most unfavorable prognosis. A sound knowledge of the phenomena of chest pathology discovered, however, sufficient grounds for a different conclusion, and the disease was pronouced to be Empyema. The progress of the case, and the final recovery of the patient, afforded the most satisfactory evidence of the accuracy of this opinion.

On the history of this, and of eight other cases of empyema, the author founds the following proposition :—

"That purulent expectoration in empyema, though attended by quick pulse, sweating, emaciation, and other hectic symptoms is not indicative of tubercular or pneumonic abscess, unless accompanied by unequivocal physical signs of these lesions; but, on the contrary, it is to be regarded as the consequence of an effort of the constitution to get rid of a large collection of matter by one of the ordinary emunctories."

Gangrene of the lung also might have been supposed to have been present in this case, as the breath and expectoration were extremely fœtid. The same characters were also present in certain other cases, which terminated fatally, showing that no such condition of the lung existed. Dr. Mac Donnell offers the following, and, we believe correct explanation of the phenomenon :—

"In such cases, we have a quantity of pus and air occupying the minute tubes and air cells, and having but an imperfect communication with the external atmosphere, owing to the larger tubes being nearly obliterated by the compression to which the lung is subjected by the fluid of the empyema, and in this way they act chemically on each other, and produce a decomposition, giving rise to the intolerable odour which both the pus and expired air soon acquire. In fact, the same phenomena are observed in these cases as in an ordinary abscess, the matter of which may be healthy and odourless on its being opened, but soon becomes altered in these respects when air enters the sac and acts upon its contents, which then become bad in quality and offensive in odour. This view is borne out by what was noticed in the present case—viz., that the breath was not fœtid during ordinary expiration, but became so immediately after coughing, by which the air pent up in the remote tubes was expelled, whilst that taken in during ordinary inspiration was exhaled devoid of odour."

A bruit synchronous with the heart's action was heard during the progress of the case, at the left side of the spine. It disappeared with the effusion. Further investigation will probably show this to be a sign of some importance in acquiring information as to the actual physical relations of the parts within the chest.—*Lancet.*

ELEGANT EXTRACT.

More food for the Old Ladies in Breeches.

MESMERISM AND MISS MARTINEAU.

"We do not know whether to congratulate or condole with the talented Heroine of Political Economy on the strange dream that has come o'er her soul. It appears that Miss Martineau recovered her health and—we were nearly saying—lost her senses! But this is not the case—she has acquired an aditional sense—CLAIRVOYANCE! Her maid, BETTY, placed her hand on her mistress's ivory forehead, and, presto, a STEAM-TUG that was passing became metamorphosed into a ship of celestial glory, fringed with gold and silver, and fit to be 'a God-head's dwelling.'

Its all in my eye BETTY MARTIN—EAU!

Betty, however, is no fool. She prescribed ale and brandy-and-water to her mistress, instead of opium-eating, and the change resulted in the best effects. Harriet's Mesmerie dreams will prove a god-send to the animal magnetisers, and will command more attention among the old women of both sexes than her Political Economy and her "Preventive Checks." But it won't do! It will be the wonder of the day—perhaps of nine days—and then sink into oblivion with the exploits of Miss Okey."—*Medico. Chir. Review.*

Dr. Duncan relates, in the last number of the *Northern Journal of Medicine*, an interesting case of *Removal of a coin from the Larynx by inversion of the body.*

An individual amusing himself by tossing up a shilling, and catching it in his mouth, it slipped through the glottis. The accident gave rise to comparatively little inconvenience. The coin seemed to the patient to be fixed at the cricoid cartilage, and he had an impression that it could be displaced were he to stand on his head. This impression corresponding with the opinion of Dr. Duncan and his associates—

"The man was placed with his shoulders against the raised end of a pretty high sofa, and then being seized by three of the most powerful of those present by the loins and thighs, he was rapidly inverted, so as to

bring the head into the dependent position, and, after a shake or two, Dr. Simpson at the same time moviug the larynx rapidly from side to side, the shilling passed into the mouth and fell upon the floor. Not the slightest cough nor dyspnœa was produced, and the patient immediately started up, delighted with the result. He was now perfectly free from uneasiness, and there was a marked change in the character of the voice. He had not the slightest subsequent bad symptom."

Curious case of Mesmeric Detection of Crime.

LYNN, Mass., May 28, 1845.

MR. EDITOR,

Thinking that you and perhaps your readers, might be interested in a specimen of what may be said on the possibility of detecting rogues through the power of Mesmerism, or Animal Magnetism, I have concluded to give you a brief account of a case, that has recently passed under my notice.—It may exceed your belief—I am confident that it will your explanation, as it does mine —meaning the process by which the given result has been reached; but incredulous as it may appear, I beg to say that the circumstances which I relate are bona fide facts, and can be shown to be such, should truth or virtue require, in any court of justice.

One of my nearest neighbors, a man of unquestionable veracity, on Tuesday of last week, in opening one of the money drawers in the counters of his store, discovered that some money had been taken from it, evidently by a stealthy hand, since he had been to it to make change—which, I believe, was in the time of an hour. The exact amount that had been taken he could not tell, though he knew it could not be large; and as to the individual by whom it had been taken, he could form no reasonable or satisfactory conjecture. His thoughts first recurred to his clerk, he being a boy that had been with him but a few days, and not knowing what power temptation might have over him; though he had seen so much to encourage confidence in his honesty, that he could not believe him to be the rogue. Who it could be, of those who had been about the store during the day, or of the suspicious characters in the neighborhood, he could not imagine or satisfy himself. After waiting a day or two, without fixing upon any one as the probable criminal, and having heard of the wonderful revelations asserted to have been made by Mr. and Mrs. C. in a neighboring street, through the power of Mesmerism, to gratify his curiosity in the shape of seeing what might be said on the subject by a person in the mesmeric state, taking along with him his clerk, he called on them for the purpose. Merely stating that he should like to have an experiment in clairvoyance, without telling them his motive or business, and they having had no means of knowing the circumstances in regard to the loss of money from his store, Mr. C. put his wife into the mesmeric sleep, and proceeded to ask her such questions as Mr. P. the applicant, might propose without being in communication with her. The first question related to the discovery and location of his store. She soon found it, describing it, without and within, to his entire satisfaction. The inquiry was next put, whether he had lost anything from the store within a few days. After a strong and somewhat protracted mental effort, she answered, "Yes, some money from a little drawer in the inside of a counter." In a free and earnest manner she went on to relate the particulars as they appeared to her, stating that, in the absence of Mr. P. from the store, and as the clerk stepped down into the cellar with a bare-footed boy to get some butter in a covered tin pail, (which the clerk well remembered,) a lad, apparently about fourteen years of age, entered the store, reached over the counter, pulled out the drawer, and took from it four dollars in two bills, one a three dollar bill, the other a one, which he hastily stuffed into his pocket; and then, instead of making off in a hurry, put on a composed air, and as the clerk came up from the cellar, made as if he had just come into the store in a very loitering, lazy, careless manner, and at last leisurely passed out of the store with the boy that had got the butter. She then described the boy, including his size, looks, hair, &c.,with great particularity; also, his parentage, habits and business; and in tracing him from the store, followed him down to the corner of the next street, where she described him as going into a grocery, and giving two cents for an orange, &c., &c.—The clerk at once remembered that a boy answering exactly to her description had frequently been in the store, and that he saw him, apparently coming into the store, as he came from the cellar at the time mentioned; and he recognized as true of him what she had said concerning his parents and habits.

On returning from the examination, Mr. P. and his clerk thought the matter might repay a little further attention. They accordingly kept a look out for the fellow that had been so particularly, and, as they thought, on reflection, so correctly described. Before the week closed, he made his appearance at the store. Mr. P. taking him one side, and speaking to him in a friendly tone

and manner, told him that he wanted that money that he took from his drawer the other day, (intending to carry the impression that he knew him to be the rogue.) At first, he denied having taken the money; but when Mr. P. told him that a person in Nahant-street, (having in his eye Mrs. C.) saw him enter the store, take the money, put it into his pocket, and when he went out, pass down to a certain grocery, where he bought an orange, giving two cents for it, he lost his power of denial, and, in owning it, confessed that all the circumstances relating to the number and size of the bills, &c. were just as they had been described by the mesmerized subject; and after expressing regret and sorrow, and saying that he had paid away the money, he promised to go to work, earn it and restore it to him.

Such are the facts in the case, and I have them from the original and responsible sources. I submit them to the public, expecting them to be questioned and perhaps ridiculed, but knowing, at the same time, that they can be supported by the most unquestionable of human testimony. I have been particular to inquire whether either Mr. or Mrs. C. had any knowledge of the boy in question before the time of the examination, and if they had, whether they had any suspicion of him as a bad boy; and I learnt that, up to that time, they were ignorant that any such boy lived in town. Leaving every one to form his own opinion in the case, and to make his own comments, I here leave the subject.

Yours, believing in the progress of human discovery and knowledge.

M. S.

N. Y. Tribune.

The relation of the Physician to a Colleague.

This relation is twofold. The first embraces mutual respect, and where that is not possible, let indulgence at least be the principal law of conduct.

Nothing is more difficult than to judge others, but nowhere is it more so than in the practice of medicine. It is therefore unpardonable in the public; but it is revolting to hear physicians, who know the difficulties of the art, and of forming opinions regarding it, judge their colleagues with severity, harshness, contempt, or disclose their faults, and try to raise themselves by lowering others. O that I were able to impress the minds of my brethren with the truism, as forcibly as I am penetrated by it! He who degrades a colleague degrades himself and his art. For, in the first place, the more the public becomes acquainted with faults of physicians, the more will physicians become exposed as contemptible and suspicious, and the more will such exposure impair confidence: and confidence in the whole body being diminished, every single one, and the censurers included, will lose a share of it. The public would be less prone to censure the medical profession, and its faults would not be a favorite topic of conversation, if the members themselves did not broach it, and set the bad example. It shews a short-sighted selfishness, and want of all common spirit, when a physician acts in such a manner, and thereby hopes to raise himself, as he degrades others.

Lancet.

A Doctor and his Lizards.

A letter from Vera Cruz, to the Albany Evening Journal, relates the following marvelous incidents in a notice of a visit to the estate of Dr. Stephens:

"While enjoying our segars under a broad-spread tamarind tree, the lizards came down as usual to keep the mosquitoes away from their protectors. The doctor's kindness for animals has developed instincts and awakened affections that would not discredit a race, intellectually endowed. His beautiful fan-tailed pigeons, when he returns from town, come with their greetings to his carriage, and perch upon his shoulders. His lizards jump from the trees into his hands. A year or two since, when several of the officers of the United States ship Potomac, with two gentlemen residing here, were at breakfast with the doctor, a huge lizard that had the misfortune to lose its tail by some casuality, marched into the rooms, and up to the doctor, with its dismembered limb in its mouth! This looks, I confess, too much like a "Remarkable Snake Story," but it is nevertheless, a well authenticated fact. The maimed reptile, under the influence of instinct highly excited, sought relief from the hand by which it had been fed and cherished. The doctor himself regards the circumstance as a tribute to his skill in surgery.

The unreasoning species are not alone, however, in their appreciation of Dr. Stephen's medical services. He performed, at an early day, with entire success, some of the most difficult surgical operations. His writings on yellow fever, scurvey, &c., won for him the highest medical honors that Europe confers. He was one of three eminent physicians upon whom degrees were conferred upon the occasion of Lord Wellington's installation as Chancellor of Oxford University. He is now devoting himself to investigations of the highest interest touching the Phenomena of Life, which, in his judgment, prove, 1st. That the action of the body is

regulated by some power or agency other than the Brain. 2d. That there is a living, vital agent, independent of, and so far as muscular action fs concerned, superior to the mind; and 3d. That in man, and in the higher order of animals, the principle of life is seated in the solar gangloin, from which the nervous system or machinery draws its power of motion, and by which it is propelled and governed.

Extraordinary facts relating to Combustion.

At a meeting of the Academy of Science, February 3, M. Dumas related some experiments to which he had submitted liquid chlorine refrigerated to 90 degrees below the freezing point, in a mixture of solid carbonic acid and ether.

1. Phosphorus falling into liquid chlorine is ignited with a violent explosion.
2. Phosphorus, itself previously cooled in the freezing bath, inflames in the same manner, with violent explosion.
3. Arsenic, taken at the ordinary temperature, is kindled when dropped into liquid chlorine.
4. Antimony, on the contrary, manifests no action on liquid chlorine.

M. Boussingault proposed that the Academy should give facilities for extending these experiments (which are attended with much danger) on some determinate plan.—*Comptes Rendus, 3d Feb.*

MEDICAL SOCIETY OF LONDON.

Dr. Theophilus Thompson, President.

Effects of Counter-Irritation.

Mr. Dendy, in reference to the discussion at the last meeting, remarked, that when properly and judiciously applied, blisters to children were by no means attended with danger. He himself, however, preferred the use of the acetum lyttæ, which merely required to be painted on the skin with a camel's hair brush, once or twice, to produce vesication. He was in favor of small vesications, such as the size of a shilling, being formed successively at intervals of twelve or twenty-four hours. The acetum lyttæ had the advantage of not producing strangury.

Some remarks on the effects of blisters to children were made by several members.—Applied with due caution, and allowed to remain only a short period, they might be and were serviceable in many cases. Their abuse however, was calculated to do much evil, and never more so than when applied by *ignorant persons*, who allowed them to remain on for a long period.

In order to shew that blisters, or any other kind of counter-irritation, might occasionally be of serious consequence to the patient, it was observed by Mr. Pilcher that he recollected six cases of inflammation of the chest succeeding to measles, in which blisters had been applied, and they were all fatal. He mentioned also the instance of a youth fifteen or sixteen years of years of age, in whom the irritation produced by a compound frankincense plaster applied to the chest, was so great that the parts sloughed, and the patient sunk. In these cases, doubtless, the constitutional powers of the patients were very low.

Mr. Stedman had found the acetic acid as efficacious as the acetum lyttæ, and considered the efficiency of the latter preparation to be dependent on the vinegar.

Mr. Dendy recollected Sir A. Cooper mentioning a case in which a young lady, recently arrived from Jamaica, fell a victim to the application of common blister to her knees. She sank in three days, from sloughing of the parts. In respect to the effects of the various paper preparations of the lyttæ, he had found them so uncertain that he never employed them.

Mr. Bishop remarked that when a large surface was exposed, either as the result of a blister or a burn, nervous irritation of such a character might be produced as to terminate fatally, and this even when the sore itself might have a healthy aspect. The nervous irritation killed Miss Clara Webster. In cases in which this irritation was set up, opium often exerted a most benign influence.

Dr. Forbes Winslow read a paper on

The Incubation of Insanity.

After dwelling upon the importance of studying and treating the disorders of the mind in their earliest or incipient form, or during the period of incubation, and lamenting the little attention which had hitherto been paid to this important subject, Dr. Winslow expressed as his belief, that a very large proportion of the 8,736 incurable lunatics confined in asylums in England and Wales, had been reduced to this sad state by the neglect to which they had been subjected in the incipient state of the malady. According to the last official return made by parliament, there were in the whole of England and Wales, confined in asylums, 11,272 lunatics. Out of this number, there were returned as "incurable," 8,736; and as "curable," only 2,519. This alarming disproportion was attributed to the ignorance which had prevailed with regard to the nature and treatment of this disease. The notion which had so generally been promulgated,

that insanity was an affection of the mind, the spiritual principle abstracted, and the material organization, and not at all associated with bodily disease, had had the effect of retarding the progress of sound pathological knowledge, with regard to the condition of the brain and nervous system, during this fearful inroad upon its recognized functions. The attempts which have also been made to define insanity, to establish a test or standard of mental unsoundness, had also operated most injuriously. Each medical man having formed his own notion of what constituted insanity, no person was admitted to be deranged until he came up to his preconceived standard; and, consequently, the period of incubation was entirely overlooked. The author maintained, with regard to the treatment of insanity, that the probability of recovery lessened in a ratio to the period which was allowed to intervene between the first onset of the disease and its more advanced stages; and that unless the result of physical injury, or connected with strong hereditary predisposition, derangement of mind was, if attacked in its incipient form, as easily curable as incipient inflammation, pneumonia, or rheumatism. He adduced a number of statistical facts to establish the point. He considered that in the primary stage, insanity was but slightly connected with lesions of nervous structure; but if the disorder be permitted to remain for any length of time without any attempt being made to remove it, serious organic changes take place in the delicate organization of the brain, which for ever place the patient beyond the reach of remedial measures. The author urged the importance of applying to the diseases of the brain and its disordered manifestations the same principles which guide us in the elucidation and treatment of other affections of organic structure. He considered that a person might be pathologically insane, who ought not to be held as legally mad. In studying this class of affections, the medical philosopher should dismiss from his mind all his preconceived notions, based upon legal and medical definitions of insanity; if he tied himself down to these metaphysical abstractions, he will close his eyes to a medical truth of the highest import to the human race. Dr. Winslow confessed his inability to define insanity. He thought that, with equal propriety, an attempt might be made to define yellow, red, blue, or any other abstract essence. He considered that insanity was not essentially different from other maladies, that it obeyed the same pathological laws. After entering at some length into the point, and having pointed out the evils which had resulted from the attempts which have been made to throw about this malady an air of mystery and superstition, Dr. Winslow next proceeded to detail the incipient symptoms of this affection. He thought that the period of incubation might last for months and years; cases had been recorded in which it had been of fifteen years duration. Long prior to the explosion of insanity, patients have confessed that they have for months and years been struggling against the encroachment of this malady. In forming an estimate of the presence of insanity in any given case, care should be taken not to confound natural healthy singularity and eccentricity with those deviations from sound mental health which are clearly the consequences of physical disease of the nervous system. The patient's own mind must be the standard of comparison. The physician must compare the manifestations which prevail at the time when the mind is supposed to be affected with the mental state of the individual in its natural and habitual condition. Insanity is often but an exaggeration of the natural habits, passions, and character. The author considered that almost invariably there existed in the early period of insanity, a stage of consciousness during which the patient was perfectly aware of the existence of an altered state of mind, and the approach of "thick coming fancies," against which he often heroically struggled. It was a fallacy to suppose that insanity was often suddenly developed; in those instances in which the malady appeared to break out suddenly, it would be found that a well-marked premonitory stage preceded the attack of mania. This was remarkably the fact in most cases of suicidal insanity. The author thought that the first stage of insanity had been properly denominated the state of "moral incoherency," and that in every case the moral faculties would be found, in the first instance, to be implicated in the disorder and that the intellectual derangement was to be considered but as an advanced stage of the moral disease. He then enumerated the early signs of insanity, before any delusion had fastened itself upon the mind, and the patient had lost all control over the will.

The following was said to be among the incipient indications of insanity:—an altered state of the affections towards relatives and friends, that alteration being often in a direct ratio to the former attachment; a difficulty in guarding against dislike; a restlessness of disposition; a disposition to magnify trifles; weakened volition; defective memory; the patient is inordinately depressed or elated by the most trifling circumstances; he manifests a restlessness and inability to concentrate his

attention to any subject; he neglects his business; avoids the society of those with whom he formerly associated; becomes violently passionate about trifles; manifests a peevishness and impatience of contradiction; he exhibits an extravagance in all his thoughts and actions.

High spirits are often the first manifest signs of approaching insanity; the patient takes larger quantities of wine than usual; if naturally reserved and modest, he becomes the reverse; all his actions betray extreme mental agitation; the imagination is often unnaturally brilliant; old impressions are revived; the patient will be seen to sit for hours in a state of abstraction, as if his mind was occupied in the contemplation of gloomy fancies. In this stage the patient has the appearance of being intoxicated.—Combined with these mental symptoms, are certain physical indications, snch as pain or lightness in the head; a sense of constriction across the forehead; heat and puffiness of the scalp; distress of countenance; prominence of cornea; contracted pupil; a disposition to bite the nails and tips of the fingers; defective articulation; sometimes, however, extreme loquaciousness; an oily or greasy appearance of the skin; fœtid cutaneons exhalation; great restlessness; the patient is disposed to pace up and down a room for hours together, muttering to himself. Before the development of insanity the patient often complains of being troubled by frightful dreams, or with illusions or hallucinations, out of which he is unable to reason himself. The patient complains of sleeplessness; the secretions often become diseased, and the hepatic, in fact, the whole of the digestive organs give evidence of derangement. The pulse is the pulse of excitement without power.

The value of these signs, the author stated, was often not sufficiently estimated until it was too late to repair the cerebral mischief done. Dr. Winslow then pointed out the treatment of incipient insanity. He stated that no specific plan of treatment could be pursued which would be applicable to every case. The medical practitioner must be guided in his treatment by the circumstances connected with each case brought under his consideration. As a general rule, he deprecated bleeding in the early or advanced stages of insanity: there were, however, cases in which considerable vascular action was going on in the brain, and for the removal of which it was necessary to abstract blood both locally and generally. Dr. Winslow also spoke of the exhibition of morphia, purgatives, counter-irritants, and the application of cold in the treatment of insanity, and pointed out the states of brain in which they were admissible.

Mr. Headland complained that the paper had failed in elucidating any new point connected with the subject discussed. He shewed that cause and effect had frequently been confounded, and referred to cases in which insanity existed without any appreciable physical change. He considered that the pathological condition was often the affect and not the cause of the mental disease. He had little expectation of insanity being either cured or prevented by physical remedies, but trusted that moral treatment and training might be of service in effecting, to some extent, its eradication. Altering the habits of the people would tend greatly to this desirable end. He shewed the difficulty of preventing the accomplishment of suicide where insanity on that point existed, although it was easy enough to detect its presence.

Mr. Dendy referred many states of mental aberration to a want of balance in the circulation of the brain, principally in respect to venous congestion.

The discussion was adjourned.

A communication was read from Mr. Curtis, in reference to the valerianate of zinc, in which it was stated that he had administered this medicine with great advantage in a variety of cases of tinnitus aurium, nervous deafness, amaurosis, and muscæ volitantes. The dose was a grain. He introduced the medicine to the Society with the view of inducing the members to try it in cases of nervous debility; and as at present it was not easily procurable in London, he had placed some of the medicine in the hands of the President, to supply any gentleman who would wish to give it a trial. This remedy had the advantage of having mineral and vegetable properties.

Mr. Hird had employed this medicine in two cases of hysterical neuralgia. In one case it was of advantage.

A member had also used the valerianate of zinc in a case of brain affection closely resembling delirium tremens. It was of much benefit.

The discussion of Dr. F. Winslow's paper was then resumed.

Dr. Costello was astonished at the opinions expressed, at the last meeting, by Mr. Headland, as they were perfectly opposed to pathology.

Mr. Headland explained, that in the absence of paralysis or other manifest physical disease, in a great majority of cases of insanity, there would be no appreciable change in the brain after death. There was no relation whatever between the amount of phy-

sical disease and the mental aberration. He referred to a case pulished in The Lancet some years since, in which there was complete destruction of a great portion of both hemispheres of the brain, and yet mind remained perfect to the last.

Mr. Dendy drew an analogy between simple concussion and incipient insanity, in which recovery took place, one from a moral, the other from a physical influence.

Dr. Chowne considered that every mental disease had a physical origin In all cases of insanity there would be a physical change, though it might not always be appreciable. The brain might be temporarily affected by some change in the circulation, independent of organic changes, as spasm and diarrhœa might exist without physical lesion.

Dr. Alison shewed that disorder of the function of the brain might exist without appreciable organic change. Yet who doubted its presence any more than they did the presence of organic change in the kidney (though not to be detected) in certain disorders of function of that organ ?

Dr. Clutterbuck regarded insanity as not a disease per se, but merely a symptom of disordered function of the brain. If we admitted—and, he thought, it could not be reasonably doubted—that the brain was the organ through which the mind was manifested, it followed that every disordered condition of the mind was dependent on some disordered condition of the brain ; not always, it was true, obvious or appreciable, but sti l it was clear that the brain was not in a sound state of health. Not always to the extent of disorganization, for it was known that insanity often left the patient for a time, and then recurred, from causes not very obvious. The brain was often found diseased in cases of insanity, but he wanted proof that those changes were always the cause of the insanity. Authors of eminence, however, had asserted that they had always found the brain diseased in cases of insanity; Sutherland and Haslam were of this number; and Mr. Lawrence, out of seventy-two cases, had found the brain diseased in all, a structural change existing in each case. These facts did not prove that the structural disease was the cause of the symptoms, but it shewed that in insanity the brain was not sound. That these conditions were not the proximate cause of the insane phenomena, however, was proved, for they existed independent of insanity. We found opacity of the membranes, increased vascularity, bloody points, induration, softening, and serous effusions of the brain, in cases in which insanity did not exist. Changes, however, might exist beyond what we were at present enabled to discover. What then caused this state of brain ? He believed that it was always the result of inflammation which had existed at some period or other. He thought this, because inflammation was the great disorganizing process ; and if disorganized, therefore, the brain must, at one time, have been inflamed. The disorganization was the result, in some way, of inflammation. We might often trace insanity in its early stages to the influence of extreme mental emotion, the effects of alcohol, or of local injuries, the insanity subsiding on the subsidence of these causes, so that we had cause and effect at once before us. He complained that the term incubation was not expressive of the manner in which insanity progressed in its early stages. Confirmed insanity was incurable, as the brain had become permanently affected. The time for treatment was in the early stage ; subdue the inflammation then, and you subdued the symptom, and the brain regained its natural condition.

Dr. Wigan agreed with Dr. Clutterbuck, except as to inflammation being the first cause in all cases. He briefly referred to his opinions on the duality of the brain and mind.

Dr. Costello agreed in the main with Dr. Clutterbuck ; but believed that the changes of the brain connected with insanity might be dependent on other causes than inflammation. Thus there was a peculiar shining appearance of the white portion of the brain, not the result of inflammation, frequently found in cases of insanity. He alluded to the state of irritation, the result of long suckling, of softening of isolated portions of the brain, in which the vessels were impervious to injec. tion, as being often passed over in examinations of the brain of lunatics.

Mr. Headland replied. He shewed that no observations which had been made affected the position with which he had started. He shewed, from reference to statistical facts, that insanity bore a ratio to the state of mental and physical destitution which prevailed, and he particularly directed attention to the prevalence of insanity in Wales. He shewed the little benefit likely to result from merely physical agents in the prevention of this disease, and trusted for the alleviation of mankind from this distressing malady to increased physical comforts, and improved mental and moral training.

Imbecility of Medical Colleges.—℞. Replace the professors of the crude notions of a by-gone age, with the talented young men of the profession.—*Clairvoyant.*

Swedenborg's "Animal Kingdom."

This wonderful man is clearly destined to be acknowledged as one of the great lights of the race. His scientific works, which have hitherto remained locked up in the obscurity of the Latin, are now appearing in an English translation, and the profoundest minds are astonished at the gigantic powers which they display. The "Animal Kingdom" in two large volumes, 8vo, has recently appeared from the London press, the character of which may be judged of from the following notices, the one from the London "Forceps," a Medical Journal, and the other from the "Monthly Review." The writers are neither of them in the interests of the New Church, nor believers in the divine mission of Swedenborg.

"This is the most remarkable theory of the human body that has ever fallen in our hands; and by Emanuel Swedenborg, too! a man whom we had always been taught to regard as either a fool, a madman, or an impostor, or perhaps an undefinable compound of all the three. Wonders, it seems, never will cease, and therefore it were better henceforth to look out for them, and accept them whenever they present themselves, and make them into ordinary things in that way. For thereby we may be saved from making wonderful asses of ourselves and our craft, for enlightened posterity to laugh at.

"To return to our book, we can honestly assure our readers, (which is more than it would be safe to do in all cases) that we have carefully read through both volumes of it, bulky though they be, and have gained much philosophical insight from it into the chains of ends and causes that govern in the human organism. What has the world been doing the past century, to let this great system slumber on the shelf, and to run after a host of little bluebottles of hypotheses which were never framed to live for more than a short part of a single season? It is clear that it yet 'knows nothing of its greatest men.' The fact is, it has been making money, or trying to make it, and grubbing after worthless reputation, until it has lost its eyesight for the stars of Heaven and the Sun that is shining above it.

"Emanuel Swedenborg's doctrine is altogether the widest thing of the kind which medical literature affords, and cast into an artistical shape of consummate beauty. Under the rich drapery of ornament which diversifies his pages, there runs a framework of the truest reasoning. The book is a perfect mine of principles, far exceeding in intellectual wealth, and supassing in elevation, the finest effor's of Lord Bacon's genius. It treats of the loftiest subjects without abstruseness, being all ultimately referable to the common sense of mankind. Unlike the German transcendentalists, this gifted Swede fulfils both the requisites of the true philosopher; he is one 'to whom the lowest things ascend, and the highest descend, who is the equal and kindly brother of all.' There is no trifling about him, but he sets forth his opinions, irrespective of controversary, with a plainness of affirmation which cannot be mistaken; and in such close and direct terms, that to give a full idea of his system in other words would require that we lesser men should write larger volumes than his own.

"The plan of the work is this: Swedenborg first gives extracts from the greatest anatomists of his own and former times, such as Malpighi, Leuwenhoek, Morgagni, Swammerdam, Heister, Winslow, &c., &c., so that these volumes contain a body of old anatomy (translated now into close English) such as cannot be met with in this shape elsewhere. He then gives his own unincumbered deductions from this 'experience,' under the heading 'analysis.' Each organ of the thorax and abdomen in this way has a two-fold chapter allotted to its consideration, which chapter is a complete little essay, or we might say, epic, upon the subject. The philosophical unity of the work is astonishing, and serves to unlock the most abstruse organs, such as the spleen, thymus gland, supra-renal capsules, and other parts upon which Swedenborg has dilated with an analytic efficacy which the moderns have not even approached; and of which the ancients afforded scarcely an indication. Upon these more mysterious organs, we think his views most suggestive and valuable, and worthy of the whole attention of the better minds of the medical profession. Of the doctrine of series, since called by the less appropriate term 'homology,' he has afforded the most singular illustrations, not confining himself to the law of series in the solids, but boldly pushing it into the domain of the fluids, and this with an energy of purpose, and a strength of conception and execution, such as is rarely shown by 'any nine men in these degenerate days.' We opened this book with surprise, a surprise grounded upon the name and fame of the author, and upon the daring affirmative stand which he takes *in limine;* we close it with a deep-laid wonder, and with an anxious wish that it may not appeal in vain to a profession which

may gain so much, both morally, intellectually, and scientifically, from the priceless truths contained in its pages."

The language of the Monthly Review, June, 1844, is equally emphatic:

"In conclusion, we record our opinion positively, and not relatively, wholly and without reservation, that if the mode of reasoning and explanation adopted by Swedenborg be once understood, the anatomist and physiologist will acquire more information, and obtain a more comprehensive view of the human body, and its relation to a higher sphere, than from any single book ever published; nay, we may add, than from all the books which have been written (especially in modern times) on physiology, or as it has been lately named, transcendental anatomy. Swodenborg reasons not on any hypothesis, not on any theory, not on any favorite doctrine of a fashionable school, but on the solid principles of geometry, based on the immutable rock of Truth; and he must and will be considered at no distant period the Zoroaster of Europe, and the Prometheus of a new era of reason, however at present the clouds of prejudice may intervene, or the storms of passion obscure the corruscations of his intellect."

Thomasville, Ga., May 1st, 1845.

Dr. H. H. Sherwood.

Dear Sir—Inasmuch as I recently sent you a summary view of the merits of Swedenborg's Animal Kingdom, as taken from a foreign medical periodical, I now send you, in connection therewith, an extract from the work itself—A. K., vol ii., page 158—in which the principles of motion appertaining to the human organization are explicitly stated, and apparently in direct accordance with those which you are now advocating. Should they meet an approval, please insert them in your Dissector, with such comments as you may deem proper.

Respectfully yours, &c.

Wm. Hunnewell, M. D.

"It is a truth constantly presented to us as the result of all our analytic investigations, that every action of the cerebrum and cerebellum is determined through the fibres; and that the fibres cannot be determined into act, excepting by their beginnings or principles; in short, by the organs that are prefixed to the fibres. The latter must certainly be excited to motion by their principles, and commence and describe their motions in this way. It is absurd to suppose that any action can begin in the middle of a fibre, and not in its first terminus. If, then, it begin in the first organs, it must inevitably begin in the cortical glands; for the fibres commence, and are conceived and produced, in those glands, and the arterial vessels of the cerebrum terminate also in them. Hence, if the principles of motion exist in them, according to all physical and philosophical laws, as mutually confirmed by and confirming each other, those principles must necessarily commence by a kind of active, living, or locomotive reciprocal force, that is, by a kind of expansion and constriction, or systole and diastole, such as we observe in a gross form in the lungs and heart; for the same conditions are involved, whether the spirit is to be driven through the fibres, or the blood through the vessels. The blood cannot be driven through its arteries without the reciprocal expansion and constriction of the heart; nor can the spirit be driven through the fibres, which are little canals and vessels analogous to the arteries, only more pure, without the reciprocal expansion and constriction of the cortical glands of the cerebrum, which on this account deserve the appellation of pure corcula, or little hearts. Assuming or granting these points, the necessary consequence is, that every time the cortical and cineritorous substance of the cerebrum, cerebellum, medulla oblongata, and medulla spinalis, contracts or constringes itself, the whole mass of those parts sinks down, and undergoes systole; but, on the other hand, undergoes diastole, when the same substance, I mean the whole congeries, expands. This is the animation of the cerebrum—using the term cerebrum in its widest acceptation—that corresponds to the respiration of the lungs. We must now proceed a step farther. If the animal or nervous spirit, at the intervals of the constriction of these organic substances—of the little hearts of the cerebrum—is expressed by the cerebrum through the nerves and nervous fibres, of course it is expressed by the cerebellum into its grand sympathetic nerves, the par vagum and the intercostals: and granting this, it follows that these nerves act during the same intervals upon the fibres of the pulmonary plexus, and upon the fibres of the costal nerves; which cannot fail on the instant to act upon their muscles and membranes: nor the latter to act upon the ribs, and this upon the internal structure of the lungs. Hence, it follows that the animations of the cerebrum (using the term here again in its widest sense) must necessarily be coincident with the respiration of the lungs; and the fact is still more plainly declared by the influx of the fibres of the above-mentioned cerebellar nerves, the par vagum, and the intercostal,

into all the viscera of the abdomen; and by the motion of those viscera agreeing exactly, and keeping perfect time, with the respiratory motions of the lungs, as proved in detail in our Analysis."—*Animal Kingdom*, vol. ii., pp. 158–9.

Each convolution of the brain or phrenological organ is divided into two equal halves, by a very thin nurilema, on the opposite sides of which the different, or diverging and converging fibres are attached. Swedenborg, a hundred years ago, called the convolutions of the brain, organs, cortical glands, and corcula, or little hearts. He was also familiar with the fact, that motion is produced by the action of two forces. Wonder how many hundred years it will require to beat this knowledge into the heads of the professors of our medical colleges!

Magnetizing in Lateral Curvatures of the Spine.
Drawn and Engraved from a Daguerreotype.

In magnetising for lateral curvatures of the spine, we have introduced the chair represented in the engraving. It is a strong common office arm-chair, the upper and back part of which being sawed off, and the front part cushioned—the right arm resting on one cushion, and the magnetising buttons on the other. A loose cushion is crowded into the space on the right side, and a strong gallon glass bottle placed upon it; when the young lady with a right and left spinal curvature—or having the upper part of the spine curved to the right, and the lower part to the left side—is drawn over the bottle by an assistant, in the manner seen in the figure, and the buttons applied in the usual manner, as described in p. 60, 61.

In this case, it was eight years since the curvature commenced; and there was, as usual, a large white swelling of the right scapula, or shoulder-blade, which drew the spine under it.

On the 23d time we magnetised this patient (May 17, 1845,) the white swelling being greatly reduced, and the atrophied or emaciated muscles on the opposite side much thickened, the spine passed the centre, under the action of the machine, and began to curve to the left side, as seen in the figure.

The most prominent part of the white swelling was of a dark red color, produced by the heavy brass corsets the young lady had long worn, which was consequently shown in the daguerreotype.

We have here presented in the plainest manner, the extraordinary phenomena of the reduction of hypertrophied muscles on one side of the spine, and the thickened atrophied muscles on the other, by the action of the machine *alone*, directed by a scientific and easy application of the buttons.

GREENLAND.

English antiquarians are pursuing interesting enquiries relative to the original settlement of Greenland and the character of its soil and climate. It was supposed originally to have been connected with our continent but it has been distinctly ascertained that it is separated from the American continent by a wide channel called Davis Straits, and extends beyond 78 degrees of latitude. The most extraordinary fact about Greenland is the wonderful change of climate it has undergone. Barren soils have been reclaimed

by emigration and industry, and cold climates changed into warmer latitudes by clearing the woods and letting in the rays of the sun, but we have no instance on record of settlements originally in warm climates, and fruitful soils becoming in centuries cold, bleak, and barren, and yet such has been the case with Greenland. The country, although now consisting of little else than barren rocks, mountains covered with snow and ice, and vallies filled with glaciers,—although its coast, now lined with floes of ice, and chequered with icebergs of immense size, was once easily accessible, and its soil was fruitful, and well repaid the cultivator of the earth. This country was discovered by the Scandinavians, towards the close of the tenth century, and a settlement was effected on the eastern coast in the year 982, by a company of adventurers from Iceland, under the command of Eric the Red. Emigrants flocked thither from Iceland and Norway, and the germs of European enterprize and civilization appeared on different parts of the coast. A colony was established in Greenland, and it bade fair to go on and prosper. That the climate must have been mild and the soil fruitful, we gather from the fact that in 1400 there were not less than 190 villages, 12 parishes and 2 monasteries, and for 400 years there was constant and profitable mercantile intercouse with the Danish provinces and Europe, but in 1406 every thing changed—a wall or ice barrier arose along the whole line of coast, and no landing could be effected, and up to the seventeenth century the whole approach to the country was blocked by unsurmountable barriers of ice—vegetation was destroyed and all vestiges of its former inhabitants are gone—parts of houses, churches, &c, remain, but the inhabitants have all perished by cold. One of our cotemporaries in referring to the gloomy subject says:—It would require no very vivid imagination to imagine the appalling sense of destruction, which bleached the features and chilled the hearts of those unhappy colonists when they began to realize their forlorn condition, when the cold rapidly increasing and their harbors became permanently blocked with icebergs, and the genial rays of the sun were obscured by fogs—when the winters became for the first time intensely rigid, cheerless and dreary—when the summers were also cold, and the soil unproductive—when the mountains were no longer crowned with forests, but covered with snow and ice throughout the year, and the vallies filled with glaciers—when the wonted inhabitants of the woods and the waters were destroyed or exiled by the severity of the weather, and their places perhaps supplied by monsters of a huge and affrightful character.—*The New-York Sun, March 8th*, 1845.

A solution of the mystery of the extraordinary changes of climate, in which the people of Greenland flourished in one period, and became extinct in another, is found in the revolutions of the magnetic poles and lines of no variation and maximum declination. These poles and lines perform a revolution around the earth in 666 years, and produce and mark the lines of the greatest cold, while the lines of maximum declination, 90 degrees east of these lines in the different hemispheres mark the lines of the greatest heat in the different latitudes.

The line of no variation which is now 37 minutes west of Pittsburgh, passed over London in 1657, and over the meridian of the City Hall, New-York, in 1791. The line of maximum declination, which is now 90° 37' *west* of Pittsburgh, passed over the meridian of that city in 1623, and the one which is now 90° 37' *east* of Pittsburgh passed over London in 1820. These lines are therefore moving from east to west, and the heat increasing on the east, and decreasing on the west side of the line of no variation.

The cold is consequently increasing in Europe, and the heat increasing in this country, east of Pittsburgh, and from a line drawn on the 1st of January, 1845, from a point 3 degrees, 34 minutes, 55 seconds, east of St. Augustine, Fa., in latitude 29 degrees, 48 minutes, 30 seconds north, and longitude 77 degrees, 54 minutes, 37 seconds west; to a point 7 minutes, and 51 seconds east of Ashtabula, on Lake Erie, in latitude 41 degrees, 52 minutes north, and longitude 80 degrees, 47 minutes, 57 seconds west of London.

These lines are at an angle of 6° 27' 33" with the terrestrial meridians, and the line of maximum declination which passed over London in 1820, is now, or was on the first of January, 1845, 10° 52' 55" west of that meridian, on that parallel of latitude. Its longitude in the arctic circle; (latitude, 66° 32' 27".) which passes through the southern part of Greenland, was at the same time 14° 47' 07" west. In latitude 70°, 15° 38' 30";

and in latitude 80°, 18° 18′ 57″ west. On drawing a line on a globe through these latitudes and longitudes, it will be found to pass through the eastern and middle part of Greenland, where the mean heat in that country is now at its maximum, and the following table will show the position of the lines of maximum declination, in every 333 years from the commencement of the Christian era to the year 2178, or during the time the sun is passing through one sign of the Zodiac, and also the situation of the magnetic pole and lines of no variation in every 333 years of the intermediate periods.—× represents the pole and line of no variation, and=× the pole and line of maximum declinations.

Christian Era,		0	Obliq. Eclip. 23° 45′	
		16½	—×180°	West.
		166½		
333	=	183	= 90°	East.
		166½		
	—	349½	—×	
		166½		
333	=	516	=× 90°	
		166½		
	—	681½	—×180°	W.
		166½		
333	=	848	=× 90°	E.
		166½		
	—	1013½	—×	
			——	1073
		166½		
333	=	1180	—× 90°	W.
		166½		
	—	1345½	—×	
			——	1406
		166½		
333	=	1512	= 90°	E.
		166½		
	—	1678½	—×	
			——	1739
		166½		
333	=	1845	=× 90°	W.
		166½		
	—	2011½	—×180°	W.
		166½		
333	=	2178	=× 90°	E.

It appears from the above table, that in the year 1013 1-2, the magnetic pole in the arctic circle, was in the same longitude as the line of maximum declination is in at the present period, and the cold was at its maximum in that latitude. This was 28 years after the first settlement of Greenland by Eric the Red.

It also appears that from the year 1073, when the climate may have become mild and the soil fruitful to the year 1406, when the whole coast was closed by ice barriers, was 333 years. From 1406 to 1739 was 333 years when the ice barriers gave way, and the climate became again mild and the soil began to be fruitful. The first period it will be seen from the positions of the pole and line of maximum declination, was that of heat, in which the colony flourished, and the second that of cold, in which it perished.

The historical evidence relative to the maratime enterprises, and voyages of discovery made by the northmen, at periods corresponding to those of the maximum and minimum temperature of this region from this cause, is highly interesting and corroborative. Thus we find that in the year 1000, but 13 1-2 years prior to the arrival of the pole in the longitude of Greenland, 14° 47′ west.—Lief Ericson, son of Eric the Red, commenced a voyage of discovery to the south, and landed at various places on the eastern shores of this continent, to which he gave the names of Hallu-land, Markland, and Vin-land, supposed to be respectively Newfoundland, Nova Scotia, and the coast of New England, whence he returned with timber and grapes. Two years subsequently, in 1002, Thorwald, brother of Leif, made a voyage to Vinland, or Vineland, and was killed by the Indians, together with eight of his crew. The survivors lingered until the year 1004 in the vain hope of effecting a settlement, but were so harassed by the natives as to be induced to return to Greenland in the spring of the ensuing year. In the course of the next six or eight years, several other expeditions were attempted, and appear to have been rendered abortive from the same cause. A long interval in the prosecution of this enterprise seems to have then ensued, and it is not until the year

1347, or more than 333 years from the date of the first recorded expedition, that we find it again resumed. At this period, however, the cold in Greenland had again become exceedingly severe, from the arrival of the magnetic pole on the same meridian, although 180 degrees of longitude distant, and on the opposite point of the arctic circle to the one which it had occupied 333 years previous. This return of cold probably furnished the strong impulse of necessity for the new expedition in search of the more genial climate of which record and tradition had preserved memorials; for the cold had become so intense, and the ice had so formidably accumulated, by the year 1406, as to create an insurmountable barrier of ice-bergs along the whole coast, gradually destroy the inhabitants, and leave their 190 villages desolate. The coast thus remained ice-bound, and the country inaccessible to explorers until the year 1739, or about 50 years after the magnetic pole had again passed that meridian, on its westerly quadrature of revolution. It was then that the desolation of the country, and the melancholy relics of its former prosperity were discovered, and a new colony established. In the present year, 1845, the descendants of these new colonists are enjoying the most genial climate of which their latitude admits, the pole being distant 90 degrees to the west, and the line of maximum declination in their midst. Their next cold period will be in the year 2011 1-2, when the pole will be 180 degrees west, coincident with their meridian of longitude as it was in 1345 1-2, but the cold will be less intense than it was in 1678 1-2, when its effects were so destructive and exterminating, because it will then be more distant from them in latitude, by the whole diameter of the arctic circle, or 46°, 56′; and this truly awful and intollerable epoch of maximum cold, will not return to them until the year 2344 1-2, or 666 years from the year 1678 1-2, when the pole will again be present, in all its horrors.

Similar changes of climate occur in all other latitudes, in the same periods, although in a milder and less remarkable degree, in proportion as countries approach the equator. In the year 1780, so memorable for the intensity of its winter, the magnetic pole was on the meridian of this city of New York, and being also on the proximate side of the arctic circle, the cold was greater than it had been for the previous 666 years, or than it will be again for the same period to come. The whole bay of New-York was frozen over, so as not only to be traversed by sleighs, but to admit of heavy cannon being taken on the ice down through the Narrows, and across the lower bay to the shore of New Jersey. Since that time the average temperature of our winters has been growing milder, and will continue to do so until the year 1967 1-2, when the magnetic needle in this city will have acquired its maximum westerly declination, or, in other words, when the line of maximum declination will be on this meridian. In the meantime, though very temporarily, our springs may be rendered fickle and chilly in temperature, by the breaking up of the ice, on the northeast coast of Europe, where that line is present on its course to the westward, and by the consequent passage of large fields of ice off our coast, on their way to the southward. Since this line, however, like the line of minimum declination, or no variation, crosses the terrestrial meridians at an angle of 6º 28′, (nearly) it follows, that countries situated in more southern latitudes, will receive their periodical meliorations and deteriorations of temperature later than those in higher latitudes; and consequently, the winters will be increasing in severity in Florida, Louisiana, Alabama, and all other regions which have now an easterly declination of the needle, while they are diminishing in severity in this and higher latitudes of this continent where the declination is increasing westerly.

In short, the temperature of all countries and climates is absolutely subservient to the following law, however it may have been over-looked by meteorologists and previous writers upon the subject, viz: Where the declination of the magnetic needle is increasing, the average cold is decreasing; and where the declination is decreasing, the average cold is

increasing. In briefer terms, the average temperature increases and decreases with the declination of the magnetic needle.

In Europe, where the westerly declination is decreasing, the cold of winter, as we learn from the unanimous report of the foreign journals, is sensibly increasing, and it will continue to do so, until the eastern half of the great circle of no-variation now in the East Indies, and 9° west of Pekin, shall arrive in Europe, and the declination there is diminished to Zero, preparatory to its becoming easterly.

LORD ROSSE'S TWO GREAT TELESCOPES.

[As the extraordinary telescopes recently constructed by Lord Rosse are beginning to excite popular attention, we extract from an able article in the British Review, a full account of what the noble astronomer has accomplished :]

'After the preliminary details respecting the constructions of gigantic telescopes, and the principal discoveries which they have enabled astronomers to make, our readers will be better able to appreciate the genius, the talent, the patience, and the liberality with which an Irish nobleman has constructed telescopes far transcending in magnitude and power all previous instruments, whether they were the result of private wealth, or of royal or national munificence. That nobleman is Lord Oxmantown, now the Earl of Rosse, one of a distinguished group of Irish philosophers, who, educated in the same academical institution, now adorn it with their genius, and sustain it with their labors.—In the records of modern science, there are few brighter names than those of Robinson, Hamilton, Lloyd and Maccullagh, and in the person of the Earl of Rosse and Lord Enniskillen, the aristocracy of Ireland have contributed their contingent to her intellectual chivalry.

If, in an eloquent address to the British Association at Cork, Dr. Robinson has given expression to his delight, "that so high a problem as the construction of a six feet speculum should have been mastered by one of his countrymen—by one whose attainments are an honor to his rank—an example to his equals—and an instance of the perfect compatibility of the highest intellectual pursuits with the most perfect discharge of the duties of domestic and social life :"—we also may indulge in the pleasing recollection that Lord Oxmantown's earliest plans for improving the reflecting telescope were first given to the world in three communications, which were published in a Scottish Journal of Science, and that some of us were the first to recognize their value, and to see looming in the distance that mighty instrument with which we are about to make our readers acquainted.

As the surfaces of all lenses and specula are necessarily of a spherical form, they are subject to what is called spherical aberration, that is the edge both of specula and lenses has a shorter focus than the centre. In lenses this may be diminished or even removed by the opposite aberration of a concave lens; but this remedy cannot be applied to specula. It therefore occurred to Lord Rosse, that the first step towards the improvement of the reflecting telescope, was to diminish the spherical aberration. With this view he formed the speculum of three parts, a central speculum, a ring, inclosing the central speculum, and outer ring. These three portions were cemented together, and ground and polished as one speculum.—They were then combined by an ingenious piece of mechanism, so that the first and second rings could be advanced each a small fraction of an inch, in order that their focus should accurately coincide with the focus of the central speculum. Lord Rosse's first attempt did not succeed to his wishes, owing to a defect in the mechanism, which required frequent adjustments, as the smallest shock displaced the images. He then tried to combine one ring only, 1 inch thick, with a central metal 1 1-2 inches thick, the two together forming a speculum of six inches aperture, and two feet focal length. This combination was more successful, as it "remained in perfect adjustment even after very violent shocks." In these combinations Lord Rosse did not perceive the ill effects which he had apprehended from contraction and expansion; and it remained to be seen, from future trials, if they did appear, whether or not they could be removed. "On my return from Parliament, (June 1828) says Lord Rosse, if other avocations do not interfere, I propose to construct a speculum in three parts of 18 inches aperture, and twelve feet focal length—this will be giving the experiment a fair trial on a large scale." This proposal was accordingly executed, and he found the speculum superior to a solid one of the same dimensions.

In order to grind and polish large specula, Lord Rosse soon perceived that a steam-engine and appropriate machinery were necessary. He accordingly invented a machine of this kind, and transmitted an account of it to the writer of this article, who published

it in the Edinburgh Journal of Science, for October, 1828. The engine which his lordship actually constructed and used was one of two horse power, though from some rude trials with it he inferred that a one horse power would be fully sufficient for executing at the same time three or four specula six inches in diameter. For such sizes Lord Rosse conceived that a day would suffice for completing the process, and that a machine on the scale shown in his drawing, 'would be sufficiently large to grind and polish a speculum of three feet diameter, or perhaps larger.' In this interesting communication Lord Rosse suggests what he afterwards accomplished, that the motion for producing a parabolic curve, 'might be imitated by means of the eccentric guides, and the slow circular motion of the speculum, and with this advantage, that, were it found really successful, the same result would probably be always afterwards obtained.'

Before the year 1830, Lord Rosse had made still further advances towards the great object he had in view. He found from many experiments that he could not cast a speculum of the modern dimensions of 15 inches, without reducing the composition considerably below the highest standard, that is without using so much copper as to produce a soft and yellowish metal. All the specula cracked in annealing when the proper composition was employed.

In order to get over this difficulty, he tried to cast the specula in different pieces, and to unite them by their surfaces; but though this was practicable, he abandoned it for the following plan. He found that an alloy of copper 2-75 parts, with 1 of zinc, expanded and contracted with a change of temperature in the same degreee as speculum metal, and was an alloy maleable, ductile, and easily worked. With this alloy he cast a speculum 15 inches in diameter, with a rim and ribs behind. It was turned smooth and flat on one side, and tinned. Six pieces of the highest speculum metal, 1 1-4th of an inch thick, were then placed on the flat tinned surface, so as to complete a circular disc 15 inches in diameter, and when soldered to it, composed a plated speculum. When ground and polished, it formed an excellent telescope of twelve feet focal length. Upon the same plan, Lord Rosse constructed a speculum two feet in diameter, for a telescope twenty-six feet long. Hitherto it had been believed by opticians, that a fine polish could not be given to specula, unless when the polisher became dry and hot; but Lord Rosse at this stage of his researches found out a method of polishing a cold metal upon a moist polisher, an object of very great importance, as a speculum should he polished at the same temperature at which it is to be used.

First Telescope, Twenty-six feet long.

The next step in Lord Rosse's progress was to make a plated speculum, three feet in diameter. The proportions of copper and tin, which he found to be the best, were the definite ones of four atoms of copper to one of tin, or 126-4 parts of copper to 58-9 of tin, or 32 of the one to 14-91 of the other. After preparing the alloy speculum, which was to be plated, and turning it to a radius of 54 feet, Lord Rosse proceeded to cast the small plates of speculum metal, about 9 inches square. In doing this he encountered great difficulties, owing to their extreme brittleness, arising, no doubt, from the too rapid cooling of their edges, and the consequent state of tension. In order to produce uniformity of cooling, he tried two ways of constructing the mould. The first was to make the lower surface of the mould, containing the liquid speculum, absorb the heat rapidly, and the upper retain it; and the second was to cool the lower surface while the heat of the upper surface was undiminished. The first plan did not succeed; but the second did, by making the lower surface of the mould of iron, and the upper of sand; but though the castings were sound, there was this defect, that bubbles of air were entangled between the iron disc and the speculum metal, producing cavities which it was troublesome to grind out. Hence he was led to replace the iron disc, by one made of pieces of hoop iron, placed side by side with their edges up, tightly packed in an iron frame, the surface thus composed of edges, being smoothed to the proper curvature, by filing or turning. By this most ingenious process he constructed a metallic surface every where open, as the closest plates allowed the air to pass freely between them.

'So successful was this expedient,' says Lord Rosse, 'that of sixteen plates cast for the three feet speculum, not one was defective. The following particulars require to be attended to. The disc of hoop iron should be as thick as the speculum to be cast upon it, so as to cool it with sufficient rapidity; it requires to be warm, so that there may be no moisture deposited upon it from the sand. It may be heated to 212 deg. without materially lessening the cooling power. The metal should enter the mould by the side, as is usual in iron founding, but much quicker, almost instantaneously; one second is sufficient for filling the mould of a nine inch plate of speculum. As to the temperature of the metal, this can be best ascertained by stirring it with a wooden pole occasionally,

after it has become perfectly fluid: when the carbon of the pole reduces the oxide on the surface of the metal, rendering it brilliant like quicksilver, the heat is sufficient. When the metal has become solid in the ingate or hole through which it enters the mould, the plate is to be removed quickly to an oven heated a little below redness, to remain till cold, which, where the plates are nine inches in diameter, should be three or four days at least.'—[Phil. Trans., 1840, p. 511.]

When the nine inch plates are properly scraped and cleaned, much attention is necessary in soldering them upon the tinned surface of the alloy speculum. Care must be taken that until the tin on the speculum is fused, the melted rosin must not be poured in between the plates.

The great success which attended this new method of casting these nine inch specula, induced Lord Rosse to try it on a large scale, and he accordingly proceeded with one 20 inches, and another three feet, which on the first trial was cast perfect. The crucibles which he employed were made of cast iron, and cast with their mouth upwards; and the fuel used was peat or wood, which are both preferable to coke.

A perfect speculum being thus obtained, the next object to be accomplished is to work it, by grinding and polishing, to a perfect spherical figure. The machine for this purpose, which we have already described, was improved and enlarged so as to work a speculum three feet in diameter, and after several years experience, during which specula have been ground and polished with it many hundred times, it has been found to work large surfaces with a degree of precision unattainable by the hand. The peculiarity in this process, introduced by Lord Rosse, and as we conceive essential to success, is, that the polisher works above and upon the face of the speculum to be polished, and one singular advantage of this arrangement is, that the figure of the speculum can be examined as the operation proceeds, without removing the speculum, which, when a ton weight, is no easy matter. The contrivance for doing this is so beautiful, and has proved so useful that we must briefly explain it. The machine is placed in a room at the bottom of a high tower, in the successive floors of which trap-doors can be opened. A mast is elevated on the top of the tower, so that its summit is about 90 feet above the speculum. A dial plate is attached to the top of the mast, and a small plane speculum and eye-piece, with proper adjustments, are so placed that the combination becomes a Newtonian telescope, and the dial-plate the object.

During the operation of polishing the larger specula, a variety of difficulties occurred, but they were all surmounted by the ingenuity and patience of Lord Rosse. At first, in order to allow a lateral expansion of the pitch, it appeared necessary to increase the thickness of the bed of pitch as the diameter of the speculum was increased. This proved a failure, and the lateral expansion was provided for by making grooves in the pitch; but these grooves, though there were two sets at right angles to each other, and only two inches distant, were with difficulty kept open, and the other polisher lost its figure. All these evils, however, were removed by furrowing the polisher itself, so as to divide it into definite and insulated portions. The effect of this improvement was so great that the plated or divided three feet speculum defined better with a power of 1200 than it had previously done with a power of 300. In place of pitch, Lord Rosse used, as his polishing surface, a mixture of common resin and turpentine, and this composition was laid on in two strata of different degrees of hardness, the outer one being the harder, the subjacent softer layer expanding laterally, so as to preserve the figure of the polisher. The speculum being placed in a cistern of water, the polishing process is then effected by using peroxide of iron and water, of about the consistence of thin cream.

The last and most important part of the process of working the speculum, is to give it a true parabolic figure, that is, such a figure that each portion of it should reflect the incident ray to the same focus. This grand difficulty has been completely mastered by Lord Rosse. The operations for this purpose consist, 1st, of a stroke of the first eccentric, which carries the polisher along one-third of the diameter of the speculum. 2d. A transverse stroke 21 times slower, and equal to 0 27 of the same diameter, measured on the edge of the tank, or 17 beyond the centre of the polisher. 3d. A rotation of the speculum performed in the same time as 37 of the first strokes; and 4th. A rotation of the polisher in the same direction about sixteen times slower. If these rules are attended to, the machine will give the true parabolic figure to the speculum, whether it be six inches or three feet in diameter. In the three feet speculum, the figure is so true, with the whole aperture, that it is thrown out of the focus by a motion of less than a thirtieth of an inch, "and even with a single lens of one-eighth of an inch focus, giving a power of 2592, the dots on a watch dial are still in some degree defined.

The twenty-six feet telescope thus executed, has a general resemblance to that of Ra-

mage, but the tube, gallery, and vertical axis of the stand are counterpoised. It is used as a Newtonian telescope, with a small plane speculum, to prevent the image being deformed by oblique reflection which is the effect of the front view. When the specula are not used they are preserved from moisture and acid vapors by connecting their boxes with chambers containing quick lime, an arrangement which Dr Robinson had applied for several years to the Armagh reflector.

Discoveries made by the Telescope.

When this telescope was completed, it became an object of high interest to ascertain its performance. In doing this, Dr. Robinson had, as he remarks, "the advantage of the assistance of one of the most celebrated of British astronomers, Sir James Smith;" but the weather, the state of the air, and the light of the moon, between the 29th of October and 8th of November, 1840, were unfavorable. The following is the substance of Dr. Robinson's report:—

'Both specula, the divided and the solid, seem exactly parabolic, there being no sensible difference in the focal adjustment of the eye-piece with the whole aperture of 36 inches, or one of twelve; in the former case there is more flutter, but apparently no difference in the definition, and the eye-piece comes to its place of adjustment very sharply.

'The solid speculum showed *a* Lyræ round and well defined, with powers up to 1000 inclusive, and at moments even with 1600; but the air was not fit for so high a power on any telescope. Rigel, two hours from the meridian, with 600, was round, the field quite dark, the companion separated by more than a diameter of the star from its light, and so brilliant that it would certainly be visible long before sunset.

'Orion is well defined, with all the powers from 200 to 1000, with the latter a wide black separation between the stars; 32 Orionis and 31 Canis minoris were also well separated.

'It is scarcely possible to preserve the necessary sobriety of language, in speaking of the moon's appearance with this instrument, which discovers a multitude of new objects at every point of its surface. Among these may be named a mountainous tract near Ptolemy, every ridge of which is dotted with extremely minute craters, and two black parallel stripes in the bottom of Aristarchus.*

'There could be little doubt of the high illuminating power of such a telescope, yet an example or two may be desirable. Between *s*1 and *s*2 Lyræ, there are two faint stars, which Sir J. Herschel (Phil. Trans., 1824) calls 'debilissima,' and which seem to have been at that time the only set visible in the 20 feet reflector. These at the altitude of 180° were visible without an eye-glass, and also when the aperture was contracted to 12 inches. With an aperture of 18 inches, power 600, they and two other stars (seen in Mr. Cooper's achromatic of 13.2 inches aperture, and the Armagh reflector of 15 inches) are easily seen. With the whole aperture, a fifth is visible, which Dr R. had not before noticed. Nov. 5, strong moonlight.

'In the nebula of Orion, the fifth star of the trapezium is easily seen with either speculum, even when the aperture is contracted to 18 inches. The divided speculum will not show the sixth with the whole aperture, on account of that sort of disintegration of large stars already noticed, but does, in favourable moments, when contracted to 18 inches. With the solid mirror and whole aperture, it stands out conspicuously under all the powers up to 1000, and even with 18 inches it is not likely to be overlooked.

Among the few nebulæ examined were 13 Messier, in which the central mass of stars was more distinctly separated, and the stars themselves larger than had been anticipated; the great nebula of Orion and that of Andromeda showed no appearance of resolution, but the small nebula near the latter is clearly resolvable. This is also the case with the ring nebula of Lyra; indeed, Dr. R. thought it was resolved at its minor axis; the fainter nebulous matter which fills it is irregularly distributed, having several stripes or wisps in it, and there are four stars near it, besides the one figured by Sir John Herschel, in his catalogue of nebulæ. It is also worthy of notice, that this nebula, instead of that regular outline which he has there given it, is fringed with appendages, branching out into the surrounding space, like those of 13 Messier, (Sir J. H's, 86), and in particular having prolongations brighter than the others, in the direction of the major axis, longer than the ring's breadth. A still greater difference is found in 1 Messier, described by Sir John Herschel, as 'a barely resolvable cluster,' and drawn, fig. 81, as a fine eliptic boundary. This telescope, however, shows the stars, as in his figure 89, and some more plainly, while the general outline, besides being irregular and fringed with appendages, has a deep bifurcation to the south.'*

* Dr. Robinson, in his address to the British Association, on the 24th August, 1843, stated, that in this telescope, a building the size of the one in which they were assembled would, under favorable circumstances, be easily visible on the Lunar surface.—[Athenæum, Sept. 23, p. 867.]

* Phil. Trans., 1833, p. 503.

In a Paper entitled 'Observations on some of the Nebulæ,' communicated to the Royal Society on the 13th of June last, Lord Rosse has given sketches of five of the nebulæ in Sir John Herschel's Catalogue,* numbered 88, 81, 26, 29, and 47, as seen in his three feet specula, and as soon as this paper is printed, the comparison of these drawings with Sir John Herschel will exhibit the power of the new telescope.

Fig. 26 of Sir J. Herschel's Catalogue (Messier 27) called the Dumb-bell Nebulæ, from its supposed resemblance to a dumb-bell, is shown by Lord Rosse's telescope to be a cluster of stars, or rather two clusters in close proximity, and, indeed, to a certain extent, blended together, and without the exact elliptical termination of Herschel's figure.

Fig. 81 of Sir J. Herschel's Catalogue (Messier 51) seen as an oval nebulæ by both these astronomers, is found to be a cluster of stars remarkable for its singular appearance, the ramifications from its southern extremity extending to a distance equal to its major axis, and giving it the appearance of a scorpion.

Fig. 45 of Sir J. Herschel's Catalogue is a perfectly circular planetary nebula: but Lord Rosse has discovered it to be an annular nebula like the elliptical annular nebula in Lyra, (29 Sir J. Herschel's Catalogue, and 57 Messier) but very much more difficult to be seen.

Fig. 49 of Sir J. Herschel's Catalogue is represented as a remarkable round planetary nebula, containing three stars, one at each of the three vertices of an equilateral triangle; Lord Rosse's telescope shows this as a long irregular patch, with about seven stars in it, grouped unsymmetrically.

There are a few interesting examples of the manner in which the new telescope has resolved nebulæ into stars, and has destroyed that symmetry of form in globular nebulæ, upon which was founded the hypothesis of the gradual condensation of nebulous matter into suns and planets.

The second Telescope, 50 feet long.

Such is a brief account of the construction and performance of a telescope which Dr. Robinson characterizes as the most powerful that has ever been made. Its superiority to all other instruments must have been very gratifying to Lord Rosse, and might have justified him in resting from his labors, and enjoying the honor of having triumphed in so noble an undertaking; but the instrument was scarcely out of his hands before he resolved upon attempting the construction of another reflector, with a speculum six feet in diameter, and fifty feet long! This magnificent instrument was accordingly undertaken and within the last month has been brought to a successful termination. The speculum has six feet of clear aperture, and therefore an area four times greater than that of the three feet speculum, and it weighs nearly four tons! The focal length is 53 feet. It was polished in six hours, in the same time as a small speculum, and with the same facility; and no particular care was taken in preparing the polisher, as Lord Rosse intended to re-polish it as soon as the focal length was ascertained to be correct; but upon directing it to a nebula, the performance was better than he expected, and he therefore has suffered it to remain in the tube for the present. The second or duplicate speculum, not yet finished, is in every respect the same in size. It was only three weeks in the annealing oven, and is reckoned very good.

The casting of a speculum of nearly four tons must have been an object of great interest, as well as of difficulty; but every difficulty was foreseen and provided against. In order to insure uniformity of metal, the blocks from the first melting, which was effected in three furnaces, were broken up, and the pieces from each of the furnaces were placed in three separate casks, A, B, and C.

Then in charging the crucibles for the final melting of the speculum, successive portions from cask A were put into furnaces a, b, and c, from B into b, c, d, and so on.

In order to prevent the metal from bending or changing its form, Lord Rosse has introduced a very ingenious and effective support. The speculum rests upon a surface of twenty seven feet of cast iron, of equal area, and strongly framed so as to be stiff and light. There are twelve of these in the outer rim, nine in the next, and six sectors at the centre. Each of these pieces is supported at the centre of gravity on a hemisphere bearing at the angle of a triangle of cast iron, these triangles being in their turn similarly supported at the angles of three primary triangles, which, again, are supported at their centres of gravity by three screws which work in a strong iron frame, and serve for adjusting the mirrors. This frame carries also levers to give internal support to the speculum, in the same diffused manner. The frame, which contains the speculum, is attached to an immense joint, like that of a pair of compasses moving round a pin, in order to give the transverse motion for following the star in right ascension.

* Proceedings of the Royal Irish Academy, No. 25, pp. 8, 11, Nov. 9, 1840.

This pin is fixed to the centre piece between two trunnions, like those of an enormous mortar, lying east and west, and upon which the telescope has its motion in altitude. To the frame there is fastened a large cubical wooden box, about eight feet a side, in which there is a door through which two men go in to remove, or to replace the cover of the mirror. To this box, is fastened the tube, which is made of deal staves, hooped like a huge cask. It is about 40 feet long, and 8 feet diameter in the middle, and is furnished with internal diaphragms, about 6 1-2 feet in aperture. The Dean of Ely walked through the tube with an umbrella up!

* * * * * * *

In looking back upon what the telescope had accomplished—in reckoning the thousands of celestial bodies which have been detected and surveyed—in reflecting on the vast depths of ether which have been sounded, and on the extensive fields of sidereal matter out of which worlds and systems of worlds are forming and to be formed—can we doubt it to be the Divine plan that man shall yet discover the whole scheme of the visible universe, and that it is his individual duty, as well as the high prerogative of his order, to expound its mysteries, and to develop its laws? Over the invisible world he has received no commission to reign, and into its secrets he has no authority to pry. It is over the material and the visible he has to sway the intellectual sceptre—it is among the structures of organic and inorganic life that his functions of combination and analysis are to be chiefly exercised. Nor is this a task unworthy of his genius, or unconnected with his destiny. Placed upon a globe already formed, and constituting part of a system already complete, he can scarcely trace either in the solid masses around him, or in the forms and movements of the planet, any of the secondary causes by which these bodies have been shaped and launched on their journey. But in the distant heavens where creation seems to be ever active, where vast distance gives us the vision of huge magnitudes, and where extended operations are actually going on, we may study the cosmogony of our own system, and mark, even during the brief span of human life, the formation of a planet in the consolidation of the nebulous mass which surrounds it.

Such is the knowledge which man has yet to acquire—such the lesson which he has to teach his species. How much to be prized is the intellectual faculty by which such a work is to be performed—how wonderful the process by which the human brain, in its casket of bone, can alone establish such remote and transcendental truths. A soul so capacious, and ordained for such an enterprise, cannot be otherwise than immortal.

But even when all these mysteries shall be revealed, the mind will still wrestle with eager curiosity to learn the final destiny of such glorious creations. The past and the present furnish some grounds of anticipation. Revelation throws in some slight touches of its light—but it is in the indications of science chiefly—in the results of mechanical laws—that we are likely to find any sure elements for our judgment. In the creation around and near us all is change and decomposition. This solid globe, once indecandescent and scarcely cooled, has been the theatre of recurring convulsions, by which every thing has been destroyed, and after which every thing has been renewed. Animal life in its varied organizations has perished, and written its epitaph upon imperishable monuments. Man too, though never extinct as a race, returns one by one to his clay, and his intellectual functions are perpetuated in the re-production of his fellow. In the solar system we see fragments of planets—asteroids, as they have been called — occupying in almost interlacing orbits, the place of a larger body; and in the direction and amount of the annual and diurnal motions of the primary and secondary planets we recognise the result of a grand creative movement, by which the sun, with its widely extended atmosphere, or a revolving atmosphere itself, has cast off, by successive throes, the various bodies of the system, at first circling in gaseous zones, but subsequently contracted into planets and a sun.

This system, so wonderfully formed, is again enchained with another more distant by an assemblage of comets—a class of bodies which doubtless carry on some reciprocal intercourse for the benefit of both. Composed of nebulous matter, they may yet be consolidated into habitable globes; and resembling in aspect the vast nebulæ which fill the sidereal spaces, and forming a part of our own system, they countenance the theory, that the nebulæ which the telescope cannot resolve may be the pabulum out of which heat and motion are to form new systems, where planets, thrown off from a central nucleus, will form new abodes of life and intelligence.

But while all the phenomena in the heavens indicate a law or progressive creation, in which revolving matter is distributed into suns and planets, there are indications in our own system, that a period has been assigned for its duration, which, sooner or later, it must reach. The medium which fills universal space—whether it be a lumiferous

ether, or arise from the indefinite expansion of planetary atmosphere—must retard the bodies which move in it, even though it were 360,000 millions of times more rare than atmospheric air; and, with its time of revolution gradually shortening, the satellite must return to its planet, the planet to its sun, and the sun to its primeval nebula.

The fate of our system, thus deduced from mechanical laws, must be the fate of all others. Motion cannot be perpetuated in a resisting medium; and where there exists disturbed forces, there must be primarily derangement, and ultimately ruin. From the great central mass, heat may again be summoned to exhale nebulous matter—chemical forces may again produce motion, and motion may again generate systems: but, as in the recurring catastrophes which have desolated our earth, the great First Cause must preside at the dawn of each cosmical cycle—and, as in the animal races which were successively reproduced, new celestial creations, of a nobler form of beauty, and of a higher order of permanence, may yet appear in the sidereal universe. 'Behold, I create new heavens, and a new earth, and the former shall not be remembered.' 'The new heavens and the new earth shall remain before me.' Let us look, then, according to this promise, for 'the new heavens, and the new earth, wherein dwelleth righteousness.'

MAGNETIC SLEEP.

(*Continued from page* 106.)

LIGHT AND IMAGES OF THE DEGREES.

In the first degree and first state of magnetic sleep, the light is a pale blue.*

In the second degree and second state, the light is a little stronger, and a little deeper blue.

In the third degree and third state, these sleepers are fully under magnetic influence, and the light a clear sky blue. They see objects in a straight or direct line, through the magnetic medium in space, but not comprehensively, or inclosing various objects as in the natural state.

In the fourth degree and fourth state, the light is stronger, and extends farther than in the lower degrees. Persons with moral organs largely developed, are disposed to see immaterial or spiritual objects in this degree.

In the fifth degree and fifth state, the light is still more intense, and clairvoyants less inclined to view or take cognizance of natural, external or material subjects, but disposed to remain in this exalted state.

In the sixth degree and sixth state, the *tendency* of going into it is instant death, and should be most cautiously avoided.

Galvanic Rings.—A knowledge of the remedial effects of magnetized rings, in persons who are very susceptible to magnetic or mesmeric influence, has excited the cupidity of adventurers, who are inundating the country with "Galvanic Rings"—so called, under the patronage of the professors of medical colleges.

These rings are made of zinc and copper, and zinc and copper gilded, plated or silvered. Such rings cannot, however, be galvanized or magnetized so as to retain or maintain polarity; and are, consequently, of no value as remedial agents. They serve, however, as a badge to distinguish the weak, ignorant and credulous from the rest of the community.

Magnetized Rings.—These rings should be made of steel wire, plated with gold, silver, tin, copper, or brass. When finished, they should be magnetized, one at a time, by placing a ring flat on one of the poles of a strong magnet, and then pressing on, and at the same time drawing it entirely off of the magnet with a quick motion. The ring will then have two poles, which will affect the compass or variation-needle; one of which should be worn on a finger of the right, and another of the left hand.

Gold rings made in this manner have a real value, as their influence on children and adults affected with *tubercula*, and at the same time very susceptible to magnetic or mesmeric influence, is very salutary, as shown by a trial of their effects in a great number and variety of cases during the last three years, and they will last a life-time. They have, however, little or no effect upon those who are insusceptible to these influences.

* They change from the natural to higher states, as they enter in, and advance in the degrees.

MEDICAL DUODYNAMICS.

The symptoms we have introduced to distinguish chronic tuburcula or chronic disease of the serous surfaces, are always present in acute diseases of these surfaces, and depend entirely upon the action of two forces, or upon the duodynamic or moving powers of the system. They are founded upon the fact that these forces act in unison in health, but are interrupted in disease—the signs of which are distinguished with facility and certainty, without any previous knowledge of the case.

The absence of these symptoms, and the presence of disease in the organs, limbs, or other structures, determine, with the same facility and certainty, disease of the mucous surfaces, acute or chronic.

The duodynamic treatment we have introduced, is founded on the fact that motion is interrupted or lost in some part of the body, organs, or limbs, and cures the disease in restoring the interrupted or lost motions, by the action of two forces, emanating from different kinds of matter, and acting on the same, or different surfaces of the body, organs or limbs. These symptoms are prominent and uniform in their character, and reduce and bind down the classification of diseases to the narrow limits of *acute* and *chronic* diseases of the *serous*, and of the *mucous* surfaces, or to four clases, orders, genera, and species, and the duodynamic treatment of diseases which we long since adopted, supports and sustains this classification in the most steady and successful manner, and presents a strong contrast with the old never ending classification and ever varying symptoms and treatment.

The posterior spinal nerves are connected with and terminate in the serous membranes or serous surfaces of the body, organs, and limbs, including those of the skin and fasciæ of the muscles, &c., and are the media of sensation: while the anterior motor nerves are connected with and terminate in the mucous membranes, or mucous surfaces, including those of the fasciæ of the muscles, the bronchia and the alimentary canal, and are the media, only, of the forces which produce motion.

These different arrangements of the nerves of motion and those of sensation account for the absence of the magnetic symptoms in disease of the mucous surfaces. Insensibility in these surfaces is as necessary to the maintenance of animal life, as sensibility is in the serous surfaces. The most intense inflammation of the mucous surfaces produce no pain. There is never any pain in these cases without an extension of the disease to the serous surfaces; yet our modern medical writers continue to repeat the tales of their grandfathers about the great and wonderful sensibility of the mucous surfaces.*

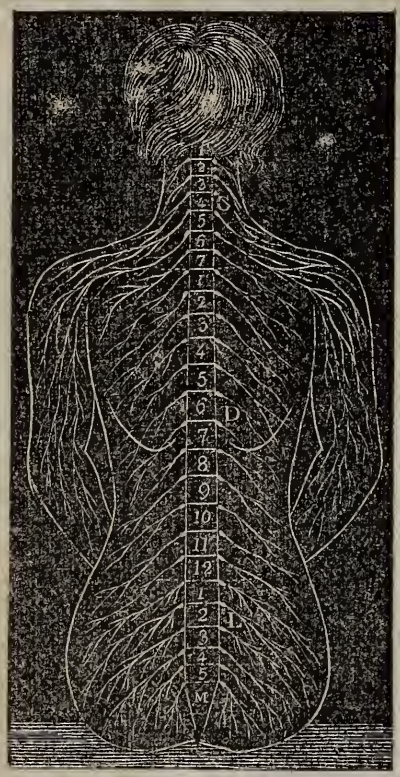
Acute or inflammatory diseases run through their course in a few days, or a few weeks: while chronic diseases continue not only many months, but many years. The excitement of the system in the first is exalted and continuous, or has brief remission or intermissions, while in the last it is depressed and periodical or accidental, with long periods of repose of many weeks or months, and is consequently as different as darkness is from light; yet the modern astrologers of the schools, like their ancient masters who were priests, physicians and astronomers, class them all as inflammations of the different degrees, and treat them as such. Our modern astrologers also follow their ancient masters in pretending to distinguish these diseases by feeling the pulse, the aspects of the tongue and urine, and the color and odor of the stools, &c.

There is however nothing more uncertain than these signs or symptoms, unless it is the treatment founded upon them, as is well known to our faculty; yet they are taught as a science with all the gravity due to these subjects, involving life or death. On the contrary there is nothing more certain than the magnetic symptoms, or the duodynamic treatment founded on them, in the absence of accidents not under the control of the physician; yet such is the attachment of men to old systems—the old astrological symptoms and treatment will continue to be taught by the professors in our medical colleges as long as they are of any value in their market.

Acute and chronic tubercula, or inflammatory and chronic diseases of the serous membranes, or serous surfaces of the body, organs or limbs; including the skin and facia of the muscles, is easily and invariably distinguished by pain more or less severe (in proportion to the intensity of the disease) produced by pressure on the ganglions of the spinal nerves, in the intervertebral spaces along each side of the spine, without any previous knowledge of the case—no matter what name may have been given to the disease by physicians, nosologists, or other medical writers.

* We commenced a series of experiments with the magnetic machine about a year since, for the purpose of ascertaining whether the least susceptibility could be detected in the great mucous surfaces, and the result showed that no sensation whatever could be felt from the brass cylinder in contact with these surfaces, under the action of our most powerful machines, while the sensation from the button in contact with the skin or serous surface, was so intense that it would only be borne momentarily.

Ganglions of the spinal nerves in the intervertebral spaces.



There are 7 cervical vertebræ, C; 12 dorsal, D; and 5 lumbar, L; these vertebræ with the os-coxyx, m; constitute the spinal column.

Press on the sides of the 1, cervical vertebræ to find symptoms of tubercula of the head—of the brain, throat, nose, eyes, or ears.

Press on the sides of the 2, 3, 4, 5, 6 and 7 cervical to find tubercula of the musucles, (Rheumatism) or of the vertebræ, or of the joints of the limbs—white swellings, &c.

Press on the sides of the intervertebral space between the 7 cervical, and 1 dorsal, to find tubercula of the lungs, and

Press on the left side of the same space to find tubercula of the heart.

Press on the space between the 1 and 2 dorsal vertebræ to find tubercula of the stomach.

Press on the space between the 2 and 3 dorsal to find tubercula of the duodenum.

Press on the right side of the space between the 7 and 8 dorsal to find tubercula of the liver.

Press on the spaces between the 11 and 12 dorsal to find tubercula of the small intestines.

Press on the spaces between the 12 dorsal and first lumbar to find tubercula of the kidneys.

Press on the spaces between the 1 and 4 lumbar to find tubercula of the uterus.

Press on the spaces between the 4 lumbar and os-coxyx to find tubercula of the genital organs.

We always press with the thumb of the right hand on the intervertebral spaces of the left side of the spine, and with that of the left hand on the intervertebral spaces of the right side.

These directions will enable any person of common sense to distinguish tubercular disease with facility and certainty, without even the aid of a physician. Negative matter, as the acids and the metals should be the principal ingredients in the preparations of medicine for disease of the serous surfaces, and should be used in connection with the action of the rotary magnetic machine.

Diseases of the Mucous Surfaces.

Acute and Chronic diseases of the mucous surfaces are invariably distinguished by the presence of disease of the body, organs or limbs, and the absence of the magnetic symptoms; and require for their reduction a treatment entirely different from that of tubercular disease of the serous surfaces. Positive matter, as the alkalies and the gums, should be the chief ingredients in the preparations of medicine for diseases of the mucous surfaces, and should be used in connection with the action of the rotary magnetic machine.

(For the Dissector.)

"ELECTRICAL PILLS," &c.

Dear Sir:—I have thought it might subserve the cause of justice, if I were to give you some account of a man, who has been travelling through the New England States, for a year or two past, selling what he calls "Electrical Pills," "Magnetic Ether," and "Galvanic Plaster." That these pretended "Electrical Pills," are sold on the credit of your remedies, there can be no doubt, and hence it would seem to be time for the public to be duly informed of the base imposition played upon them in the sale of these worthless drugs.

The man who sells them is in the practice of lecturing on what he calls the "Philosophy of Mesmerism Discovered." He has a subject whom he puts to sleep for examining disease; and, of course, in every case examined, his oracle recommends the invalid to take the "electrical pills," or the "magnetic ether," or, to wear the "Galvanic Plaster." Hundreds and thousands, I have no doubt, have been duped in this way, as B——(for this is the man's name,) stated in Provincetown, Mass., a few weeks since, that he had made over $1800 during the last six months.

Having stated that this man's name is B——, I should add, that this is not the name by which he announces himself to the public, at the present time. He was apprehended for theft in the city of New-York, some years since, and gave his name as H. H. B.——; and a few years after he was exposed in the Boston Recorder, as an infamous impostor, under the name of J. B. D. He was expelled from Phillip's Academy, Andover, and again from the Bangor Seminary; and has been found guilty of forging letters, and other disgraceful crimes, which render him unworthy of public confidence. And yet, this man is ever and anon announcing himself in the public papers, as "*Dr.* J. B. D.—!! As he will probably visit the South and West, it would seem to be important that the public should be made acquainted with his character; and hence the above is submitted for your columns.

JUSTITIA.

May, 1845.

We are acquainted with the correspondent, who has sent us the above exposure of a very gross case of imposition, and we are well informed, both by observation and frequent transmitted intelligence, that it forms but one of many, of a very similar character which are practised in almost every part of the country, including this city, and Philadelphia. The real and indisputable effects of metallic, medicinal, and animal magnetism, are so truly remarkable and are exciting so much attention throughout our wide spread population that mercenary impostors, without the least regard to conscience or character, are taking advantage of it in a thousand ways, throwing deplorable obstacles in the progress of a science so important to humanity, if not inflicting more direct injury upon the community.

IMPORTANT PROPOSAL.

The acknowledged importance of Magnetism and Phrenology, as physical and psychological sciences; the profound and fervent interest which they are exciting and maintaining in every section of this extensive country; and their manifest liability to ignorant desecration and mercenary charlatanism, forcibly appeal to all who desire the advancement of knowledge, to adopt some means by which these comprehensive sciences may be propagated with more systematic efficiency and greater security from perversion. To this end the undersigned have deemed it important, if not indeed essential, that a central society, for the rigid investigation of the facts and inferences which these subjects involve, should be established in this metropolis, with the view of affording authentic information concerning them to the public in general, and to induce the formation of kindred associations, in fraternal alliance, in the principal cities and towns of the country.

Aiming at nothing but fair and honest inquiry, and the extension of useful knowledge for the benefit of mankind, they earnestly invite the many scientific and philanthropic individuals around them, who already concur in this object, to co-operate with them in forming the society here respectfully suggested. Ample intelligence and talent could readily be contributed for this purpose, without any serious sacrifice of time, or any hazard of reputation; while sciences, confessedly the most interesting and elevated of any now in active progress, would be rescued from the incompetent dissemination which now stamps them with but an equivocal authority and character.

Communications upon the subject, post paid, will be cheerfully received and published in the Journals, of which the undersigned are the editors.

H. H. SHERWOOD, M. D.
Editor of N. Y. Dissector.

O. S. FOWLER, A. B.
Editor N. Y. Phrenological Journal.

MAGNETIC MISCELLANY.

EYES—*acute and chronic diseases of.* The forces from the magnetic machine combine to reduce acute and chronic diseases of the eyes, and to remove opacities of the cornea, in the most extraordinary manner. These interesting and important results furnish the best materials for the most withering comments on the absurd theories and practice of the schools.

ALOPACIA—*loss of hair, baldness.* The effects of the magnetic forces in producing the most rank vegetation from the earth, suggested their employment in the production of a luxuriant vegetation from the skin, which has been found perfectly successful.

Among the cases in which magnetic machines have been used for this purpose, is that of a gentleman who having lost every hair from his head, commenced magnetising it with one of our vibrating instruments in February last, and, on the first of June, had already cut two heavy crops of hair from his head!

APOPLEXY.—The magnetic machine reduces the apoplectic state in a more safe and powerful manner, than any other means that has been heretofore adopted.

ULCERATED LEGS AND VARICOSE VEINS.—Nothing can be compared to the action of the magnetic machine in these cases, or in acute or chronic diseases of the skin.

PROLAPSUS UTERI.—*atonic.* These cases from feebleness or debility are quickly restored by the action of the instrument or by the mesmeriser. In cases, however, which are the consequence of tubercular disease of the uterus, the remedies for chronic tubercula are required to aid the action of the instrument.

MAGNETIC SLEEP. There are now a great many persons who have gone into the magnetic sleep, under a very slight but steady action of the magnetic machine, some of whom have been clairvoyant. These facts, with the increased susceptibility to mesmeric influence by the action of the instrument, are strong evidences of the identity of the influences from these different sources.

Homœopathy.

The homœopathic practice is everywhere increasing in favor with the people, and many alopathic physicians have consequently found it necessary to adopt it, or lose their practice in many of the most intelligent and wealthy families.

In 1837 there was only four homœopathic physicians in this city, and there is now more than forty, and their number has increased in the other cities of the Union in about the same proportion to the population.

It is the extraordinary effects of homœopathic or magnetised medicines upon children and upon adults who are very susceptible to magnetic or mesmeric influence that maintain the high character of these remedies. They have, however, little or no effect upon those who are naturally insusceptible to these influences.

Animal Magnetism.

It is now only about nine years since the subject and practice of animal magnetism was first introduced into this country, and although it has everywhere met with great opposition in its progress from the bigoted and the ignorant, a practical knowledge of it has extended more or less into all the States of the Union; and its extraordinary and beneficial effects are everywhere acknowledged.

MAGNETIC MACHINES.

The magnetic machines first used in medical practice, although very superior to the old electrical apparatus, were naturally very defective and strikingly inferior, both in construction and effect, to those of the improved rotary and vibratory principle which greater knowledge and experience have at length produced. The former were not only comparatively clumsy and unmanageable, but liable to such derangement as to be frequently wholly inoperative except in the hands of persons accustomed to their defects, and skilful in repairing them. Notwithstanding this, we find that these obsolete contrivances, with miserable imitations of our machines, are still imposed upon persons ordering magnetic machines, through druggists and other indirect agents, as those of the latest and best construction. The natural consequence is that, from perplexing difficulties almost inseparable from the use of them, and the failures in beneficial effect which thence ensue, the influence itself, however inestimable, becomes disparaged in the estimation of medical men who have had no better means of testing its value, and

still more so in private practice. This is much to be regretted, as well for the sake of science, as the victims of disease who might otherwise have been relieved and restored. The most improved and best instruments, can be applied with ease and certainty, without any other instruction than is afforded in the *Manual* which accompanies them, by any person of the most ordinary capacity, and in a wide range of cases. The others are constantly liable to complete failure, even in the hands of the most patient professional men, on whom they may be either carelessly and ignorantly, or designedly and selfishly imposed.

Mr. J. G———of Penn Yann, N. Y., reports the following case which recently came under his observation.

Mrs. A. C. Randall living near the village of Penn Yan, N. Y., had been deranged nearly one year; during which time she was incapable of taking care of herself. She was attended by three or four physicians, without any favorable results. Her husband made application to me to mesmerize her—but instead of doing so, I mesmerized a young lady, who in the clairvoyant state, examined Mrs. Randall. Her report was, "That the brain was diseased -- that it had become inflamed in consequence of taking cold, together with some other irregularities of the system. To mesmerize the deranged person, would have a tendency to spread the disease through the system."

Her prescription was, to put a seton in the back part of the neck, saying that the disease would run off by this means, and the brain would resume its healthy functions. This was done—the seton was kept in about two months, during which time the patient improved; at the end of the second month, her reason was restored—she was cured. This was about two months ago. She is now in good health, and perfectly sane.

J. G.

Penn Yan, N. Y., April 5, 1845.

Newark, N. J., June 2nd, 1845.

Dr. Sherwood, Sir:

A few weeks since I was called to a Mrs. B. of this city, who had been for two months under regular treatment for fever: a few days before I was called, she aborted, and excessive hemorrhage, and inflammation of the womb ensued. Before the miscarriage, she had lost the use of the lower limbs and was helpless. In this condition her physician left her, and sent word to the family that they might employ whom they pleased. I was called upon, but regarded the case as a hopeless one. The symptoms were aggravated and discouraging. After some simple applications for allaying the inflammation and hemorrhage of the womb, I resorted to the magnetic instruments, and although, she had not slept for nights, and the cerebral derangement was bordering on delirium; yet under its influence she soon fell into a refreshing sleep, and convalescence commenced from that hour. She is now getting about the house, and looks more healthy, than for many months previous.

On the 8th of May, I was called on to visit Mrs. G. an elderly lady, under an attack of pleurisy. It was a clear case. She said she had been subject to it for years, and had always been confined to her room from four to six weeks. Two applications of the instrument reduced the symptoms, and on the 12th she was about her house. They were perfectly astonished at the result of the treatment.

About the same time I was called to see Master L., ten years of age with inflammatory rheumatism. He was perfectly helpless; not a finger could be moved without causing him to scream. In one week he was entirely relieved, by the machine. I am satisfied of the value of the instrument in both acute and chronic diseases.

In haste, I am as ever yours,

L. D. FLEMING.

ANTIQUITY OF AMERICA.

A person writing to the Paris Academy of Sciences, from Brazil, says he has observed in one of the numerous calcareous caverns in that country a quantity of human bones near those of different species of animals, some of which are now extinct. He concludes from this fact that it is erroneous to regard the South American race as a variety of the Mongolian race, who are supposed to have peopled what is called the New World, by emigration. The geological constitution of America shows, he says, that it is anterior to what we call the old continent, and the Mongolian race is but a branch of the American race, instead of being the primitive root.

CLAIRVOYANCE.

We were requested to see a clairvoyant, at Professor Roger's rooms, 95 Chamber-street, on the 23d of June inst., in the person of a little girl aged nine years, who it was reported, could read with facility while in the mesmeric state. We went prepared to secure her eyes with adhesive plaster, and after having placed one securely over each eye, presented her with a book, which she handled in the same manner, and read in various places, with apparently the same ease as in the natural state.

Such feats have been frequently performed by clairvoyants of private families in this city.

SWEDENBORG'S ANIMAL KINGDOM.

Introductory Remarks by the Translator.

James John Garth Wilkinson,
Member of the Royal College of Surgeons, of London.

It will be the aim of the following remarks to give a general view of the doctrines of the "Animal Kingdom," and of their relation to the past, present and future state of science; and in so doing, to address those chiefly who are acquainted with the theological writings of Swedenborg, as forming the class by whom, at present, the work is most likely to be read, and to whom it may be the most useful and satisfactory.

The evolution of the natural sciences amounts to the creation of a new sphere in the human mind; and since this development has not taken place under the auspices of theology, but either in direct or tacit opposition to the prevailing church; since it proceeds from without, and proposes knowledge and intelligence as ends distinct from spiritual life; therefore it constitutes a sphere which is not in unison with the current doctrines of religion, but from the beginning has menaced their subversion; and which, unless reduced to order, is opposed, however true its materials in themselves may be, to the understanding of all genuine truth. It was a perception of this character in science, and also of the fact that the universal human mind was becoming immersed in scientifics, that impelled Swedenborg to enter the field of nature, for the purpose of demonstrating in it an order corresponding to the order of heaven, and thereby of making it a medium to spiritual and sacred truths. This was his paramount end in the construction of the "Animal Kingdom."

The system therein propounded rests upon the foundation of experience; namely, of such experience as the learned world had accumulated at Swedenborg's time; not indeed upon the particular experience strictly and proximately belonging to any one science; for such experience would be inadequate, in the present imperfect state of our insight, to suggest the universal truths that each science involves; but upon the general experience of all ages in all the sciences. This, it is to be presumed, was Swedenborg's meaning, when he likened himself to one of the racers of olden time, who before he could merit the crown, was commanded to run seven times round the goal; and again, when he declared that we must be instructed by all things of one thing, if we are to know that one thing thoroughly. As his theory is not derived from particular experience, so it cannot finally be either confirmed or denied by any isolated fact or facts. For it is a conclusion from the order and tenor of facts universally; in a word, from an integral survey of nature. Unless this be borne in mind, the very largeness of the field from which his inductions are drawn, and the very strictness of mind which caused him to test them through all the sciences, will only make them seem the more like baseless hypotheses. In this case the analytic process may easily be mistaken for the synthetic, and Swedenborg may be charged with committing the error which he begins his work by denouncing in others.

Swedenborg announced the starting-point of his method in the first lines of his first chapter; namely, that "the use or effect which produces the end must be the first point of analytic enquiry." First comes the question of fact or result; next, the reasoning upon it. Unless we reason from uses, what chart have we in the exploration of structures? To illustrate this, let it be supposed that a complicated tissue—for instance, the skin—presents us with three undoubted effects, say of absorption and excretion; from these effects we infer the existence of a threefold organism to produce them; for effects imply causes, and functions forces, motions, accidents, &c., are predicates and unvarying signs of substances. Having proceeded so far, we have then to distribute the effects to their proper organic causes in the tissue; and thus effects furnish the rule for the first analysis of a structure.

In many instances indeed it will be impossible to trace effects to visible organic causes, in which case the mental sight must take up the operation, and continue and complete it, and this, by the assistance of the several instruments and appliances which are now to be mentioned.

It is impossible to understand either the Word or the works of God without doctrines, which in both cases require to be formed by "one who is enlightened."* The doctrines made use of by Swedenborg in the "Animal Kingdom," are the Doctrines of Forms, of Order and Degrees, of Series and Society, of Influx, of Correspondence and Representation, and of Modification. These doctrines themselves are truths arrived at by analysis, proceeding on the basis of general experience; in short, they are so many formulas resulting from the evolution of the sciences. They are perpetually illustrated and elucidated in the "Animal Kingdom," but never stated by Swedenborg in the form of pure science, perhaps because it would have been contrary to the analytic method to have so stated them, before the reader had been carried up through the legitimate stages, beginning from experience, or the lowest sphere. Each effect is put through all these doctrnes, in order that it may disclose the causes that enter it in succession, that it may refer itself to its roots and be raised to its powers, and be seen in connexion, contiguity, continuity, and analogy with all other things in the same universe.† They may be compared to so many special organs, which analyse things apparently homogeneous into a number of distinct constituent principles, and distribute each for use as the whole requires To deny any of these doctrines, or to give them up in the presence of facts that do not range upon them at first sight, is to nullify human mind as the interpreter of nature.

The Doctrine of Forms teaches that "the forms of all things, like their essences and substances, ascend in order and by degrees from the lowest to the highest. The lowest form is the angular, or as it is also called, the terrestrial and corporeal. The second and next higher form is the circular, which is also called the perpetual-angular, because the circumference of the circle involves neither angle nor rectilinear plane, being a perpetual angle and a perpetual plane; this form is at once the parent and measure of angular forms. The form above this is the spiral, which is the parent and measure of circular forms, as the circular, of angular forms. Its radi or diameters are not rectilinear, nor do they converge to a fixed centre like those of the circle; but they are variously circular, and have a spherical surface for a centre; wherefore the spiral is also called the perpetual circular. This form never exists or subsists without poles, and axis, foci, a greatest circle, and lesser circles, its diameters; and as it again assumes a perpetuitywhich is wanting in the circular form, namely, in respect of diameters and centres, so it breathes a natural spontaneousness in its motion. There are other still higher forms, as the perpetual-spiral, properly the vortical; the perpetual-vortical, properly the celestial;* and a highest, the perpetual-celestial, which is spiritual, and in which there is nothing but what is everlasting and infinite." There is then a scale of forms, whereof the higher are relatively more universal, more perfect, and more potent than the lower. The lower again involve the higher and the highest, and are generated by them: so that where there is an angular body, there is a circular form and force intimately present as its ground; where there is a circle, it is the limit of an interior spiral; and so forth. For nature operates from the very principles of geometry and mechanics, and converts them all to actuality and use. The purer substances in creation gyrate through the higher forms; the less pure circulate through the lower, or are fixed in the lowest. All the essentials of the angular form are opposed to each other, whence the origin of gravitating and inert matter, intrinsically unfitted for motion. But the other forms, according to their eminence, are more and more accomodated to motion and variation,

The Doctrine of Order teaches that those things which are superior in situation, are also superior in forces, in power, in dignity of office, and in use; and that a similar law determines the situation of the parts of things, and of the parts of parts. Corresponding to the highest or first of the series of subordination, is the central or innermost of the series of co-ordination.

The Doctrine of Degrees teaches the distinct progressions through which nature passes when one thing is subordinated to, and co-ordinated with another. There are three discriminated degrees in all things, both natural and spiritual, corresponding to end, cause, and effect. In the human body there is a sphere of ends, a sphere of causes, and a sphere of effects. The body itself, comprehending the viscera of the abdomen and chest, and the external sensoria of the

* Arcana Cœlestia, n. 10582.

† By a universe, Swedenborg appears to mean any complete series as referable to its unities.

* Swedenborg here uses the term celestial, not in the sense which is peculiar to it in his theological writings, but more with the meaning attached to it in the phrase, "celestial globe," as pertaining to th form of the universe.

head, is the sphere of effects; the brain, and the whole of its appendages, are the sphere of causes; the cortical substances of the brain are the sphere of ends or principles. These spheres are subordinated to each other in just series from the highest to the lowest. The highest degree or sphere is active, the lowest is passive and re-active. The above degrees, in their order, indicate the progression from universals and singulars to generals or compounds. But every organ again involves the same triplicity of spheres; it consists of least parts, which are congregated into larger, and these into largest. All perfections ascend and descend according to degrees, and all attributes, functions, forces, modes, in a word, all accidents, follow their substances, and are similarly discriminated. Each degree is enveloped with its common covering, and communicates with those below it thereby.

There is no continuous progression from a lower degree to a higher, but the unity of the lower is the compound of the higher, and in transcending that unity, we leap out of one series into another, in which all the predicates of force, form, perfection, &c., are changed and exalted. The Doctrine of Degrees enables us to obtain a distinct idea of the general principles of creation, and to observe the unity of plan that reigns throughout any given organic subject; and by shewing that all things are distinct representations of end, cause, and effect, it empowers the mind to refer variety to unity, as the effect to the cause, and the cause to the end, and to recognize the whole constitution of each series as homogeneous with its principles.

Series is the form under which the co-ordination and subordination of things, according to order and degrees, ultimately present themselves. The whole body is a series, which may be looked at either generally, from above to below, as comprising the head, the chest, and the abdomen; or universally, from within to without, as divisible into the three spheres already alluded to. All the organs of each region are a series; each organ in itself is a series; and every part in each organ likewise. In short, everything is a series and in a series. There are both successive and simultaneous series, but the latter always arise from the former. Essences, attributes, accidents, and qualities follow their substances in their series. Every series has its own first substance, which is more or less universal according as the series is more or less general. This first subsubstance is its simple, unity, or least form, governing in the entire series, and by its gradual composition forming the whole. Each series has its limits, and ranges only from its minimum to its maximum. Whatever transcends those limits at either end, becomes part of another series. The compounds of all series represent their simples, and shew their form, nature, and mode of action. The Doctrine of Series and Society teaches that contiguity and continuity of structure, are indicative of relationship of function, and that what goes on in one part of a series, goes on also, with a determinable variety, in all the other parts: wherefore each organ is to be judged of, and analysed, by all the others that are above and around it. In this manner, the whole series is the means of shewing the function of each part of itself, and indeed of analysing that function into a series similar to that of the whole; for the least in every series must represent an idea of its universe. Under the operation of this law, the point becomes a world analogous to the great world, but infinitely more perfect, potent, and universal.

Such is a very brief illustration of the Doctrines of Order and Degrees, Series and Society, from which it will be evident how closely connected these doctrines are, and that they can hardly be stated without our seeming to repeat of one what has already been predicated of the others. Degrees appear to involve the distinct progressions of creation from above to below, or from within to without: order, to appertain to the law of succession observed in degrees, whereby rank and height are given to excellence, priority, universality, and perfection; series, to involve the complex of the whole and the parts when created and coexisting; and society, to be the law of contiguity and relationship existing between different series, and between the parts of any single series. Perhaps it would not be far wrong to state in generals, that order and degrees involve the creating and successive, series and society, the created and simultaneous. But as we have said before, Swedenborg never stated these doctrines as promised in the "Animal Kingdom," but contented himself with using them as analytic instruments in the exploration of the body; and therefore the reader will learn them best in the way of example and illustration in the Work itself.

The Doctrine of Influx involves the manner in which the lower substances, forms and forces of the body subsist, as they at first existed, from the higher and the highest; and in which the body itself subsists from the soul, as it at first existed; and the natural world from the spiritual. But there is not only an influx from within, but also from without; and by virtue of both, the body, which otherwise would be a mere power, is raised into an active force.*

* See "Animal Kingdom," vol. II, p. 559.

The Doctrine of Correspondence and Representation teaches that the natural sphere is the counterpart of the spiritual, and presents it as in a mirror; consequently that the forms and processes of the body are images of the forms and activities of the soul, and when seen in the right order, bring them forth and declare them. It shows that nature is the type of which the spiritual world is the ante-type, and therefore is the first school for instruction in the realities of that which is living and eternal.

The Doctrine of Modification teaches the laws of motion and change of state in the several auras or atmospheres of the world, and in their spiritual correspondents.†

What was stated of the Doctrines of Order, Degrees, Series, and Society, as mutually supposing, or as it were interpenetrating each other, may be repeated generally of the whole of these doctrines, and this, because they are all but so many varied aspects of the one principle of divine truth or order. Like nature itself they are a series, each link of which involves all the others.

The Doctrine of Series and Degrees in conjunction with that of Correspondence and Representation, teaches that there is a universal analogy between all the spheres of creation, material, mental, and spiritual: and also between nature and all things in human society. The circulation of uses in the body perfectly represents the free intercourse of man with man, and the free interchange of commodities between nation and nation. The operations that go on in the body, analogically involve all the departments of human industry; nay, and infinitely more, both in subdivision, unity, and perfection. There is not an art or trade, whether high or low, so long as it be of good use, but the Creator himself has adopted and professed it in the human system. Nay, in the richness of his pervading love, the very prerogatives of the mind are representatively applicable to the body. End, cause, and effect, as existing in Himself, are represented in the latter as well as in the former. Liberty and rationality, the universal principles of humanity, are transplanted by analogy from the mind into the body. It presents an analogon of liberty, in that every organ, part, and particle, can successfully exercise an attraction for those fluids that are adapted to its life and uses; of rationality, in that it acts as though it took cognizance of the adaptability, and operates upon the materials demanded and supplied, in such a manner as will best secure the well-being of itself and of the whole system.

This may account to the reader for the extremely figurative character of Swedenborg's style, and shew that it proceeded from the reason and not from the imagination. It is because each thing is a centre to the life of all things, that each may freely use the exponent terms of all. Analogous uses in the body and the soul, furnish the point of contact between the two, and the possibility and the means of intercourse. Had Swedenborg confined himself to the dry straitness of what is now called science, he must have forfeited the end he had in view; for matter, as matter, has no communion with spirit, nor death with life. It was absolutely necessary that the body should be tinctured with life in all possible ways, when it was to be the medium of instruction respecting the soul.

But it is time to instance a few of the results to which the above doctrines lead when wisely applied to the living body. It will, however, be impossible to give anything beyond the merest sketch of Swedenborg's physiology, or to look at it from more than a single point of view. He himself has regarded it from all sides, or from each organ and sphere of the body, and given what may be called a combined proof of its correctness.

The alimentary canal and the whole of the viscera of the abdomen form one grand series subservient to the creation of the blood. This again is divided into three inferior series, whereof one primarily respects the chyle, another the serum, and a third the blood already formed. There are then three series of digestions. 1, The alimentary canal commencing at the tongue and terminating with the rectum, performs as many distinct digestions of the food, and eliminates from it as many distinct products, as the canal itself has distinct divisions and articulations. Thus there is the chyle of the tongue and mouth, the chyle of the stomach, the chyle of the small intestines, and the chyle of the large intestines, and all these chyles subserve the blood in a successive series, coincide in its formation, and ultimately coexist within it in a simultaneous series. When the chyle has been inaugurated into the blood, and is once in the arteries and veins, it is no longer called chyle, but serum. 2. The serum is the object of the second digestion. The finer parts of it therefore are secreted, and the worthless parts are excreted and thrown out, just as was before the case with the food. The former operation is performed by the pancreas, the latter by the kidneys. 3. The blood itself is the object of the third digestion. This process, termed by Swedenborg

† See Animal Kingdom., vol. II., p. 49.

the lustration of the blood, takes place in the capillaries and glandular elements all over the system, but specifically in the spleen, the pancreas, and the liver. As in the first series there are various menstrua or media between the chyle and the blood; namely, in the mouth, the saliva; in the stomach, the gastric juice, which is the saliva potentialized by the peculiar action of the stomach;* in the small intestines the pancreatic juice, and the hepatic and cystic biles; and in the large intestines the liquid distilled from the vermiform appendage of the cœcum; so in each of the other series corresponding menstrua are required and applied. The blood of the pancreas, and the blood of the spleen deprived of its serum by the pancreas, serve in the liver as a menstruum for refining the chyle and lustrating the blood. The lymph is a kind of ultimate saliva which digests the chyle as the common saliva digests the food. The lymph of the spleen, for instance, digests the chyle in the mesentery, as its blood digests the chyle and blood in the liver. In short, as all the abdominal viscera form one series of uses, so the lowest and largest form of that series may be taken as an exponent of the whole; and it will then be found that all these organs are high evolution of the alimentary tube, digesting finer and finer aliments, (for the blood itself is the essential aliment of the body,) and throwing out subtler and subtler excrements or impurities. Thus the liver is the stomach of the chyle and blood; and the ductus hepaticus and the gall-bladder and ductus cysticus are respectively analogous in their proper series to the small and the large intestines.

The viscera of the thorax also minister to the blood. The heart is a chemical organ for preparing liquids to enter into its composition, at the same time that it is the beginning of the circulation. It separates the blood into two parts, a purer and a grosser; the purer it sends away through the lacunæ underneath the columns on its inner surface, by a series of ducts into the coronary vessels, which are the true veins of the heart,† the grosser into the lungs. Thus it also is an organ of blood-digestion or sanguification. The lungs have three general functions: 1. They lustrate all the blood of the body, especially in regard to its chyle or serum; their office in this respect being analogous to that of the kidneys in the abdomen. 2. They feed the blood with ærial and ethereal chyle, as the viscera of the abdomen with terrestrial chyle. 3. They call forth the powers of all the organs of the body by respiration. With respect to the last-named of these offices of the lungs, namely, that they supply the body and all its parts with motion, it is one of the most important discoveries in the "Animal Kingdom," and not less wonderful in its consequences than in its simplicity and obvious truth.

We have published the above commencement of the Translator's Introduction to Swedenborg's "Animal Kingdom," with the view of continuing it, to completion, in the future numbers of this Journal, together with such other extracts from the work itself as we may deem most interesting and important. This introduction by the translator, a medical scholar of distinction, probably gives a better synoptical and analytical view of the whole of this really wonderful work than could be presented by any one less thoroughly acquainted with every page and sentence of its contents. It will be seen from notices of it which we adduce from English Reviews, that it is beginning to excite the profound attention and astonishment of the enlightened and learned minds of that country; and there being no American reprint whatever, and the London edition, moreover, being entirely exhausted and out of print, we have thought it scarcely possible to occupy a portion of our pages with any matter of equal novelty and value. We confess, too, that in making these extracts we are not wholly uninfluenced by what, we trust, is a very natural and excusable gratification, in finding and submitting to our readers such remarkable and unexpected illustrations of the physiological doctrines which, in perfect independence of the great mass of medical writers and on the authority of our own discoveries and convictions alone, we have been publishing to the world, and adopting in practice, for more than thirty years past.

Being fortunately in possession of a copy of Swedenborg's "Principia," we intend to enrich our Journal with consecutive specimens of this extraordinary work also, which successfully aspires to the highest altitude of intellectual acumen and generalization.

* See "Animal Kingdom," vol. I., p. 122, note (*a*) p. 133, note (*y*.)

† On this subject examine Swedenborg's "Economy of the Animal Kingdom," tr. i., n. 399—459.

THE DISSECTOR.

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FALLACIES OF THE FACULTY.

Lectures delivered at the Egyptian Hall, Piccadilly, London, 1840.

BY S. DIXON, M. D.

LECTURE VII.

Unity of all Things.

Diseases of Women—Cancer—Tumour—Pregnancy—Parturition—Abortion—Teething—Hereditary Periodicity.

GENTLEMEN:

Many of you have doubtless read or heard of Dr. Channing of Boston, one of the boldest and most eloquent of American writers. In a little Essay of his, entitled "Self-Culture," I find some observations bearing so strongly upon the subject of these lectures, that I cannot resist the temptation to read them at length. How far they go to strengthen the view I have thought it right to instil into your minds, you will now have an opportunity of judging for yourselves:—"Intellectual culture," says this justly eminent person, "consists, not chiefly, as many are apt to think, in accumulating information—though this is important; but in building up a force of thought which may be turned at will on any subjects on which we are forced to pass judgment. This force is manifested in the concentration of the attention—in accurate penetrating observation—in reducing *complex subjects* to their *elements*—in diving beneath the effect to the cause—in detecting the more *subtle* differences and resemblances of things—in reading the future in the present,—and especially in rising from *particular facts* to general laws or *universal truths*. This last exertion of the intellect—its rising to broad views and great principles, constitutes what is called the philosophical mind, and is especially worthy of culture. What it means, your own observation must have taught you. You must have taken note of two classes of men—the one always employed on details, on particular facts—and the other using these facts as foundations of higher, wider truths. The latter are philosophers. For example, men had for ages seen pieces of wood, stones, metals falling to the ground. NEWTON seized on these particular facts, and rose to the idea that all matter tends, or is *attracted* towards all matter, and then defined the law according to which this attraction or force acts at different distances;—thus giving us a *grand principle*, which we have reason to think extends to, and *controls* the WHOLE outward CREATION. One man reads a history, and can tell you all its events, and there *stops*. Another *combines these events*, brings them under ONE VIEW, and learns the great causes which are at work on this or another nation, and what are its great tendencies—whether to freedom or despotism—to one or another *form* of civilization. So one man talks continually about the particular actions of this or that neighbor,—while another looks beyond the acts to the inward principle from which they spring, and gathers from them larger views of human nature. In a word, one man sees all things *apart* and in *fragments*, whilst another strives to discover the *harmony*, connection, UNITY OF ALL."

That such *Unity*, Gentlemen, does actually and visibly pervade the whole subject of our own particular branch of science—the history of human diseases,—is a truth, we have now, we hope, placed equally beyond the cavil of the captious and the interested. In this respect, indeed, we find it only harmonizing with the history of every other thing in nature. But in making INTERMITTENT FEVER OR AGUE the *type* or *emblem* of this unity of disease, we must beg of you at the same time, to keep constantly in view the innumerable *diversities* of shade and period, which different intermittent fevers may exhibit in their course. It has been said of *Faces*,

——Facies non omnibus *una*,
Nec diversa tamen—

And the same may with equal truth be said of Fevers—all have resemblances, yet all have differences. For, betwixt the more subtle and slight *thermal* departures from Health,—those scarcely perceptible chills and heats, which *barely deviate* from that state, and the very intense cold and hot stages characteristic of an *extreme* fit of ague, you may have a thousand differences of scale or degree. Now, as it is only in the question of scale that all things can possibly differ from each other, so also is it in this that all things are found to resemble each other. The same differences of shade remarkable in the case of *temperature* may be equally observed in the *motive* condition of the muscles of particular patients. One man, for example, may have a tremulous, spasmodic, or languid motion of one muscle or class of muscles simply—while another shall experience one or other of these morbid changes of action in every muscle of his body. The chills, heats and sweats, instead of being in all cases *universal*, may in some instances be *partial* only. Nay, in place of any increase of perspiration outwards, there may be a vicarious superabundance of some other secretion within: of this you have evidence in the dropsical swellings, the diarrhœas, the bilious vomitings, and the diabetic flow of urine with which certain patients are afflicted. In such cases, and at such times, the skin is almost always dry. The same diversity of shade which you remark in the symptoms may be equally observed in the period. The degree of duration, completeness, and exactness of both paroxysm and remission, differs with every case. The cold stage, which in most instances takes the patient first—in individual cases may be preceded by the hot. Moreover, after one or more repetitions of the fit, the most perfect ague may become gradually less and less regular in its paroxysms and periods of return; passing in one case into a fever apparently continued—in another, reverting by successive changes of shade into those happier and more harmonious alternations of temperature, motion and period, which Shakspeare, with his usual felicity, figured as the "fitful fever" of healthy life. If you take Health for the standard, every thing above or beneath it—whether as regards time, temperature motion, or rest, is Disease. When and correctly analyzed, the symptoms of carefully such disease, to a physical certainty, will be found to resolve themselves into the symptoms or shades of symptom, of intermittent fever. Fever, instead of being a thing apart from man, as your school doctrines would almost induce you to believe, is only an abstract expression for a greater or less change in the various revolutions of the matter of the body. Fever and disease, then, are one and identical. They are neither "essences" to extract, nor "entities" to combat—they are simply variations in the phenomena of the corporeal movements; and in most cases, happily for mankind, may be controlled without the aid either of physic or physicians. The same reparative power by which a cut or a bruise, in favorable circumstances becomes healed, may equally enable every part of a disordered body to resume its wonted harmony of action. How often has nature in this way triumphed over physic, even in cases where the physician had been only too busy with his interference.—It is in these cases of *escape* that the generality of medical men arrogate to themselves the credit of a cure.

"It was a beautiful speculation of Parmenio," remarks Lord Bacon, "though but a speculation in him, that all things do by scale ascend to unity." Need I tell you, Gentlemen, that every thing on this earth which can be weighed or measured, is matter—matter in one mode or another. What is the difference between a piece of gold and a piece of silver of equal shape and size? A mere difference of degree of the same qualities—a different specific gravity, a different ring, a different degree of malleability, a different lustre. But who in his senses would deny that these two substances approach nearer in their nature to each other than a piece of wood does to a stone; yet may not a piece of wood be petrified, be transformed into the very identical substance from which at first sight it so strikingly differs! Nay, may not the bones, muscles, viscera, and even the secretions of an animal body, by the same inscrutable chemistry of nature, be similarly transmuted into stone? Gold and silver have differences assuredly, but have they not resemblances also—certain things in common, from which we deduce their unity, when we speak of them both as metals? How much more akin to each other in every respect are these substances than water is in either of its own elemental gases? What certainty then have you or I that both metals are not the same matter, only differing from each other in their condition or mode? Does not every thing in turn change into something else—the organic passing into the inorganic, solids into liquids, liquids into gases, life into death, and vice versa? The more you reflect upon this subject, the more you must come to the opinion that all things at last are only modes or differences of *one matter*. The unity of disease is admitted by the very opponents of the doctrine, when they give to apoplexy

and toothace the same name—*disease* or *disorder*. But the approaches to unity may be traced throughout every thing in nature.—Betwixt the history of man's race, for example, the revolutions of empires, and the history of the individual man, the strongest relations of affinity may be traced. The corporeal revolutions of the body, like the revolutions of a kingdom, are a series of events. Time, space, and motion are equally elements of both. "An analyst or a historian," says Hume, "who should undertake to write the history of Europe during any century, would be influenced by the connection of time and place. All events which happen in that portion of space and period of time, are comprehended in his design, though, in other respects, different and unconnected.—They have still a species of unity amid all their diversity."

The life of man is a series of revolutions. I do not at this moment refer to the diurnal and other lesser movements of his body. I allude now to those greater changes in his economy, those climacteric periods, at which certain organs that were previously rudimental and inactive, become successively developed. Such are the teething times, the time of puberty, and the time when he attains to his utmost maturity of corporeal and intellectual power. The girl, the boy, the woman, the man, are all different, yet they are the same; for when we speak of Man in the abstract, we mean all ages and both sexes. But betwixt the female and the male of all animals, there is a greater degree of conformity or unity than you would at first suppose, and which is greatest in their beginning. Now this harmonizes with every thing else in nature; for all things in the beginning approach more nearly to simplicity. The early *fœtus* of every animal, man included, has no sex; when sex appears it is in the first instance hermaphrodite, just as we find it in the lowest tribe of adult animals, the oyster, for example. In this particular, as in every other, the organs of the human *fœtus*, internal as well as external, first come into existence in the lowest animal type—and it depends entirely upon the greater or less after developement of these several hermaphroditic parts, whether the organs for the preservation of the race, take eventually the male or female form.—How they become influenced to one or the other form we know not. Does it depend upon position? It must at any rate have a relation to temperature. For a long time even after birth, the breasts of the boy and girl preserve the same appearance precisely. You can see that with your own eyes. But the comparative anatomist can point out other analogies, other equally close resemblances in the rudimental condition of the reproductive organs of both sexes. During the more early fœtal state the rudiments of the testes and the ovaries are so perfectly identical in place and appearance, that you could not tell whether they should afterwards become the one or the other. What in the male becomes the prostate gland, in the female takes the form of the womb. To sum up all, the outward generative organs of both sexes are little more than inversions of each other. Every hour that passes, however, while yet in its mother's womb, converts more and more the unity of sex of of the infant into diversity. But such diversity, for a long period, even after birth, is less remarkable than in adult life. How difficult at first sight to tell the sex of a child, of two or three years old when clothed: at puberty the difficulty has altogether vanished. Then the boy becomes bearded and his voice alters; then the breasts of the girl—which up to this period in no respect differed from his, in appearance at least—become fully and fairly developed, assuming by gradual approaches the form necessary for the new function they must eventually perform in the maternal economy. Another, and a still greater revolution, imbues them with the power of secreting the first nutriment of the infant. But even before the girl can become a mother a new secretion must have come into play—a secretion which, from its period being, unlike every other, monthly only, is known to physicians under the name of *Catamenia* or the *Menses*. How can such things be done but by a great constitutional change—without a new febrile revolution of the whole body? Mark the sudden alternate pallor and flush of the cheek and lip, the tremor, spasms and palpitations—to say nothing of the uncontrollable mental depressions and exaltations—to which the girl is then subject, and you will have little difficulty in detecting the type of every one of the numerous diseases to which she is then liable. Physicians may call them *Chlorosis*, green-sickness, or any other name, *you* will recognize in them the developments of an Intermittent fever simply—as various in its shades, it is true, as a fever from any other cause may become—producing, like that, every wrong action of place and time you can conceive, and like other fevers, often curing such wrong actions as previously existed, when it happens to reverse the atomic motions of the various parts of the body. Before touching upon the principal

Diseases incidental to Women,

I must tell you that the Catamenia, in most

cases, disappears during the period of actual pregnancy; nor does it return while the mother continues to give suck. During health, in every other instance, it continues from the time of puberty, or the period when women can bear children, to the period when this reproductive power ceases. As with a fever it comes into play, so with a fever it also takes its final departure. Why it should be a peculiarity of the human female, I do not know—but in no other animal has any thing analogous been observed. Some authors, indeed, pretend to have seen it in the monkey; but if this were really the case, I do not think so many physiologists would still continue to doubt it, especially as they have every opportunity of settling the question definitively. Various speculations have been afloat as to the uses of this secretion, but I have never been satisfied of the truth of any of them. I am better pleased to know that the more perfect the health, the more perfectly periodical the recurrence of the phenomenon. It is therefore, without question a secretion, and one as natural and necessary to females of a certain age, as the saliva or bile to all people in all times. How absurd, then, the common expression that a woman, during her period, is "unwell." It is only when the catamenia is too profuse or too defective in quantity, or too frequent or too far between in the period—when the quality must also be correspondingly altered—that the health is in reality impaired. Then, indeed, as in the case of other secretions imperfectly performed, pain may be an accompaniment of this particular function.

Need I tell you that no female of a certain age can become the subject of any fever without experiencing more or less change in this catamenia? or that during any kind of indisposition, how slight so ever it may be, some corresponding alteration in this respect must, with equal certainty take place? In cases where the alteration thus produced takes the shape of a too profuse flow, practitioners are in the habit of prescribing astringents and cold applications. Happily for the patient the medicines usually styled "astringents," (iron, bark, alum, opium, &c.,) are all *chrono-thermal* in their action; and the general salutary influence which they consequently exercise over the whole economy, very frequently puts the catamenia, in common with every other function, to rights—when the practitioner who prescribes them has no idea that he is doing more than attending to the derangement of a part. He accordingly places profuse menstruation in his list of local diseases? When deficiency or suppression of this secretion, on the contrary, chances to be the coincident feature of any general constitutional change—a thing which may happen from a transitory passion even—such effect or coincidence of cerebral disturbance is by many practitioners assumed to be the cause of all the other symptoms of corporeal derangement! And under the formidable title of "obstruction," how do you think some of your *great* accoucheur doctors are in the habit of combating it?—By leeching the patient—by applying leeches locally. Now, I only ask you what you would think of a practitioner, who, on finding the same patient feverish and thirsty, should leech her *tongue?* or when she complained of her skin being uncomfortably dry, should apply leeches to that? You would laugh at him of course; and so you may, with just the same reason, laugh at the fashionable practitioners of the day, when you find them leeching their patients for defective or suppressed menstruation—a derangement of function which a passion might produce, and another restore to its healthy state. Is it then, a local disease or a disease of the brain and nerves—an affection of a part or a disorder of *totality?* If the latter, who but a mechanic would think of applying leeches locally? In either case, who but a cow-leech or a quack salver would dream of restoring any periodical secretion by a mode of practice so barbarous and disgusting? You might just as reasonably, in the absence of an appetite for dinner, expect to make your "mouth *water*" by the application of leeches to your stomach when the clock should strike five!

Having thus far explained the nature of these cases, I have now little else to say of them. The general principle of treatment is obvious—attention to temperature; for in every case of catamenial irregularity, whether as regards quantity, quality or period, the temperature of the loins must be more or less morbid—one patient acknowledging to chill, another to heat. In the former case, friction or a warm plaster may be tried as a local means—in the latter, cold or tepid sponging: though I may tell you that, with the chrono-thermal remedies singly, you may produce the most perfectly salutary results in numerous cases. In both instances, cold, warm, and tepid baths may also be advantageously employed, according to the varying circumstances of the case.

The majority of women who suffer from any general indisposition short of acute fever, are more or less subject to a particular discharge which, by the patients themselves is very often termed weakness, but which is more familiar to the profession under the name of *leucorrhœa* or *whites.* The usual

concomitant of this disease is a dull aching pain at the lower part of the back. Now, I never questioned a woman who suffered from it, but she at once acknowledged that the local *flow* was one day more, another less, and that she had, besides, the chills, heats, and other symptoms of general constitutional derangement. But of that derangement, the discharge so often supposed to be the cause, is in the first instance nothing more than a coincident feature or effect; though from pain or profuseness, it may again react upon the constitution at large, and thus form a secondary and superadded cause or *aggravant*. In cases of this kind I am in the practice of prescribing quinine, iron, or alum, sometimes with, and sometimes without copaiba, catechu, or cantharides—one medicine answering best with one patient, another with another.

I have been frequently consulted in cases of painful whites, and also in cases of painful menstruation, disorders which practitioners, as remarkable for their professional eminence as for their utter want of high professional knowledge, had been previously treating by leeches, some applying these to the loins, which, in every case, whether of whites or irregular menstruation, is weak and consequently painful; some, to the disgust of every woman of sensibility, introducing them even to the orifice of the womb itself. What practice can be more erroneous? What relief, if obtained, more delusive! Bark, iron, opium,—these are the remedies for cases of this description; and the general constitutional improvement which, for the most part, follows their use, together with the disappearance of the more prominent local irregularities for which your aid had been asked, affords the best answer to any hypothetic objection that may be brought against their employment. The best topical application in these cases—and you will find it useful in most—is a plaster to the spine to warm and support it; though, cold, hot, or tepid fomentation to the loins or womb may also be occasionally employed, according as one or other shall prove most agreeable to the patient's own feelings.

The various female disorders of which I have just been treating are matter of daily practice. The more formidable affection to which I now draw your attention,

Cancer of the Breast,

fortunately for the sex, is of rare occurrence —not one woman, perhaps, in five thousand ever becoming the subject of it. Now, what is Cancer? What but a slow and painful decomposition—a canker or blight of the particular organ affected. The manner in which cancer of the breast generally commences is this:—A tumor, at first smaller than a nut, possessing more or less hardness, and to a certain extent circumscribed, is observed in the neighborhood of the nipple; the patient's attention, in most cases, being first called to it by a slight itching or uneasiness in the part affected, which soon deepens into a "pricking," "darting," or "shooting" pain—for such are the various phrases by which different patients describe their pain. The tumor gradually but slowly increases in size and hardness, while the pain becomes more and more intolerable and "lancinating." The disease, in every case, is intermittent, and in most instances, this intermission is periodical, the tumor being one day perceptibly diminished, another as obviously enlarged. The pain, in like manner, disappears more or less completely, for a time, to return at a particular hour of the clock with undiminished violence. Now, when surgeons were more in the habit of performing operations in cases of this kind, than at present, such tumors, after removal by the knife, were usually, from motives of curiosity, bisected. If their internal structure when thus divided, resembled something betwixt a turnip and a cartilage, the disease was pronounced to be "true cancer"—a *schirrus* or *carcinoma*. On the contrary, if instead of this appearance, the tumor had a resemblance to the substance of the brain, or to lard, jelly, or was of a mixed character, disputes frequently arose as to the name by which the disease should be christened; as if it signified one straw whether the breast, when so completely changed in its structure and nature, as to be productive of nothing but misery to its owner, should be called schirrus, carcinoma, cancer, or any thing else! Oh! it matters very little what that organic change be termed, when, as in all these cases, the glandular fabric of the breast becomes at last completely destroyed and decomposed.

How and in what manner is this disease developed? Gentlemen, it is the result of general constitutional change. It is the effect of a weak action of the nerves on an originally weak organ; and of this you may be satisfied, when I tell you that in most instances cancer is a hereditary disease; or, to express myself better, there is hereditary predisposition, and what is more, the disease generally makes its first appearance about that period of life when the breast ceases to be any thing but a mere personal ornament to its possessor. It comes on much about the same time when the catamenial secretion is about to terminate for life. Can such termination take place without a new corporeal

revolution? Certainly not: every female at such time suffers more or less from constitutional disorder. Analyze this disorder, and you will find that it resolves itself into a general intermittent febrile action of the whole body, varying in its shade with every case. Cancer, then, is a development of that fever. Now, why is it that the word cancer sounds so fearfully in the female ear? The difficulty to cure it simply—the difficulty in most instances—the absolute impossibility in many. To understand the reason of this difficulty, we must consider the nature and uses of the organ. However beautiful and ornamental to its possessor, the breast is not, like the heart or lungs, an organ of the least importance to her own vital economy. It is a part superadded for the preservation of the race. Rudimental, or all but absent in the child, this organ only reaches its full maturity of development when the girl becomes the woman. After the woman ceases to bear children, or whether she has borne them or not, when the period of the possibility of her being pregnant has passed away, the substance of the breast is generally more or less absorbed, though you occasionally meet with instances where it becomes enlarged beyond its previous size. In fewer cases still it takes on a process of decay—in other words, it becomes cancerous. But nature in this instance, even when aided by art, will not often exert her usual reparative efforts—she will not put forth her powers (so to speak) for the preservation of a part which now, not only so far as the individual economy is concerned, but so far also as regards the race, has become a useless part. This I take to be the true reason of the difficulty to cure a cancer; for although in many cases more or less improvement in the state of the affected organ may follow the employment of remedial means—such means as beneficially influence the whole health—still, as if to prove more fully the truth of my explanation, you may even succeed to a great extent in raising the general healthy standard, and yet fail to procure the slightest arrest of the local process of decay. While a cut or bruise upon any other part of the body of a cancer patient will heal with ease, the breast, partaking no longer in the preservative power of the economy, may perish piece-meal. Gentlemen, never in my life did I meet with a cancer in any state or stage, the subject of which did not acknowledge to chills and heats, or who did mot admit errors of secretion; to say nothing of variations in the volume, temperature, and sensation of the part affected. I lately attended the sister of a Fellow of the Royal College of Physicians, who was first induced to consult me, from hearing that I looked upon ague as the primary type or model of all complaints. Her own cancer, she assured me, was preceded by shivering fits, which she traced to a sudden chill; and during the whole progress of the disease she suffered more or less from aguish feelings. Previously to my seeing her, she had been visited by a surgeon of eminence, who ordered her to apply leeches, but the effect of their employment was an increase of her pain And no wonder—for if that great man had only taken the trouble to enquire, he would have found that, instead of the hypothetic "inflammation," which doubtless suggested their employment, the breast in that instance was generally cold! Would not a warm plaster under these circumstances have been of more service? You, gentlemen, may try at least, and if you do not find it produce more or less relief in many similar instances, I know nothing whatever of the science I now pretend to teach you. No local application, however, will be long productive of any very effectual advantage in this or any other disease, without attending to the chrono-thermal principles of paroxysm and remission. Arsenic, quinine, opium, copper, prussic acid, may be all successively tried. But you must here always keep in mind that cancer is a chronic disease, a disease of time; and you must farther hold in your remembrance what I have already said in regard to most cases of chronic disease, namely, that no medicine will produce its beneficial effect for any great continuance in those disorders; for once the constitution becomes accustomed to the use of a remedy, such remedy either loses its salutary influence altogether, or acts in a manner the reverse of that which it did when tried in the first instance. No medicinal agent had a greater reputation at one time, in the treatment of cancer, than arsenic; arsenic in fact was supposed to be a wonderful specific in cases of that nature. What was the consequence? Like every thing else in this world, whether person or thing, physician or physic, that ever enjoyed the temporary distinction of infallibility, after a few decided failures in particular instances, this mineral came at last to be almost entirely abandoned in such cases. And yet, notwithstanding this, I do not know a remedy which may be more successfully used in cancer than arsenic. "We have seen from its use," says Dr. Parr, in his Dictionary, published in 1809, "an extensive [cancerous] sore filled with the most healthy granulations, the complexion become clear, the appetite improved, and the general health increased. Unfortunately," he continues, "these good

effects have not been permanent. By increasing the dose we have gained a little more, but, at last, these advantages were apparently lost." And was it ever otherwise with any other remedy? No power on earth could always act upon the living body in the same manner. The strongest rope will strain at last, and so will the best medicine cease, after a time, to do the work it did at first But a physician who should, on that score, despise or decry a power that had, for a given time, proved decidedly advantageous in any case, would be just as wise as the traveller who, on reaching his inn, instead of being thankful to his horse for the ground it had enabled him to clear, should complain of it for not carrying him without resting to the end of his journey. What, under the circumstances mentioned by Dr. Parr, either he or any other doctor should have done,—and what I have confidence in recommending you to do on every similar occasion is this,—Having obtained all the good which arsenic or any other remedy has the power to do in any case, change such remedy for some other constitutional power, and change and change until you find improvement to be the result; and when such result no longer follows its employment, change your medicine again for some other; or you may even again recur with the best effect to one or more of the number you had formerly tried with benefit; for when, (if I may speak so metaphorically) the constitution has been allowed time to forget a remedy that once beneficially influenced it, such remedy, like the re-reading of a once admired, but long-forgotton book on the mind, may come upon the corporeal economy once more with much of its original force and freshness. In all such cases, then, you must change, combine, and modify your medicines and measures in a thousand ways to produce a sustained improvement. Arsenic, gold, iron, mercury, creosote, iodine, opium, prussic acid, &c., may be all advantageously employed, both as internal remedies and as local applications, according to the changing indications of the case.

When Cancer is suffered to run its course undisturbed by the knife of the surgeon, or the physic of the doctor, the usual termination of it is this:—a small ulcer shows itself upon the skin of the most prominent part of the tumour, gradually increasing in dimension. And so exceedingly weak do the atomic attractions of the matter of the breast become during the change produced by the disease, that scarcely has the atmospheric air been allowed to come in contact with the tumour, than it commences to mortify and die—falling away in most cases, (as it did indeed in the case of the lady to which I have already alluded,) after a certain time, in a dead and corrupted mass. The ulcer which it leaves behind, is in all such cases, extremely fœtid, and shows a great disposition to spread; the reason of which is this,—first, because the whole constitution of such persons is more or less weak; and secondly, because the particles of dead, or half-dead matter, which coat the bowl of the ulcer, not only have no power of reparation in themselves, but are the cause of a further failure of reparative power in the already weak parts with which they come in contact. Exactly the same thing takes place when any part of an old tree becomes decayed, and very much after the manner of such vegetable decay, as you may see it in a gnarled oak, we have in this disease, mushroom-like and other excrescences springing from the sides and bottom of the ulcerous and decaying part, and that too with a rapidity truly astonishing. A case of this kind I lately attended with Mr. Farquhar of Albermarle-street. Unless every portion of these fungoid bodies be completely removed, you must not hope to arrest the progress of the disease. The whole surface of the ulcer should be cauterized and completely destroyed with a burning iron, nitrate of silver, ammonia, or potass. All four may, in some cases, be resorted to with advantage. Nor must you here spare any part that shows even a symptom of weakness; but cauterize, and cauterize again and again, until you get red, small, healthy granulations to appear. The dressings which you will now find most successful, are ointments or other preparations of the red oxide of mercury, iodine, arsenic, creosote, lead, &c., and each and all of these will only prove beneficial in particular cases, and for particular periods. The law that holds good in the case of internal remedies, will be now more conspicuous in the case of external applications,—namely, that all medicinal powers have a certain relation to persons and periods only, and must in no case, be a priori expected to do more than produce a temporary action. If that action be of a novel kind, they will produce benefit; if, on the contrary, the increased motion from their action be in the old direction, and which cannot be foreseen till tried, the result of such trial will be a greater or less aggravation of the state for whose improvement you ordered them to be applied.

Dr. Abel Stuart, while practising in the West Indies, where the disease is more frequent than in England, had many opportunities of making himself acquainted with every one of the various states and stages of cancer—and since I settled in London,

where he also now practices, he has shown me cases of this kind, which he has treated with the greateat success. You must not then suppose, like most of the vulgar, and not a few of the members of the profession, that cancer of the breast is necessarily a mortal disease. So long as you can prevent the ulcer from spreading, and at the same time keep up the general health to a certain mark, how can there be danger? The breast I repeat, is not a strictly vital organ; it is not, like the lungs or heart, necessary to the individual life,—it is a part superadded for the benefit of another generation. How many women at one time remarkable for a large full breast, in the course of years, lose every appearance of bosom by the slow but imperceptible process of interstitial absorption; what inconvenience do these suffer in consequence? But for the tendency to spread, and the accompanying pain, cancer would seldom terminate fatally at all; it is the pain principally that makes the danger, not any loss of the organ itself. Pain alone will wear out the strongest: relieve this, therefore, in every way you can, but avoid leeches and depletion, which, I need not say, are the readiest means, not only to exhaust the patient's strength, but to produce that extreme sensibility of nerve, or that intolerance of external impression, that converts the merest touch into the stab of a dagger. Strong people seldom complain of pain: it is bloated and emaciated persons who mostly do so. Keep up your patient's health, then, by every means in your power, and she may live as many years with a cancer of the breast, as if she had never suffered from such a disease. Sir. B. Brodie mentions the case of a lady who lived twenty years with Cancer, and died at last of an affection of the lungs, with which it had no necessary connexion. What shall I say in regard to amputation of the breast? Will amputation harmonize the secretions? Will it improve the constitution in any way whatever? Those patients who, in the practice of others, have been induced to undergo operations, have seldom had much cause to thank their surgeons,—the disease having, for the most part, reappeared at a future period in the cicatrix of the wounded part. Gentlemen, you have only to look at the pallid, bloated, or emaciated countenances of too many of the sufferers, to be satisfied that something more must be done for them than a mere surgical operation—a measure doubtful at the best in most cases, and fatal in not a few. Shiverings, heats, and sweats, or diarrhœa, or dropsy; these are the constitutional signs that tell you you have something more to do than merely to dissect away a diseased structure, which structure, so far from being the cause, was in reality but one feature of a great totality of infirmity. That the knife may sometimes be advantageously employed I do not deny, but instead of being the rule, it should be the exception; for the majority of honorable and enlightened surgeons will admit how little it has served them in most cases beyond the mere purpose of temporary palliation. When you hear a man now-a-days, speaking of the advantage of early operating, you may fairly accuse him of ignorance, with which, I regret to say, interest, in this instance may occasionaly go hand in hand. The large fee for amputating a breast enters into the calculation of some of your "great operators"—for that they get whether the operation be successful or not.

I have twice in my life, seen cancer of the male breast—the subject of one was a European, the other a native of India.

Let me now say a few words on

TUMOURS

generally; premising that the term tumour is merely the Latin word for any Swelling, though we commonly employ it in the more limited sense of a morbid growth. It is a very common error on the part of medical men, to state in their report of cases, that a "healthy" person presented himself with a particular tumour in this or that situation. Now, such practitioners by this very expression show how much they have busied themselves with artificial distinctions—distinctions which have no foundation in nature or reason--to the neglect of the circle of actions which constitute the state of the body termed health. Never did a tumour spring up in a perfectly healthy subject. In the course of my professional career, I have witnessed tumours of every description, but I never met one that could not be traced, either to previous constitutional disturbance, or to the effect of local injury on a previously unhealthy subject. Chills and heats have been confessed to by almost every patient, and the great majority have remembered that in the earlier stages their tumour was alternately more and less voluminous.

Every individual, we have already shown, has a predisposition to disease of a particular tissue. Whatever shall derange the general health, may develope the weak point of the previously healthy, and this may be a tendency to tumour in one or more tissues. The difference in the organic appearance of the different textures of the body, will account for any apparent differences betwixt the tumours themselves; and where tumours appear to differ in the same tissue, the difference will be found to be only in the amount

of the matter entering into such tissue, or in a new arrangement of some of the elementary principles composing it. It is a law of the animal economy, that when a given secretion becomes morbidly deficient, some other makes up for it by a preternatural abundance. If you do not perspire properly you will find the secretion from the kidneys, or some other organ increase in quantity. I was consulted some time ago by a female patient, whose breasts became enormous from excess of adipose or fatty deposit. Now, in the case of this female, the urine was always scanty, and she never sweated. Every tissue of the body is built up by secretion. The matter of muscle, bone and skin, is fluid before it assumes the consistence of a tissue, and the atoms of every texture are constantly passing into each other. "The great processes of nature," says Professor Brande, "such as the vegetation of trees and plants, and the phenomena of organic life generally, are connected with a series of chemical changes." But, Gentlemen, this chemistry is of a higher kind than the chemistry of the laboratory; —it is Vital Chemistry, under the influence, as I shall afterwards show you, of Vital Electricity. Secretion of every kind is the effect of this vital chemistry; and Tumours instead of being produced, as Mr. Hunter supposed, by the "organization of extravasated blood, are the result of errors of secretion. They are principally made up of excess of some portion the tissue in which they appear, or the result of new combinations of some of the ultimate principles which enter into its composition.

If you search the records of medicine upon the subject of tumours, you will find that the medicinal agents by which these have been cured or diminished, come at last to the substances of greatest acknowledged efficacy in the treatment of ague. One practitioner (Carmichael) lauds iron; another (Alibert) speaks favorably of the bark; the natives of India prefer arsenic; while most practitioners have found iodine and mercury more or less serviceable in their treatment. Gentlemen, do you require to be told that these substances have all succeeded and failed in ague! Wonder not, then, that each has one day been lauded, another decried, for every disease which has obtained a name, tumors of every description among the number. We now come to

Pregnancy.

But this, you will very likely say, is not a disease. In that case, I must beg to refer you to ladies who have had children, and I will wager you my life, that they will give you a catalogue of the complaints that affected them during that state, equal in size to Dr. Cullen's Nosology. In the case of every new phenomenon in the animal economy, whether male or female, there must be a previous corporeal revolution. We find this to be the case at the times of teething and puberty,—and so we find it in the case of pregnancy. Can the seedling become an herb in the frost of winter, or the sapling grow up into maturity without a series of changes in the temperature and motion of the surrounding earth?—No more can the infant germ become the fœtus without a succession of febrile revolutions in the parent frame! Once in action it re-acts in its turn.

The influence of the mother's brain over the growth of the child while in the womb, is sufficiently proved by the effects of frights and other passions, induced by the sight of objects of horror, and so forth, while in the pregnant state. Hare lips, distortions, moles, marks, &c., have in too many instances been traced by the mother to such passions, to render us in the least sceptical upon that point. Now, in this particular instance, some of the parts or divisions of the mother's brain must act in association or simultaneously, while others act independently or in alternation, for otherwise you could not understand how the brain of the mother should influence the growth of the child in utero, and at the same time continue to play its part in the parental economy. Some of its various portions must act in these respects alternately, for they cannot do both at one and the same moment of time. But, here again, as in other instances, a want of harmony may arise—the brain may continue to exercise its influence over the child too long; in other cases it may forget the child for the mother. How such want of harmony affects the child, we can only guess from analogy. How a too long cerebral neglect of the mother's economy may influence her, we may daily see in the numerous disorders to which she is then liable—more particularly in the periodic vomitings which take place in most instances, and also in the swoon or faint which occasionally comes on during the pregnant state. Are not these the very symptoms that happen in the case of a person who has had a blow on the head, or who has been much bled? It appears to me probable that the infant's growth must take place principally during the period of maternal sleep. For it is chiefly in the morning, just as she awakes, that the mother experiences those vomitings and other symptoms from which I infer the brain has been too long neglecting her own economy.

But even as a natural consequence of the more favorable alternations of cerebral movement which take place during pregnancy, the mother for the most part experiences chills, heats, and sweats,—she has symptoms, or shades of symptom, at least, of the same disorders that may arise from any other agency affecting the brain in a novel or unusual manner—she becomes at certain times pale and flushed alternately, and, as in the case of other fevers, frequently complains of headache. When blood-letting—the usual refuge of the ignorant—is in such cases tried, the blood drawn exhibits the same identical crust, which under the name of "buffy-coat," "inflamed crust" &c., so many practitioners have delighted to enlarge upon as the peculiarity of "true inflammatory fever!"

Pregnancy has been defined by some very great doctors, to be a "natural process." Now, that certainly is a very great discovery; but they might have made the same discovery in the case of disease and death. Is not every thing in Nature, a natural process, from the fall of an apple to the composition of the Illiad! Every thing that the eye can see or the ear can hear is natural; miracles only are miraculous; for they are events that are contrary to the natural order of things. Pregnancy, then, is a natural process;—but is it on that account the less surely a Febrile state? Is it for that reason the less certainly an Intermittent Fever?—What disorders have not originated in pregnancy? What, in cases where they previously existed, has it not like every other fever cured? If it has produced Epilepsy, Apoplexy, Toothache, Consumption, Palsy, Mania,—each and every one of these diseases have I known it to ameliorate, suspend, or cure! I remember the case of a lady who, before her marriage, squinted to perfection. But when she became pregnant, her Squint diminished, and long before the period of her confinement it was cured;—never did I see such an improvement in the face of any person. Still, if pregnancy has cured squint, I have known cases where it produced it. How completely, then, does this harmonize with the unity which pervades Disease generally!

PARTURITION,

I have already said, is a series of pains and remissions, but it is not an intermittent fever; nor, indeed, has it any resemblance to that affection! So, at least, I have been assured by very clever doctors: and they have told me the same of pregnancy! Is this question, then, completely settled in the negative? Certainly,—It is settled to the satisfaction of all who pin their faith upon mere human authority. But human authority seldom settled any thing with me; for wherever I have had an interest in knowing the truth, I have generally appealed from the decree of that unsatisfactory court to the less fallible decision of the Court of Fact. And what does Fact say in this instance? Fact says that child-labor, in almost every case, commences with chills and heats, and that these are again and again repeated with longer or shorter periods of immunity during its progress. But how do I know all this? you will ask,—I who hold modern midwifery in such horror! I will tell you truly—I first guessed it: for I could not suppose that parturition unlike every other great revolution of the body, could be either a painless or an unperilous state, or that it could be free from the chills, heats, and remissions, which I had always observed in cases of that character. Still not being a person easily satisfied with guess-work, I took the trouble in this particular instance, to interrogate Nature. And as sure as the sun ever shone on this earth, Nature completely verified the fact of my anticipation, that parturition, in every instance, is an intermittent fever. In some of my medical books, too, I found shiverings among the numerous other symptoms mentioned as incidental to women at this period. "Sometimes," says Dr. Ramsbotham, himself a man mid-wife, "they are sufficiently intense to shake the bed on which the patient lies, and cause the teeth to chatter as if she were in the cold stage of an ague-fit; and although she complains of feeling cold, the surface may be warm, and perhaps warmer than natural."

Now, this cold sensation, as you well know, is often complained of by ague patients, even in the hot stage. In spite of every assertion to the contrary, then,—in spite of every declaration on the part of medical or other persons, Pregnancy and Parturition are agues—agues in every sense of the word; for not only do their revolutions take place in the same manner as ague, but, like ague, they may both be influenced by medicines as well as by mental impressions. Indeed in most cases of parturition, the labor-fit,—mark the word!—will stop in a moment from the new cerebral movement induced by Fright or Surprise. In some the fit never returns, and the most terrible consequences ensue. When the fœtus is fairly developed in the case of pregnancy, and the labor completed in that of parturition, health is the general result; but in the course of both, as in the course of other fevers, every kind of disease may show itself, and, when developed, may even proceed to mortality. An occasional termination of pregnancy is

Abortion or Miscarriage;

And this, in every case, is preceded by the same constitutional symptoms as pregnancy and parturition, namely, the symptoms or shades of symptoms of ague. Moreover, when a woman gets into a habit of miscarrying, such miscarriage, like an ague, recurs periodically, and takes place almost to a day, at the same month as the first. A lady who had been married several years, but who had never borne a living child, although she had had frequent abortions, consulted me upon the subject. Her miscarriages have always taken place at the same period of pregnancy —about the end of the third month—I desired her when she should again become pregnant to let me hear from her within a fortnight of the time she might expect to miscarry. She did so, telling me at the same time she knew she should soon be taken ill, as she had already had shiverings. I directed her to use an opium suppository, nightly, which she did for a month, and she was thus enabled to carry her child to the full time. She has had two children since, and all three are now well and thriving. I have succeeded in similar cases with the internal exhibition of quinine, iron, hydrocyanic acid, &c. But opium, where the drug does not decidedly disagree, will be found the most generally useful of our medicines in checking the habit of miscarriage Need I tell you that in no case should it be continued where it excites vomiting.

The tendency to return of any action which has once taken place in the constitution, is a law even in some effects of accidents. A lady, who from fright during a storm, miscarried of her first child, a Boy, never afterwards when pregnant with boys, would carry them beyond the time at which she miscarried of the first. On the other hand, she has done well with every one of her daughters, five in number, all of whom are at this moment living.

To mothers and nurses, next to Pregnancy and Parturition, there is no subject so interesting as that of

Teething.

The birth of the first tooth, like the birth of a first child, is commonly expected by both with a certain degree of anxiety, if not with fear. Why is this? Why, but because as in the case of pregnancy, before the dormant germ can be called into action—before the embryo tooth can be developed—there must be a complete corporeal revolution, an intermittent fever, of more or less intensity, varying according to the varying conditions of particular constitutions. And what a curious unity runs through all creation, producing those wonderful analogies that alone can lead us to the proper study of nature. The embryo tooth, like the embryo infant, is the offspring of a *womb*—tiny indeed, but still rightly enough termed by the profession *matrix*—that being only another Latin word for uterus or womb. Both also come into the world by a fever. The more healthy and vigorous the child, the more subdued will the teething fever for the most part be, and the teething itself will consequently be less painfully accomplished; just as under the same circumstances the parturient mother will more surely bring forth her young in safety. In those cases, on the contrary, where the child is weakly or out of health, the fever will be proportionally severe. The generality of teething children, after having been comparatively well during the day, become feverish at a particular hour in the night. Now, the newly developed tooth, though in the first instance itself a mere effect of the fever, very soon contributes, by the painful tension which its increasing growth produces in the gum, to aggravate and prolong the constitutional disorder. It is first an effect, and then a superadded cause, or aggravant. Gentlemen, in this fever we have a fresh illustration of the unity of disease—a fresh proof that intermittent fever, in some of its many shades, is the constitutional revolution which ushers in every kind of corporeal disorder. How many varieties of local disease may not be produced during the intermittent fever of teething! Every spasmodic and paralytic distemper you can name—convulsions, apoplexy, lock-jaw, squint, curved spine, with all the family of structural disorders, from cutaneous rash and eruption to mesenteric disorganization and dysentery. Should the gum be lanced in these cases? Who can doubt it? If you found the painful tension produced by the matter of an abscess keeping up a great constitutional disorder, would you not be justified in letting out the matter with a lancet? The cases are similar. In many instances of teething, then, the gum-lancet may be used with very great advantage—but with greater advantage still may you direct your attention to the temperature of the child's body. When that is hot and burning, when its little head feels like fire to your hand, pour cold water over it, and when you have sufficiently cooled it throughout, it will in most cases go to sleep in its nurse's arms. During the chill-fit on the contrary, you may give it an occasional teaspoonful of weak brandy and water, with a little dill or aniseed to comfort and warm it —having recourse also to friction with hot

flannel, or to the warm bath. During the period of remission, the exhibition of small doses of calomel, quinine, or opium, with prussic acid occasionally, will often anticipate the subsequent fits, or render them trifling in comparison with those that preceded them.

But, Gentlemen, I should explain to you, that you may sometimes be met with considerable opposition on the part of the wiseacres of the profession, when you propose Quinine or Prussic Acid in infantile disease. I was once requested to see the infant son of a gentleman living in Hertford Street, which had been suffering from convulsions and flatulence. You remember what I told you of this disease—that infantile convulsion depends in every instance upon cerebral exhaustion. It is often the effect of cold, and frequently follows upon a purge; I have known the disease come on after the application of a leech. "No fact," says Dr. Trotter, "is better known to the medical observer, than that frequent convulsions are a common consequence of the large loss of blood." And you may recollect that in the experiment of the animal bled to death by Dr. Seeds, flatulence and convulsions were among the symptoms produced by the evacuation. But to return to the child in question. Before I saw it, the poor little thing had been the subject of thirteen distinct convulsive fits, with an interval of remission of longer or shorter duration between each. What do you think was the treatment to which this infant had been in the first instance subjected by the practitioner then and previously in attendance? Though its age was under six months, and the disease clearly and obviously remittent, he had ordered it to be cupped behind the ear,—afraid as he explained to me, of the old bugbear, pressure on the brain! How compatible this doctrine, permanency of cause, with remission of symptom! The quantity of blood taken was about an ounce, but the convulsions recurred as before. This was the reason why I was called in. The child at that particular moment had no fit—so after taking the trouble to explain the nature of the symptoms to the attending Sangrado, I suggested quinine as a possible preventive. The man of cups and lancets stared, but acceded. The quinine, however, upon trial proving abortive in this instance, I changed it, according to my custom, for prussic acid—after taking which, the infant was free from fits for a period of at least five or six weeks,—when the convulsive paroxsym again recurred—from what cause, I know not, unless it might be from a Purge which its mother injudiciously gave it on the morning of recurrence. The flatulence, too, with which the child was all along troubled, began to diminish from the moment it took the prussic acid. You may perhaps ask me in what dose I prescribed the acid here. I ordered one drop to be mixed with three ounces of cinnamon water, and a tea-spoon full of the mixture to be given every two hours all that day; so that there is no earthly agent, however powerful, even in a small quantity, that may not by dilution, or some other mode or diminution, be fined away to any state and strength—to any age or condition of life for which you may be desirous of prescribing it. In this respect, medicine resembles every thing in nature. Take colors for example;—the most intense blue and the deepest crimson, by the art of the painter, may each be so managed that the eye shall not detect, in his design, a trace of either one or the other. In the case of the infant just mentioned, the dose of prussic acid was about the twenty fourth part of a drop, and its good effects were very immediate and very obvious. Nevertheless, when the attending practitioner came in the morning to see the little patient, then completely out of danger, he was so horrified by the medicine which had produced the improvement, that he stated to the family he could not, in conscience, attend with me any longer. He accordingly took his leave of the child he himself had brought into the world, and all because he, a man-midwife! could not approve of the treatment that saved its life. Yet this very person, without hesitation, let loose all at once the Eight lancets of the cupping instrument on the head of the same infant, whose age, be it remembered, was under six months! Gentlemen, though I will not condescend to name the individual who having so heroically, in this instance, swallowed the camel, found such a difficulty afterwards in approaching the gnat; I may state for your diversion that he is a very great little man in his way—being no less than one of Her Majesty's principal accouchers — a proof to you that "Court-fools" are as common as ever. Indeed, the only difference I see in the matter is this,—that whereas in the olden time such personages only exhibited in cap and bells at the feast and the revel, they now appear in a less obtrusive disguise, and act still more ridiculous parts on the gravest occasions.

One very great obstacle to improvement in medicine has been the very general preference given by Englishwomen to male over female practitioners of midwifery. For by means of that introduction, numbers of badly educated persons not only contrive to worm themselves into the confidence of families,

but by the vile arts to which they stoop, and the collusions and conspiracies into which they enter with each other, they have in a great measure managed to monopolize the entire practice of physic in this country. And what an infamous business medical practice has become in their hands! To check the career of these people, Sir Anthony Carlisle wrote his famous letter to the Times newspaper, wherein he declared that "the birth of a child is a natural process, and not a surgical operation." Notwithstanding the howl and the scowl with which that letter was received by the apothecaries, it is pleasing to see that the public are now beginning to be aware of the fact that more children perish by the meddlesome interference of these persons, than have ever been saved by the aid of their instruments. How many perish by unnecessary medicine common sense may form some notion—for the fashion of the day is to commence with physic the moment the child leaves the womb—to dose every new-born babe with castor oil before it has learnt to apply its lip to the nipple! Who but an apothecary could have suggested such a custom? Who but a creature with the mind of a mechanic and the habits of a butcher would think of applying a cupping instrument behind an infant's ear to stop wind and convulsions? The nurses and midwives of the last age knew better. Their custom in such cases was to place a *laurel*-leaf upon the tongue of the child. The routinists laughed at what they called a mere old woman's remedy, and declared that it could have no effect whatever; they little knew that its strong odour and bitter taste depended upon the *prussic acid* it contained! Gentlemen, you may get many an excellent hint from every description of old woman but the old women of the profession—the pedantic doctors, who first laugh at the laurel-leaf as *inert*, and yet start at the very medicine upon which its virtues depend, when given with the most perfect precision in the measured form of prussic acid! men who, in the same mad spirit of inconsistency, affect to be horrified at the mention of opium or arsenic, while they dose you to death with calomel and colocynth, or pour out the blood of your life as if it were so much ditch-water!

Gentlemen, there is such a thing as

HEREDITARY PERIODICITY.

If you take a particular family, and, as far as practicable, endeavor to trace their diseases from generation to generation, you will find that the greater number die of a particular disease. Suppose this to be pulmonary consumption. Like the ague, which makes its individual revisitations only on given days, you shall find this disease attacking some families only in given generations—affecting every second generation in one case; every third or fourth in another. In some families it confines itself to a given sex, while in the greater number, the age at which they become its victims is equally determinate—in one this disease appearing only during childhood, in another restricting itself to adult life or old age. By diligently watching the diseases of particular families, and the ages at which they respectively reappear, and by directing attention in the earliest stages of constitutional disorder to those means of prevention which I have in the course of these lectures so frequently had occasion to point out to you, much might be done to render the more formidable class of disorders of less frequent occurrence than at present—mania, asthma, epilepsy, and consumption might thus, to a certain extent, be made to disappear in families where they had been for ages hereditary. But alas! then, for the medical profession, the members of which might in that case exclaim, "Othello's occupation's gone!"

[While the second edition was in the course of printing I received the three following letters, which, as they go far to bear me out in many of my previous observations, may not be deemed by the reader to be entirely out of place here. The first is from Dr. M'Kenzie of Kenellan, in Scotland. "KENELLAN, near Dingwall, 24th Feb. 1841. Dear Sir,—After studying at Edinburgh, London and Paris, I graduated in 1824, and immediately afterwards received an appointment to the Medical staff of the army. I conceive that, phrenologically speaking, my head is a fair sample of the common run; and during my pupilage I had the very best opportunity of acquiring what most people call "medical information." In the military hospital at Fort Pitt I had abundant opportunities of testing its value, yet though I did my best to put in practice the rules and directions which I had so sedulously studied in the schools of medicine, the result of their application was anything but satisfactory to me; nor did the observations I made on the practice of my comrades mend the matter. The Sangrado system was in full operation. Like my neighbors, I did as I had been taught, but the more I considered the result of our practice, the more convinced I became that we were all in the dark, and only tampering with human life most rashly, in a multitude of cases Still I thought it my duty to do as my superiors directed, hoping soon to see my way more clearly. In process of time I was appointed

to a Regiment, with which I served about two years. I then married, and finding that a married man has no business to be in the army, I resolved to embark in private practice, expecting that with the excellent opportunities of becoming acquainted with disease in every form which I had possessed in the army, and aided by numerous friends, I might rise easily in my profession. I settled in Edinburgh, and became a Fellow of the College of Physicians. I soon found, however, that in leaving the army for private practice, I was "out of the frying pan into the fire;"—there were obstacles to success that I had never even dreamt of. In the military hospital I had only to say "do," and it was done; and I knew to a nicety the effect of my remedies, for in every instance they were faithfully administered. In private practice all this was changed. There, in order to live like other men by labor, I found it absolutely essential to practise the *suaviter in modo* on many occasions when the *fortiter in re* would have been the best for my patients. I therefore felt myself obliged to consider how others managed such matters, and I was soon able to divide the medical body into three classes. At the top of the tree I noted here and there a solitary individual whose word was law to his patients. I endeavored to trace the career of these favored practitioners, and was grieved at being compelled to think that in few instances had they ascended to their eminence by the ladder of integrity, talent, or real medical knowledge. On the contrary, I was compelled to believe that these qualities often were a bar to a physician's rise, and that flattery and humbug were far more valuable qualities in the eyes of the world, and, if skilfully practised, would ensure first rate eminence. Lower down I found a certain number who, like myself, did their best to retain practice, and preserve the *vultus ad sidera.* But when I looked to the bottom of the tree, I saw around it a host of creatures, void of any scruples, determined to acquire wealth, and to act on the ancient maxim, *rem si possis recte; si non, quocunque modo rem;* [Make money,—honestly if you can; if not, make money!] men who, void of integrity and all honorable self-respect, looked upon such as differed from them in this point as insane. I certainly was taken quite aback, and looked and better looked in hopes that my senses deceived me; but the more I looked the more was I satisfied, or rather dissatisfied with the correctness of my views. It was now quite clear that I never should rise in the profession, and that "although *bred* to physic, physic would never be *bread* to me." I could not scramble for subsistence at the expense of self-respect, and live upon an *ipecacuan loaf.* In spite of the lamentations of my friends and patients, who thought me "getting on so nicely," but who were unable to read my real feelings, and at the expense of being ridiculed by many who supposed me actuated by foolish pride, &c., I bade adieu to private practice, and turned my lancet into a ploughshare. In short, I took to farming, in which vocation I have now continued for nine years, enjoying a happiness and peace of mind that I think few medical men can understand. Among the poor I still keep up a little practice, and occasionally am consulted by my country practising friends, but, like my old lancets, I grow very rusty. Perhaps you will say so much the better. And now, why have I troubled you with all this from an entire stranger? Simply as a preface to the thanks that I now beg to offer you for the new light that broke upon me on reading your *Fallacies of the Faculty,* sent me by a non-medical friend. My ideas on physic have been totally revolutionized by it, and I now recal to my mind many cases where I made most fortunate cures accidentally, by following your system, though without any knowledge of the principles of its application. Most sincerely do I congratulate you on your discoveries, and most confidently do I look forward to the day, not distant, when they will be duly appreciated. I have myself been all but a martyr at the shrine of Sangrado, but nothing will ever again induce me to part with a drop of blood, so long as it will circulate in the veins of—Your obliged and faithful

J. M'Kenzie, M. D."

The next letter is from Dr. Charles Greville of Bath: "Bath, Feb. 24, 1841. My dear Sir, I have perused with much interest your excellent and original lectures on the *Fallacies of the Faculty,* and have much pleasure in attesting the truth of your remarks. I have treated numerous cases of disease upon the chrono-thermal principle, with perfect success. Should time permit, I will furnish you with various instances. I have no doubt the public will eventually appreciate the superiority of your views, and take its leave of the nefarious apothecary, whose existence seems to depend upon the deluging of his patient with unnecessary and too often deleterious compounds. I remain, my dear Sir, Yours very faithfully,

Charles Greville."

The third letter is from Mr. Henry Smith, a surgeon in very extensive practice at Cheshunt, in Hertfordshire: "Cheshunt, Feb. 24, 1841, My dear Sir, At a time

when your doctrines are so much the subject of discussion both with the profession and the public, the evidence of a country practitioner as to the result of their application in his hands, may not be altogether unacceptable to their author. The first time I heard your name was about eighteen months ago, when the Hon. Edmund Byng sent your Unity of Disease to my father-in-law, Mr. Sanders. We were both equally struck with the novelty and simplicity of your views, as there detailed, and we determined to put them to the test. You will be gratified to hear, that neither Mr. Sanders nor myself, from that time, have ever had occasion to use either leech or lancet in our practice, though formerly we felt ourselves compelled to use both. Every day has confirmed us in the truth of your opinions by our increased success. I have treated cases of Apoplexy with the most perfect success with no other means than the application of cold water dashed over the head and face, —following that up after the fit had gone off, with quinine, ammonia, and prussic acid. I have cured all kinds of cases of convulsion, by the same treatment; indeed, in the convulsive diseases of children, the prussic acid has been my sheet-anchor. In cases where children have been apparently still-born, I have succeeded in rousing them by dashing cold water over their bodies. With quinine, and prussic acid, I have treated many cases of croup, and in no instance do I remember to have lost a patient. Many cases of hysteria, and some of epilepsy, have been cured or relieved by creosote, after every other medicine had been tried in vain. I have treated cases of both chronic and acute rheumatism successfully by arsenic. By the tonic practice I have been equally successful in inflammations of the chest and bowels. Before concluding this hasty sketch, permit me to express how thankful and grateful I feel towards you, for the light by which you have expelled the darkness in which medicine was formerly so much enveloped by its professors.

Yours, my dear Sir, very faithfully,

HENRY SMITH."

Since the publication of the second edition of this work, Mr. Smith confirms his previous statement by a further experience of eighteen months—three years in all—during which he has not used a leech or lancet. I have also received among other communications the following:

From H. C. Deshon, Esq., Surgeon. "SHROTON, BLANDFORD, 10th November, 1841. Dear Sir, I have from time to time anxiously waited to hear of the state of health of that beloved relative [his mother] I left under your care, and I am now glad to hear that she considers herself better, * * * I have cured palsy and epilepsy by hydrocyanic acid, quinine, arsenic, &c., and I have also found these medicines of avail in convulsions and dropsies. Indeed, I am confident that most diseases may be cured (I refer to chronic diseases chiefly) by medicines useful in ague, and on your principles with reference to Periodicity and Temperature. Dear Sir, very truly yours,

HENRY C DESHON."

From Charles Trotter, Esq., Surgeon: "HOLMFIRTH, near HUDDERSFIELD. Dear Sir, having read your second edition, *Fallacies of the Faculty*, I have been induced in a great number of cases to try the chrono-thermal system of treatment, and I must confess that in very many instances it has exceeded my expectations. I have cured what are termed inflammations without the patient losing a single drop of blood. Very recently I succeeded in bringing a case of Peritonitis (inflammatian of the membranous covering of the bowels) to a favorable result without bleeding at all. Several well-marked cases of Pnuemonia, (inflammation of the lungs,) as well as of pure Bronchitis, (inflammation of the air-passages,) have also yielded to medicine without any bleeding. And I may at the same time observe, the recovery was in every case quicker, and the consequent weakness less than if blood had been drawn. Yours truly,

CHARLES TROTTER."

From Dr. Fogarty, Surgeon of the St. Helena Regiment: "LONDON. My dear Sir, I have read with the greatest delight your *Fallacies of the Faculty*. Every word ought to be written in letters of gold. Yours faithfully,

M. FOGARTY."

From H. W. Bull, Esq., Surgeon, R. N.: "WOKINGHAM, 5th February, 1843. Dear Sir, I beg to forward to you a statement of my own case, and one or two cases of others treated on your plan, all of which are evidence of the value of the chrono-thermal system. I was attacked by paralysis on the 28th October, 1841, which deprived me of the use of my right arm and leg, affected the same side of the face, and produced some difficulty of speech. The usual plan was adopted, bleeding, purging, leeching, mercury and blisters. In this state I crawled on to May, 1842, when I lost more blood to *prevent* another anticipated attack, goaded on by what you term the bugbear Congestion. In this manner I went on occa-

sionally cupping and purging, and with a very restricted diet. In consequence of all this I was much reduced, and I became exceedingly weak; the heart palpitated very much on the least motion, and I had in addition occasional fainting fits. Last May my son sent me some extracts from your work, the *Fallacies of the Faculty*, the perusal of which induced me a few days afterwards to state by letter the particulars of my case to you. The first prescription you were so kind as to send disagreed; you then ordered quinine, and this I took with good effect. The shower-bath which you also ordered I found very beneficial. I have followed the plan laid down by you with very great advantage; changing the different medicines from time to time as occasion required; and I can now walk two miles without assistance. I have not only power to raise my right arm and wave it round my head, but I can lift a weight of forty pounds with it. I am now following the same plan with very good effect; I must confess I was at first startled by a practice so very different from all I had been taught in the schools, but a practice, I can truly say, to which I owe my life. Like Dr. M'Kenzie, nothing will ever induce me to lose a drop of blood again so long as it will circulate in the veins of,

Yours, most sincerely and faithfully,

H. W. Bull, Surgeon, Royal Navy.

Cases alluded to in the above letter.

"Case 1. Mr. C——— was attacked with acute rheumatism in almost every joint, great difficulty of breathing, and violent pain in the chest. I prescribed an emetic, but he refused to take it: he is a Hampshire man, and almost as obstinate as one of his own hogs. He continued in this state two days more; at last he was prevailed on to take the emetic. It operated soon and gave him instant relief. I followed it up with quinine and colchicum; he is now quite well, and has gone to his brother's house, some distance from this.

"Case 2.—A girl twelve years of age was brought to me from Binfield in convulsive fits. The pupils of her eyes were much dilated, and the fits followed each other in rapid succession. I first gave her a purgative, and followed it up with prussic acid; this was on a Monday. The fits became less and less frequent, and from the following Friday they entirely ceased. I also lately used the prussic acid with the best effect in the case of a child seven weeks old.

"Case 3.—A gentleman lately brought his child, a fine boy, to me for squint; the age two years. Some days the boy squinted less than others. I gave him six powders containing quinine and a little calomel: no other medicine was prescribed. There has been no squint since the powders were finished. In many other cases I have followed your plan with the best success.

H. W. B."

From John Yeoman, Esq., a surgeon in extensive practice at Loftus in Yorkshire: "Loftus, Feb. 2, 1843. Sir, Hearing that you are about to give us another, a third edition of the *Fallacies of the Faculty*, I beg now to offer to you my best thanks for the service you have already done the medical profession, by the publication of your original doctrines on disease. Being convinced, from my own experience and observation, that there is a Periodicity in most diseases, and that blood-letting is resorted to, as a curative measure, far too indiscriminately, I have read the *Fallacies of the Faculty* with very great interest and advantage. With interest, because I have been anxious and ready, for the last two years, to test the Chrono-thermal doctrine and remedies fairly, and with advantage, because I have succeeded in a wonderful manner to cure diseases, by acting up to the principles and practice you recommend. I have treated several cases of decided *Pleurisy* and *Pneumonia* according to the Chrono-thermal system, using emetics, purgatives, tartar emetic, prussic acid, and quinine, and *without* the aid of *lancet* or blister, most successfully. In croup and typhus-fever, I can bear ample testimony to the good effects of emetics, cold affusions, prussic acid and quinine; and with these agents alone, I have cured several cases of both within the last six months. You are at liberty to make use of these few remarks, to make them known to the profession, or the world, as you please; and wishing you every success in your future efforts, good health, and happiness, I am, Sir, yours sincerely,

John Yeoman,

Member of the Royal College of Surgeons, and Licentiate of the Apothecaries' Company, London."

From J. H. Sprague, Esq., M. D., formerly a Medical Officer on the Staff:—"Clevedon, near Bristol, Feb. 6, 1843. My dear Sir, Having read over and over again your invaluable work, the *Fallacies of the Faculty*, and having devoted much time to the study of the principles laid down, I am desirous to convey in plain language my sentiments in regard to the immense benefit which would indubitably be conferred on mankind by the general adoption of your opinions and practice. I was strictly

educated to the Medical profession from my youth up, and have been in actual practice for more than thirty-three years, time enough you will say, to be rooted and grounded in all the prejudices of an age of such superficial thinking as the present. Those prejudices, doubtless, I should have imbibed, and possibly cherished, like many others who know no better, had I not been taught at an early age by my mother, a woman of superior sense and discernment, to imitate the example of one whom I am proud to call my ancestor—the immortal John Locke. Her constant advice was, think for yourself and never take any man's assertion for proof. Examine before you believe:

Seize upon Truth where'er 'tis found,
Among your friends, among your foes,
On Christian, or on heathen ground,
The flower's divine where'er it grows,
Watts.

I have, therefore, through life carefully examined and compared effects with their supposed causes, believing nothing upon the mere assertion, or *ipse dixit* of any authority, however high. It was my fortune to be a pupil of the late once popular Dr. Beddoes, at a period when Pneumonic medicine was all the fashion; or in other words, when the inhalation of various gases was prescribed for chest diseases. At that time, it was also common to place consumptive patients in cow-houses, to breathe the odor of the animal, then believed to be a specific for that complaint. Beddoes, however, prescribed digitalis (fox-glove); maintaining that he could cure consumption with that drug, as certainly as he could cure an ague with bark. Yet all these things are now candidly allowed to be only specious fallacies. Soon after this originated the doctrine first brought to this country by invalids returning from India, that the Liver is the seat of all disease; and this doctrine my friend and correspondent, Dr Curry, of Guy's Hospital, promulgated to the world as true, in his attractive and eloquent lectures; assuring his numerous pupils, at the same time, that the cure was to be effected by calomel, in scruple and half-drachm doses! So extensively, indeed, at one time, was this mercurial used through Dr. Curry's influence, that calomel was generally known at the druggist's shops in London by the name of Curry powder! How many thousands of lives have been destroyed by the *mercurius dulcis*, or sweet mercury, as calomel was once called! On the subsidence of the Hepatic mania, Mr. Abernethy appeared upon the medical stage with his blue pill and black draught, which, with decoction of sarsaparilla, were long considered as the only remedies required for "all the ills that flesh is heir to." Somewhat later, began the rage for profuse bleeding, which, with very few exceptions, has up to the present time been zealously advocated by the whole medical fraternity. 'The Sanguinary Science,' as you have most appropriately named it, has been, and is still taught and inculcated in all the English schools of medicine; and sanctioned by such authorities, the practice of phlebotomy has spread through the land like a destructive torrent. Whether the doctor entered the rich man's habitation, or the poor man's dwelling, the first word was 'You must be bled!' Or if the operation had been performed, the next most important question to be decided was, 'Has enough blood been taken?' Among the principal British slaughter-houses, I must reckon the Army Hospitals. There the living blood was and is still poured out, as if it were the most pernicious element in nature; so much poisonous ditch-water. I recollect a spruce young surgeon, of the 13th Regiment of Foot, with whom I was in garrison in the Island of Jersey, who made it his boast that 'when the battalion was in Canada, he thought nothing of having seventy or eighty pounds of blood thrown out upon the dung-hill every morning!!' To preserve my credit with the Director-General of the Army Medical Department, I was of course obliged to follow at an humble distance this terrible practice: for had not the letters V. S., or Venæ Sectio, appeared opposite to the patient's name in my returns to the Medical Board, I should undoubtedly have been deprived of my commission; so indispensable was the operation considered to be! But even at this early period of my life, by a judicious use of Emetic Tartar and other medicines, which I now call chrono-thermal remedies, I was much more successful in my practice than those who trusted almost exclusively to the lancet. A few years after the time I refer to, a perusal of the excellent practical treatise of Dr. Balfour led me to adopt the Antimonial treatment. Up to this hour, in this part of the country, the dangerous system of depletion is thoughtlessly persisted in, and the delicate and weakly, as well as the more robust, are every day drained of their life's blood,—the unfortunate patient sinking into a state of exhaustion—and death produced not by disease, but by the doctor. But of all the sanguinary projects ever had recourse to, surely there is none so barbarous and cruel as the practice of scalping a patient by a cut of six or seven inches along the upper part of the head, for the purpose of making an issue. I have known cases in this neighborhood where the patient has rapidly sunk from loss of blood, shortly

after the infliction of such an incision; and other cases in which the bleeding has been so impetuous, that it could only be stopped by means of searing the wound with a red hot iron! What an idea, to call the practice of illiterate quacks in question, when medical men are permitted to perform operations so unprofitable! Lord Ellenborough's act for 'cutting and maiming' surely applies to these torturers of their fellow-creatures. A very clever physician, whom I lately had the pleasure of meeting in Devonshire, showed me a preparation of the head of an unfortunate man who had formerly been a patient of his, and who had cancer of the eye. A short time before his decease, the poor man went to Bristol for advice, where his case was treated by two medical men, a physician and an oculist, as Inflammation of the Brain. This patient, by their directions, was unmercifully leeched and then cut and hacked, as I have described to you, and he returned home with an issue, containing fifteen beans, in his scalp! after which, he lingered a few weeks, and died of complete exhaustion. Notwithstanding the strenuous and persevering advocacy with which bloodletting has been so universally urged, and that, too, in the face of the great destruction of human life indubitably produced by it, to you, Sir, belongs the honor of triumphantly proving by evidence the most incontrovertible, that 'all diseases which admit of relief can be successfully treated *without* loss of blood.' And here do I most willingly record my unbiassed testimony to this important Truth. Let me further add, that by a course of patient investigation and much practical experience, I had arrived at the same conclusion before I had the pleasure of perusing your writings. I am therefore bound to acknowledge how highly I value the *moral courage* which has induced you to promulgate your invaluable opinions, and which, I believe are built upon an immoveable foundation. In proof of the benefits derived by the application of your principles in my own practice, I annex a few remarkable cases, some of them highly inflammatory, which I have lately cured by the chrono-thermal treatment, without the loss of a single drop of blood. With a deep sense of obligation to you for the information I have derived from your various writings, especially the 'Fallacies of the Faculty,' I remain, my dear Sir, yours very faithfully,

J. H. Sprague, M. D.

Cases referred to in Dr. Sprague's letter:—

Case 1.—I was suddenly called upon to see the butler of Sir C. A. Elton, Bart., Clevedon Court, who, I was told, had Brain-fever, and was "ramping mad." On my arrival, I found that a practitioner, previously in attendance, had bled him largely at the arm, and applied leeches to his head, and put him on a low diet. His state, when I saw him, was one of great danger. He looked wild and agitated—his head at intervals being intensely hot, succeeded by a low sinking pulse, and his skin bedewed with a clammy perspiration; he had not slept for seven nights. The case was evidently *Delirium tremens.* I immediately ordered the cold dash to the head, which was repeated at intervals in the course of the day. Mulled port to be taken occasionally with some cordial medicine and an opiate. The next day he was effectually relieved, having had six hours' comfortable sleep. A remission of symptoms being thus established, I prescribed quinine, and other chrono-thermal medicines; and at the end of a fortnight he was so far recovered as to be able to walk a distance of two miles, much to the surprise of all who had heard of his illness, the medical man formerly in attendance having declared that if he did not die, he must become the inmate of a mad-house. He is now doing his duty as butler in good health.

Case 2.—A girl, aged four, who had been ill four days, was brought to me, with intense pain of head, and the peculiar scream that generally attends inflammatory brain affection. She had much fever, with hard and incompressible pulse—the pupil of her eye was contracted—she was intolerant of light, and she had repeated fits of vomiting. Having had her head shaved, cold applications in various forms were employed, and her feet, at the same time, were kept warm with hot water bottles. An emetic was also given, with other medicines, to subdue the fever. In the course of three weeks, this severe case of cerebral inflammation was completely cured, without the loss of a single drop of blood. Under the anti-phlogistic plan, such cases usually terminate in water of the head and death.

Case 3.—A child, twelve months old, had croup; he was hot and feverish, had great difficulty in breathing and cough, with the metallic sound peculiar to that disease. By an emetic twice repeated, followed up with quinine, and sulphate of copper, in minute doses, to say nothing of warm applications to the throat and other chrono-thermal means the child recovered rapidly. Under the old system of leeching, bleeding, and blistering, such cases, if the subjects of them survive at all, which is seldom, generally end in a long protracted weakness of body.

Case 4.—Miss S——, aged 30, had repeatedly suffered from spitting of blood, for

which her physician in Bath had ordered her to be as repeatedly bled and leeched. When called upon to see her, she was bringing up considerable quantities of florid blood, and her anxious friends, in the belief that I would bleed her, had the bandage and basin ready for the operation! I ordered an emetic instead, which at once stopped the hæmorrhage. This I followed up with antimonials and opiates. I then prescribed quinine, and other chrono-thermal medicines, with nutritious diet, directing her chest, at the same time, to be sponged with cold water. In the course of three weeks, her health was very greatly improved. In six weeks more, she left Clevedon quite an altered person, and without any apparent tendency to return of the hæmorrhage.

Case 5.—Mrs. S——, aged about 38, applied to me for a *lancinating* pain of the left side, cough, and difficulty of breathing, increased by inspiration, with the other common symptoms of Pleurisy. I prescribed an emetic, and having, by means of this, and antimonials in small doses, subdued the more urgent symptoms, I ordered a mustard cataplasm to the chest, and prescribed the usual chrono-thermal remedies, which, in a few days, cured an attack of as severe Pleurisy as I ever witnessed, and that, too, without the abstraction of a drop of blood in any form.

Case 6.—Mr. T—— N——, age about 28, from exposure to wet, was seized with severe shiverings, followed by violent fever, in course of which, the elbow, wrist, and the ankle joints became so swollen, painful, and agonizing, as to prevent his moving in any manner. Emetics, opium, bark, and warm fomentations to the affected joints, rapidly produced a cure. Since that attack, he has had much better health than formerly, without any return of Rheumatism, to which he was before very liable.

Case 7.—Mr. H—— D——, age about 50, had for years suffered from severe pain in the back and limbs, the temperature of his skin being *colder* than natural. Cupping, bleeding, blisters, &c. had all been tried in his case unavailingly. I prescribed quinine, sulphur, guaiac, and small doses of turpentine, which, with a liniment of turpentine and mustard, worked wonders on him. These measures, and an occasional tepid bath, cured him completely in three weeks.

Nausea, or Sickness of the Stomach.—℞ Tinct. Ipecac. 3 to 5 drops, in a wine-glass of water; or of first dilution 5 to 10 drops, in a wine-glass of water.—*Homœpathic.*

(For the Dissector.)

TRACTS ON CONSUMPTION.

NUMBER ONE.

On a new Diagnostic Symptom in Tubercular Phthisis.

By J—— G——, M. D.

The improvement in the science of medicine has been so great during the past century, that, if it does not constitute one of the glories of modern philosophy, it is a just object of pride to the physician. It is not detracting unfairly from the character of this improvement to confess that our science is still very imperfect. We may even admit that in several departments, which, from their comprising enquiries into the greatest evils incidental to man, have been most assiduously investigated, we have made no important advance in knowledge. Consumption is a striking example of the stationary character of medical science. This disease has been regarded as influencing the happiness of man as much as any circumstance connected with his existence, and, as such, has engaged the attention of physicians from the earliest ages of medicine; and yet it may be questioned whether it is more submissive to the power of art, at the present day, than it was in the time of Hippocrates. Improvements in diagnosis have enabled us to point out the disease, at least in its advanced stages, with considerable accuracy; and yet it acknowledges no more control from the art of medicine, than when the means of distinguishing it were so ill defined that its characteristics might be applied to a whole class of complaints. The zealous cultivation of pathological anatomy has shown us an approximation to the true nature, if not the actual state, of the malady; but still it is as rarely cured as when pathology consisted wholly of fiction and hypothesis. Therapeutics, based upon a sound diagnosis and an improved pathology, have, apparently, suggested the most direct and energetic means of subduing this terrible disease; but so unsatisfactory are the results of their most judicious application that no physician attaches any importance to, or places the least reliance on them.

Pathological anatomy has clearly demonstrated that the powers of nature are frequently adequate to cure consumption; and it is considered equally certain that it is utterly beyond the reach of art. So indisputable is the latter position deemed, that the physician who should pretend to cure the disease would be considered unacquainted with its morbid anatomy, if, indeed, he did not subject himself to the imputation of being a boasting charlatan. And yet, when we see, as mor-

bid dissection demonstrates, that nature by her unaided efforts, not only changes the condition of the system on which a disease primarily depends, but even remedies its local ravages, it is certainly not unreasonable to suppose that art may be so applied as to imitate, or at least, to aid her labors. An accurate knowledge of the morbid condition which characterizes a disease ought, in every instance in which it is curable, to establish a foundation for a successful method of treating it. And until, in these cases, the latter follows the former, like effect from a cause, it will be more philosophical to consider that our views are erroneous or too limited, and to seek, by new modes of investigation, sounder results, than to suppose an evil beyond the reach of art to remedy, and thus allow ourselves to sink into the hopeless indifference of despair.

The treatment of consumption, whether under the daring energies of the empiric, or the suggestions of reason based upon recognized principles of pathology, has been so uniformly unsuccessful that, taking into view its spontaneous curability, it affords conclusive evidence it must be associated with error. Its melancholy results furnish a strong incentive, if they do not indeed imply an absolute duty, to review the whole subject in a light entirely different from that in which it has been accustomed to be looked at. Examined in this way, it will no doubt be discovered that many of the supposed facts and principles, upon which our knowledge of this complaint is founded, and deemed to be incontestible, are but hazardous conjectures. There can be as little doubt that a due attention bestowed on what is indisputable in consumption, will show not only that its pathology is incomplete, and that the deductions from it are erroneous, but that reasoning applied with the earnestness due to a subject so important and interesting, will point out the deficiencies. But in order to do this with a rational hope of attaining the great object of controlling consumption, it will be necessary to establish, on a certain basis, three conditions of the disease, viz; first, an accurate means of determining its existence; second, an indisputable pathology; and third, a means of treatment in strict conformity with its pathological principles. An examination of these three fundamental conditions of consumption will form subjects for three separate articles, which will be furnished for publication in this journal.

Diagnosis. The first step in the consideration of any disease is to ascertain its precise diagnostic characters. This department of medical science is nowhere more useful than in its application to consumption, because there are a number of diseases simulating it, but arising from pathological causes so different as to require treatment of an opposite character. Chronic inflammation of the different tissues of which the lungs are composed is often accompanied with symptoms closely resembling those produced by tubercular disease; and the distinction between them becomes, by the ordinary means of diagnosis, very difficult—more especially after the tuberculous disease has existed for some time, and become complicated with inflammation. It is, therefore, an important desideratum to be able to determine the peculiarities or pathognomonic signs of these distinct diseases. A certain degree of perfection in identifying phthisis is indispensable to the reputation of any means which pretends to exert an influence over it; for the ordinary manner of setting aside the evidence of recoveries, under remedial agents, has been by denying the identity of the disease and tubercular consumption. And this summary but invidious mode of disposing of a difficulty has, hitherto, been sanctioned by the uncertainty attending the diagnosis of the disease, as well as by the vast preponderance of the testimony against the success of the same means when employed by others, than their introducers, in unequivocal cases of consumption. It is of still higher importance to be able to distinguish it in its early stages from the other diseases with which it is liable to be confounded, since, it is considered, that, if it is not exclusively in the commencement of the disease that we can hope to effect a cure, or even to arrest its progress, it is much more controllable in these stages under an appropriate treatment.

It is due to the progress of medical science as well as to the interests of society, that the diagnostic characteristics of tubercular consumption, in every stage, should be accurately determined. The enquiry into the subject has been much facilitated by the labors of Broussais, Abercromby and Laennec, subsequently confirmed by the minute and laborious investigations and researches of Louis, Andral, Clark, Williams, and a host of modern physicians. Notwithstanding this vast mass of labor it is still encumbered with contradictory facts, and results which are difficult to reconcile or explain in a satisfactory manner. In analysing the usual diagnostic symptoms and signs of phthisis we shall find that there is not one of the former which may not belong to a multitude of complaints, and scarcely a leading one of the latter which may not be absent. Indeed, it has been stated, instances have occurred in which tuberculous disease has proved fatal almost without any local or general symptoms, and

the most accurate observers have been deceived, even in the last stages of consumption, by the apparent absence of all physical signs.

The ambiguity and obscurity in which the diagnosis of this disease, particularly in its early stages, is involved, fully sanction a new attempt at its elucidation. In making this attempt, I am not without hopes of being able by a simple but natural means, in most cases by itself alone, and always by contrasting it with the nosological character and physical signs, to render its diagnosis so plain and distinct that no one who is competent to undertake the treatment of phthisis can mistake it. In conducting this enquiry, I shall avoid, as much as possible, and always, except to point out their general insufficiency, details of the symptoms and phenomena, which are commonly considered evidences of either phthisis or the diseases which admit of being identified with it. This I do, not that I think them valueless, but because they are to be found, accurately described, in almost every treatise on the subject. My observations will be strictly confined to a notice of those nosological points which contribute to illustrate the main subject of investigation, and which must be accurately decided upon in order to render the disease the aid our profession affords.

Nosological Symptoms. The value of general symptoms of disease consists in their affording an index to the causes from which they arise. If they were unerring, and consequently to be relied upon, they would afford a very simple process for arriving at a knowledge of the physiological or pathological conditions of diseased structures But though the progress of pathology, during the present century, has done much to explain the rationale of the general symptoms of disease, nosology furnishes but feeble agents in determining its precise nature In no disease is the imperfection of this department of medicine more apparent than in consumption; for no collection of symptoms has been ever able to define it, even in the loosest and most general acceptation of the term. The enumeration of phenomena never conforms invariably with the disease, nor are they always dependent on the same pathological cause. The whole train of symptoms, laid down as pathognomonic of phthisis, may occur as the result of a simple cause, such as a common cold, producing catarrh, pleurisy or peripneumonia, in the first instance, followed more particularly if improperly treated, with wasting, expectoration and hectic fever. How embarrassing this absence of precision, in a disease so destructive as consumption, must have been to the practitioner of past ages, when, under the sole guidance of nosology, it was of the highest consequence to identify the symptoms with the name given to the disease, and thereon found the treatment, must be apparent!

If we examine the general symptoms of phthisis, we shall find that they are common to a variety of diseases, in which there is not only an absence of tubercles, but in which there is neither disorganization of the lungs nor any material interruption of their functions.

Cough. "This symptom is generally the earliest indication of pulmonary irritation, and the first circumstance which excites the attention of the patient or his relatives." While, in general, among the most obvious and constant attendant throughout the whole progress of consumption, it is sometimes so slight as to be overlooked, and cases are on record, in which tubercles have proceeded to a fatal termination without its having ever occurred. That it does not uniformly depend on the pathological process of genuine consumption, every practitioner, as well as the public at large, very well knows. In truth, the diseased conditions in which it may arise are so numerous and various that it can hardly be considered a distinctive sign of any disease. Inflammation of the pulmonary mucous membrane gives rise to and renders it a prominent symptom of chronic bronchitis —a disease that, from its prevalence and fatality, is scarcely less a scourge than consumption itself—and hence, as it is different both in its nature and the tissue affected, and consequently requires a very different mode of treatment, it is important to distinguish it from the tuberculous cough. Gastric irritation is frequently attended with cough, not unlike that which accompanies the early stage of tuberculous disease, and as its cure depends on principles of treatment very different from that of the tubercular, it is obviously important that its distinctive characters should be known. Besides these more common sources of chronic cough, irritation of the liver and duodenum, and irritation of the uterus often give rise to a cough which may be confounded with that of consumption. For a description of the characteristics of the various kinds of coughs, so far as they are connected with a general history of the disease, I must refer the reader to systematic treatises on consumption, and particularly to the admirable one of Sir James Clark. It is sufficient for my purpose to state that the new diagnostic symptom I propose to introduce, will be sufficient to, negatively, recognize them as unconnected with tubercular phthisis.

Dyspnœa. This symptom, though never

wholly wanting in consumption, varies greatly in the degree of its intensity in different cases, and even in the same individual. Its presence will generally be found proportionate to the extent of the disease of the lungs and to the rapidity of its progress. Though commonly put down as a diagnostic symptom of phthisis, and certainly present when the disease exists to any extent, it so often and so obviously arises from other causes than tubercles, that little reliance can be placed on it as a distinguishing characteristic.

Expectoration. Few of the symptoms of phthisis have excited more attention than the matter excreated from the lungs, or have been considered of equal importance in distinguishing consumption from bronchial disease. But since morbid anatomy has shown that pus may exist in the simple affections of the larynx, trachea and bronchia, or may be an attendant on chronic pleurisy, or pulmonary abscess, it has also satisfied physicians of its inutility as a diagnostic. Whether, indeed, in correcting the error which formerly attached so much importance to this much labored diagnostic, physicians have not gone to an opposite extreme and deprived themselves of some advantages it is capable of affording, is a subject worthy of investigation. Animal chemistry has not done much to illustrate the nature of purulent discharges, or of tubercular deposites; but it is impossible to identify the melted down matter of tubercles with that bland and salutary fluid which is poured out on the surface of granulating sores, or even with that discharged from bronchial ulcers. It is not improbable that the cultivation of this science would show that tuberculous matter is essentially different from that fluid discharged from inflamed mucous surfaces; and, if so, might elevate discharges from the lungs to the important position in diagnosis they were formerly considered to possess. That there is a distinctive difference between pus and the matter of tubercles is apparent from their appearance; and Majendie expressly states that he had a pupil, who was able, by simple inspection of the globules to distinguish pus from the lung, the pleura, the peritoneum, and the cellular tissue with unerring accuracy. It is, however, possible for phthisis to run its course without expectoration, and it occasionally does so. From this circumstance, conjoined with its varying characters, and our inability, at present, to distinguish it from the matters discharged in other affections of the lungs, no pathologist places any reliance on it, either in a negative or positive sense, as a diagnostic symptom of phthisis.

Hæmoptysis. Among the consequences of the pathological condition of the lungs, accompanying the development of tuberculous disease, is a tendency to hæmoptysis. It is no doubt, occasionally, idiopathic, or at least totally unconnected with any previous disease of the lungs; but it is generally to be considered symptomatic of the existence of tubercles. Occurring in a large proportion of cases, and frequently in a very early stage of tuberculous disease, it is a diagnostic symptom of some importance. Being wholly absent, in many cases, it cannot be looked upon as an unerring characteristic of consumption.

Hectic Fever. Hectic fever is an invariable attendant on consumption; but as it is common to every disease in which there is local disorganization, or a process of destruction accompanied with chronic inflammation; and as it may be both considerable and conspicuous, while the tissue of the lungs is neither tuberculated, destroyed by ulceration nor otherwise diseased it cannot be looked upon as a nosological characteristic of phthisis.

Emaciation. This very prominent symptom forms a part of every nosological definition of consumption, and, generally, is so disproportioned to the other symptoms by which it is preceded or accompanied, that it is frequently the first that attracts the attention of the patient, while it exercises a great influence over his feelings. Its importance as a diagnostic sign is inconsiderable, because, like hectic fever, it is common to a large class of diseases; while in consumption, other symptoms of a more marked character to the eye of the physician, usually precede and accompany it.

Aphthæ. The difficulty of defining phthisis accurately, in any of its stages, by means of symptoms, led to the introduction of an aphthous state of the mouth as one of its characteristics. But, besides, that it is one of the last evils that appears in the long catalogue of maladies which form the nosological definition of phthisis, it cannot be regarded as a diagnostic, because it follows hectic from any cause, chronic bronchitis for instance, or dysentery, or from abscess in the liver or groin, psoas abscess, &c.

The view which I have taken of the assemblage of morbid phenomena, called by nosological authors symptoms of consumption, shows that they may arise from pathological causes so widely different, that they cannot often possess the precision for pointing out either tubercular phthisis, the several species of disease that stimulate it, or even to designate the whole as a class. In the few cases, even, in which their indications

might be regarded as unequivocal they would be of no value, because they must mark a stage of disease too far advanced in destructiveness to admit of being arrested by the art of medicine. The advance in the knowledge of pathology, by pointing out the variety of causes on which apparent consumption might depend, and the importance of recognizing them in the earliest stages of disease, called for diagnostic means more positive and particular, in their information, than general symptoms afford. Without these the practitioner must continue, as he had done through all time, to administer medicines, destitute of any certain principles for determining whether they may be beneficial or injurious to the particular variety of morbid action in his patient's lungs. In this difficulty, as applied to the disease before us, the science of medicine has received a powerful collatteral aid from what are called the physical signs of consumption

Physical Signs. These valuable diagnostic agents depend on the general laws of physics, and are explained on the same principles as other phenomena illustrated by natural philosophy; hence they stand on a broader and more intelligible basis than ordinary symptoms, and possess a great superiority as a channel through which to investigate disease. Their discovery introduced them to a rapid popularity; for, with many physicians, they immediately superceded the necessity of attending to the external symptoms of such diseases as phthisis. In this respect the value of their indications has been over-rated; for there are certain organic affections of the chest, which furnish nearly or quite the same physical signs, but in which the general and specific symptoms can be brought into service to indicate the difference. Thus, however inadequate mere nosological symptoms may be for fixing the character of consumption, they may render considerable aid to the physical signs in removing doubts on the subject. It is true that both conjoined are often very equivocal in characterising the first occurrence of pulmonary tubercle; yet, at this time, they may aid each other in affording very valuable information, if not in a positive at least in a negative point of view. If, for instance, they cannot give us positive assurance of the presence or absence of tuberculous disease, they may enable us to say that, if present, it exists in a very limited extent.

Respiratory Movements. In examining a patient the first of the physical signs we should notice is the state of the respiration. If, in the act of inspiration, we find the chest is unequally raised on both sides we may infer that there is disease, and that the side which is least raised is either exclusively diseased or the seat in which it is the most extensive. But it is right, that tuberculous disease must occupy a considerable portion of the lungs to be capable of influencing to a perceptible degree the motions of the chest, and it, therefore, cannot be of any value in the stage in which it is most important to determine the presence of the disease.

Percussion The importance of this test of tubercular phthisis has been much exaggerated. In most cases it is of very little value in the early stage of the disease, as tubercles may exist even to a considerable extent, if the surrounding pulmonary tissue is healthy, without being detected by it. "The sound elicited by it may even be clearer than that over a more healthy portion of lung, which is the case when the pulmonary vesicles are dilated, as they often are, amid groups of small tubercles." Percussion, therefore, cannot be regarded as a very valuable diagnostic in the early stages of phthisis.

Auscultation. Of all the diagnostic agents of phthisis, auscultation is, at the present day, the one most generally relied upon. The indications to be obtained from it afford more valuable and precise information than those derived from either general symptoms, the respiratory movements or resonance of the thorax. But it is unfortunate that not even the ear, with or without the stethoscope, can give us satisfactory evidence of the presence of tubercles in their early stage, or of the nature of any malady in the chest previous to excavation. However capable of pointing out the extent of the ravages tubercles have produced, when it is too late to arrest their progress, it is insufficient to announce their presence with certainty while the disease can be regarded as curable. In many instances, though, perhaps, only in injudicious hands, it has been the cause of mischief; for by indicating sound lungs while the disease is in an incipient state it has too often inspired security till tubercles have attained a progress which has placed them beyond the reach of remedial measures. The powers of the stethoscope may, however, be enhanced, and made highly useful, by collateral circumstances and the exercise of a sound judgment; for by affording negative evidence of the absence of tubercles, and, either alone, or in conjunction with a careful observation of general symptoms, positive evidence of other morbid conditions of the lungs, information of great certainty and value may be obtained. Again, when all the usual symptoms of consumption exist, but the physician is unable to determine whether they are occasioned by chronic bronchitis or tubercular softening, the

skilful auscultator may rely on the evidence of the stethoscope with the greatest confidence. In other instances, as in distinguishing between chronic pleurisy, and the second stage of tubercles, or between fistulous opening into the pleura, and actual tubercular excavations, the necessity of disregarding all other indications, and employing the less ambiguous aid of the stethoscope is very obvious.

The value of physical signs has been lessened by the undue importance attached to them. The inventor of the most important of them, auscultation, deemed it fully adequate to determine the nature of any disease of the chest; and his followers and admirers have thought that when they have failed to obtain the success he claimed, as the result of a judicious use of the stethoscope, the fault has been in their observations, and not in the imperfection of the means. They have thus been led to rest satisfied with a feeble instrument, and simply urged to strive more earnestly to master its supposed powers. In this effort its value has been still further diminished; for in the endeavor to make its indications accurate for all stages of disease, it has occasioned such an enormous increase of the number, and such a minute and needless division of physical signs, as would require the observation of a life time to understand. This abuse of a valuable means of indicating disease has excited despair in many who have doubted their ability to master it, and ridicule from those, even, who place confidence in auscultation; while, seeing the difficulty or absurdity to which it has led, it has tended to repress attempts to discover new means of diagnosis.

If our previous observations are founded on truth, it is apparent that neither semeiology, nor physical signs, nor both conjoined, affords the practitioner of medicine, a certain means of distinguishing tubercular phthisis from other diseases of the lungs having the same constitutional characteristics. That there is this difficulty in discriminating affections of the chest, must be acknowledged by every physician who has been accustomed to treat these diseases. It is, therefore, highly desirable to obtain diagnostic agents more certain in the information which they afford, and through which we shall feel a confidence in employing the kind of curative process which we may deem the most appropriate to the morbid action we have to remove. Above all we need a means of recognizing phthisis not only in its advanced and incurable stages, but also in its early and obscure, but remedial stages. Fortunately, a portion of the diseased structures, which has heretofore been unnoticed as constituting a part of the disease, supplies this urgent want, while anatomy and physiology concur in explaining its mode of action.

The Sympathetic Nerve:—In every form of tuberculous disease this grand nerve is affected either in its structure or functions. In phthisis, the sensibility to pain in particular portions of the spinal region, induced by its deviation from ordinary healthy action, renders it the most sensible, as well as the most certain diagnostic of the disease. It forms a symptom of tuberculated disease of the lungs which is always present at the commencement, and continues uniformly throughout the disease. By a rigid and proper examination of it, the greater number, if not every case of tuberculous phthisis may be discovered, independently of the symptoms referable to the respiratory organs, or even in their absence, and often weeks, or occasionally months, before auscultation or percussion afford any evidence of an appreciable alteration of the pulmonary parenchyma. If there are any exceptions to its application, they must be of very rare occurrence, for I have never found it absent; and certainly they do not occur so often as to interfere with its establishment as a general law in phthisis. This simple sign is so sensible and accurate, that if it could be allowable to trust to a single means of diagnosis, when there are concurring ones, it would be found sufficient for all practical purposes.

The parts of the system primarily affected in the production of this symptom, are, no doubt, the nervous filaments distributed through the lungs, and connected with, and involving one or more ganglia of the grand sympathetic system. As disease of this nerve can scarcely exist without involving the ganglia of the spinal nerves, and the corresponding portion of the spinal marrow, the symptom is made manifest by pressure on the intervertebral spaces of the adjacent vertibrae. The tenderness thus induced is always seated in and around the part occupied by the particular ganglia with which the nerves of the diseased lung are connected. In phthisis, pressure on the intervertebral spaces between the last cervical and first dorsal vertebrae will indicate the seat of this sensibility. In the incipient stage, or during a suspended action of the disease, the tenderness of the spine, to an ordinary and superficial examination, will be slight, and confined to the seat of the ganglia; but if it has advanced to the second stage, or is in active progress, the pain will dart like an electric shock into the affected organ, and induce apparent spasm of the lung, and a suspension of the respiration. But if the pressure be

judiciously made, and its effects be carefully observed at the commencement of the formation of tubercles, the phenomena will be found, it is true much milder, but similar to, and even identical with, the signs accompanying their advanced stage of developement In some cases a very considerable force is necessary in making the requisite pressure. In the advanced stages of the disease, the sensibility of the spine is greater from its being diffused over a larger space, owing to the extension of the irritation, through the medium of the connecting and anastomosing nervous branches, to the spinal nerves, spinal marrow, and possibly to their membranes, and a slight pressure will give the most acute pain.

Contrary to the opinion of that able investigator of the living functions, Dr. Willson Phillip, who says, "he has found it impossible by depriving the lungs of their nervous power, or by any other cause operating on them, to produce the symptoms of spasmodic asthma," I have frequently observed that pressure on the first dorsal ganglia, in tubercular phthisis, is capable of producing a genuine, though temporary paroxysm of asthma. Excited sensibility of the sympathetic nerve, re-acting upon the diseased lungs, is, no doubt, the frequent, and perhaps the sole cause of the neuralgic pains which are so often a distressing accompaniment of phthisis. This is shown in the connection between the nerve and the seat of these pains, as well as in the methodus medendi employed; relief being afforded, in these painful paroxysms, by remedial means directed to the affected spine and ganglia.

Neither in pure chronic bronchitis, chronic laryngitis, chronic pleurisy, chronic pneumonia, or in any of the other complaints that simulate consumption, is sensibility of the spine ever found present as a necessary concomitant of the disease. Modern pathology has, however, shewn that these diseases exist very rarely in a simple state: and, it may be said, that chronic pleurisy, and, indeed all affections of the pleura, are always accompanied with more or less of tubercular developement.

It is proper to remark that nervous irritation of the ganglia, and sensibility of the spine may exist as an idiopathic and primary disease, and though affecting the functions of the lungs, may have no connection with organic disease of that organ.

Teale, in his treatise on neuralgia, was, I believe, the first to call the attention of physicians to diseases of the spinal marrow and their symptomatic manifestation in the muscular system and organs of the chest and abdomen; but, Dr. Sherwood, of New York, was the first to point out the converse relation between these structures, and to show the connection between tubercular disease and spinal sensibility. It would be desirable to show that the diagnostic view we have taken of the sensibility of the spine, in tubercular phthisis, is in strict conformity with anatomical and physiological facts. If this be established, the evidence of the diagnostic sign can neither be considered as based on a slight foundation, an accidental coincidence, nor a bold conjecture; for it must be founded on science, and the laws of the animal economy, and being so, its correctness cannot be disputed. There is certainly nothing in the origin, course, or distribution of the grand sympathetic nerve, which does not tend to support the probable connection between disease of the lungs and its manifestation in the spine. But the subject of the functions of the nerves is either so new, or involved in so great obscurity, that our view can derive little collateral support from physiology. Dissection can hardly afford direct evidence of any change which nervous ganglia, or the spinal marrow, undergoes from sympathetic irritation; and in its abscence we can only resort to conjectural reasoning to elucidate the facts. The enquiry is rendered intricate, but not, on that account, the less interesting: from the lungs being supplied with nerves from two sources —the cerebro spinal system, through the medium of the pneumo-gastric nerve, and from the sympathetic system through the filaments from the ganglia—and from the circumstance, that the facts assign to them, particularly the latter, functions different from those adopted by physiologists. The absence of sensibility of the spine in affections of the mucous membranes, the sub-mucous cellular, or the pulmonic tissues of the lungs, would seem to indicate that the sympathetic nerve has no communication with, or agency in their functions. Its presence in tubercular disease, and obscurely, perhaps, in simple inflammatory affections of the serous membranes, is equally conclusive that it is distributed to the glandular and serous tissues and exerts a control over their functions.*

The power of the sympathetic nerve to transmit the impression of pain, and, as has been shown, to influence or even arrest the great function of the lungs, is an interesting physiological fact, because it tends to demonstrate that the automatic system of nerves, are nerves of sensation and motion. The assignment of the latter function to them is neither new nor of much importance,

* The doctor is here mistaken in supposing there is any obscurity in these symptoms in acute or inflammatory diseases of the serous membranes.—Ed.

as the dependance of the muscular action of the heart, stomach, and respiratory movements of the lungs, &c., on this system of nerves, is generally acknowledged. But the question whether the sympathetic nerve is capable of bestowing sensibility, is one on which physiologists are, at least, divided in opinion, if, indeed, they have not universally decided upon it in the negative. And it is probable that in a perfectly healthy state it is entirely devoid of this function. In the absence of direct evidence from experiment, the precise relation of this nerve to the whole system must, to a certain degree, remain conjectural; but I am unable to conceive of any nervous communication, which can convey the evidence of disorganization, and painful affections of the lungs and heart, to the spinal region, but the sympathetic nerve. That the transmission of the sense of pain from the lungs to the spine cannot be dependant upon the pneumo-gastric nerves is evident upon anatomical considerations; and hence, as these and the sympathetic are the only nerves of connexion with the lungs, its necessary dependance on the latter, for this evidence of nervous power, must be apparent. This, however, does not necessarily prove that the sympathetic nerve is, in its natural and healthy condition, a nerve of sensation. Lobstein has shown, with much reason, that there probably exists a relation between the sympathetic nerve and par-vagum, by which one may take on it the functions of the other. In this way the former may become, in diseased lungs, either from the stimulus of irritation, or from inability of the pneumo-gastric to perform its appropriate functions, a vicarious nerve of sensation. It is unfortunate that the subject has not received any elucidation from post-mortem examinations; though it is probable the indications of disease would be too obscure to admit of the detection of any morbid appearances. Such is the difficulty in which this part of the subject is involved that it is questionable whether even inflammation of the nerves and ganglia afford, after death, any evidences of disease; and it is therefore scarcely reasonable to suppose that mere irritation, or altered nervous function, should be productive of such appearances.

In conclusion I will remark that, while I place very great reliance upon the indications furnished by spinal sensibility, I must not be understood as proposing this simple means as an exclusive method of distinguishing phthisis from all other ailments. The tact which results from long experience may have imparted a facility in detecting this disease, through this symptom, which others may find some difficulty in attaining; but it is so uniformly present that a little care and attention will always enable the practitioner to find it. Viewed in its least favorable light, it presents an additional way to the discovery of the actual condition of organs affected with tuberculosis, of which the physician may avail himself to the saving of much labor in diagnosis, and which cannot be neglected without the risk of injury to the patient. But after bringing into requisition all the means of diagnosis above described, it will be found that attention to a minute history of the case, and a strict reasoning upon it, on the principle of induction, will be beneficial in supplying any deficiencies arising from the obscurity of external symptoms, the imperfections of physical signs, and the insufficiencies of pathological deductions, while they will determine any doubt as to the character of the spinal sensibility. In the incipient and obscure stages of this destructive disease no circumstance connected with the patient should be overlooked; his aspect should be noticed; his past health and occupations, the previous diseases and family predisposition should be ascertained; while the condition of the more important functions, independent of the respiratory organs, should be investigated. In the early stage of tuberculous disease it would be unwise to depend on any one local sign or symptom, but it will be necessary to examine it in relation to all the means by which it may be identified. By a careful analysis of the whole of them, and by availing ourselves also of the negative symptoms, as regards the other pulmonary diseases with which consumption is liable to be confounded, we shall not be liable to err in forming a correct diagnosis at a very early stage of phthisis. No pains in discharging this essential duty of the physician ought to be deemed unnecessary, for the important reason, already mentioned, that several diseases have so striking a resemblance that they are not easily distinguished from consumption, and for the still more important one that they arise from different morbid states, and consequently require a treatment that has no affinity with that which we have found not only the best, but a very efficient means of controlling phthisis.

Missions in Greenland.

From late English papers it appears, that on the ice-bound coast of Greenland, four Moravian settlements are made, to which are attached 26 missionaries; in a climate where the cold is often 50 degrees below the freezing point. These settlements now contain 1864 native converts to christianity, who gain chiefly from an icy and stormy sea the needful support of their families.

Dislocation of the Long Head of the Biceps.

By Henry Hancock, Esq, Surgeon to Charing-Cross Hospital.

[There are probably few accidents so little noticed or understood as displacement of the tendons. The subject is scarcely mentioned in any of the numerous works on dislocations, although the consequence, when unreduced, is great inconvenience to the patient, and in the case of displacement of the tendon of the long head of the biceps, which happens more frequently than any other kind, the patient is deprived in a great degree of the use of the limb. Mr. John Soden, of Bath, in 1841, published a paper on the subject in the "Transactions of the Royal Medico-Chirurgical Society of London, giving details of two cases which he had the opportunity of dissecting, and this is the only detailed and satisfactory account we have of these cases. It is but rarely that the opportunity occurs of examining these injuries by dissection, but Mr. Soden availed himself of his opportunities, and the profession is indebted to him for a very good paper, which has dispersed the doubt and obscurity investing them. Magnetus, who died at Geneva in 1742, relates a case, and in the second edition of William Cowper's "Anatomy of Human Bodies," is a case which there is reason to think is a pirated version of that of Magnetus. Boerhaave observed that muscles often slip out of their places when their sheaths are so relaxed during violent efforts, as to offer little resistance, but he gives no cases. Lieutand in 1742 refers to displacement and injury of the tendons of the lumbar muscles; and Claude Ponteau in 1760 published a case which he describes as a displacement of one of the attachments of the splenius colli. Mr. Bromfield and Mr. Stanley each met with one case, and Mr. Gregory Smith met with two cases in his dissecting room, both in the same person This very vague and unsatisfactory account is all we had on the subject until the appearance of Mr. Soden's paper; indeed till then we knew very little of the matter.]

The principal signs of this accident are pain and tenderness in front of the joint, corresponding to the bicipital groove; acute pain in the course of the biceps when it is thrown into action, the pain being referred more particularly to its two extremities; the patient is unable to raise his hand to his head, or his arm beyond an acute angle from his body; the appearance of the shoulder is somewhat altered, the head of the humerus being drawn upwards, and more forward than natural, lying close beneath the acromion process, while the posterior and external part of the joint is somewhat flattened. When we consider how much in appearance these accidents resemble partial dislocations of the head of the humerus upward and forward, we can entertain but little doubt that they have frequently been mistaken for them.

In the treatment of these cases you have three principal objects in view:—to overcome the action of the capsular muscles, to reduce the tendon, and to keep the tendon in its groove when you have reduced it. Through the kindness of Mr. Bainbridge, Jr., I have been enabled to make some investigations on the dead subject, which may, perhaps, be of some service, as guiding us in the treatment of these cases. Assisted by this gentleman, I cut down upon and dislocated the long tendon of the biceps on to the lesser or inner tubercle. I first endeavoured to return it by flexing the forearm and relaxing the muscle, while I rotated the humerus strongly inward, but without success. I next straightened the arm, and holding it by the wrist, I rotated it inward as far as I could, and then with a sweep carried it across the chest, while, with my left hand on the deltoid muscle, I pressed the head of the bone downward and outward, and the tendon returned to its groove with a very evident snap. I next displaced the tendon on the outer or greater tubercle, when, by rotating the arm outward with my right hand, and drawing the head of the bone downward and outward with my left, I reduced it, but I found it was more easily restored to its proper position by taking hold of the wrist with my right hand, and placing my left in the axilla; with the latter I pressed the head of the bone gently outward, while with the former I supinated the hand and rotated the arm strongly outward, at the same time bringing it to the side of the body, my left hand serving as a fulcrum in the axilla. By this means the deltoid was put upon the stretch, and its anterior fibres, upon the insertion of which the biceps tendon lay, evidently assisted the latter into its groove. I next endeavoured to ascertain in what position of the arm the tendon would remain most securely in its proper place. Accordingly, I flexed the forearm, and placed the hand in the position of pronation across the chest, when the tendon became again displaced, as it did immediately the head of the humerus was rotated inward, although the forearm was extended; but when I extended the forearm, placed the hand supine, and separated the arm from the side, it remained properly in its place, being now bound down by the tendon of the pectoralis major. I am fully aware, in these experiments, that the

subject being dead I did not encounter that opposition from the capsular muscles which I should in all probability have met with in a living patient; but, making every allowance for this, I am still in hopes that what I have here endeavoured to explain to you, may serve to place the treatment of these accidents on some surer basis than mere conjecture, and that, henceforth, you may have some rule to guide you.

We have seen that the head of the humerus is drawn up against the acromion process, and that the greater tubercle striking against that process, when the arm is separated from the side, prevents its being raised beyond a very acute angle. I should advise you to adopt the following method, should you find the plan as recommended by Mr. Bromfield fail. I am not aware of any particular symptom by which we can be guided with any certainty as to when the tendon is dislocated inward, or when outward; but, as a result of my experiments, I should imagine that it is more frequently dislocated inward than outward, the inclination of the head of the humerus, and the greater projection of the large tubercle, being unfavorable to the latter displacement. Place your patient on a low chair, and let an assistant fix his scapula by pressing upon the superior angle and costa; then separate the patient's arm from his side, as far as you can; keep his hand in the prone position, and make extension downward and outward from the wrist, until you have somewhat withdrawn the head of the bone from the acromion process. Now let an assistant sit down on the floor, underneath the injured arm, and, clasping both his hands over the deltoid muscle, draw the head and neck of the bone downward and a little backward, while you rotate the head of the bone inward and backward in the glenoid cavity, by making the patient's arm describe a circle, carrying it backward, upward, forward and inward, across the chest. Should you have reason to suppose that the tendon is displaced outward, separate the arm as far as you can from the body, and let an assistant make extension in that direction best calculated to remove the head of the humerus from the acromial process, that is, downward and outward. Unless this be done, in either form of the dislocation the bicipital tendon remains pressed up by the head of the humerous against the acromial process, and is obviously prevented from returning into its natural position Next place your left hand well up in the axilla, and direct your assistant, while he keeps up the extension, to rotate the arm strongly outward, and at the same time to bring it to the patient's side. Having reduced it, gently separate the arm from the patient's side; keep it steadily rotated outward, and the hand supine; place a long splint which extends from the shoulder to the fingers, along the back of the arm and hand, and also a pad or compress in front, over the bicipital groove. Fix the whole with a roller evenly and carefully applied, and place your patient on his back in bed, where he had better remain until you consider that the parts have become sufficiently firm to prevent a recurrence of the accident.

The reason why I recommend you to separate the arm from the side after reduction, is, that by so doing you place the pectoralis major muscle upon the stretch, and consequently make its broad tendinous insertion press more closely and directly over the bicipital groove. In my experiments, the difficulty was not so great in reducing, as in keeping the tendon in its place when reduced, and certainly the plan which I am now advocating appeared both to Mr. Bainbridge and myself to be the most efficacious.—*Provincial Med. and Sur. Journal.*

Rupture of the Tendon of the Long Head of the Biceps.

By Henry Hancock, Esq., Surgeon to Charing-Cross Hospital.

This accident may be occasioned by falling upon the arm, by violent twists of the limbs, without external violence referred to the part, or by the sudden and violent extension of the limb, as when we put out our arms to save ourselves in falling. The patient experiences at the moment a sensation of snapping in the shoulder, soon succeeded by inability to raise the hand to the head; acute pain is caused by even slight pressure in the course of the bicipital groove, or lower down, on the muscle itself; the latter becomes flabby, and the movement of the arm backwards and forwards produces acute suffering, mostly referred to the situation of the biceps, where it passes over the head of the humerus.

Treatment.—Your object in these cases should be to approximate the two portions of the tendon, to obtain union if possible, or otherwise to favor the attachment of the lower portion to the head of the humerus, as Mr. Stanley has pointed out. To do this effectually, place the hand in the semi-supine position, that is with the thumb upwards, making your patient grasp the opposite shoulder; thus you effectually relax the biceps muscle, as you will at once perceive, upon recollecting that the biceps is inserted

into the back of the tubercle of the radius, and that the first action of the muscle, when the hand is prone, is to render it supine before it can effect flexion of the elbow. Now apply a roller carefully, beginning from below, carrying it up to the axilla, and fixing a compress over the course of the biceps tendon, by which means you will keep the muscle quiet and prevent spasms; and lastly, secure the arm in this position by bandages.

[Mr. Earle's and Mr. Chapman's apparatus for injuries about the shoulder, though well adapted for the purpose intended, are very complicated and consequently expensive Mr. Hancock has invented a modification of Mr Earle's, which combines simplicity with cheapness, and can be made in less than half an hour.]

It consists of a long sleeve, made either of old sheeting or bed-ticking, which should be long enough to extend from the middle of the humerus to about three inches beyond the patient's fingers, and having, consequently, what (for the purpose of description) I shall call a humeral and a digital extremity, and also a hole corresponding to the olecranon to allow that process to project through. The digital extremity terminates in a *cul de sac*, or, in other words, is sewn up, and to it is attached a bandage three inches wide, made either of the same material as the sleeve, or of strong webbing, which is firmer and consequently better. This bandage should be at least three yards long, but you must be guided as to its length by the corpulence and size of your patient. To the posterior and external margin of the humeral extremity of the sleeve is attached another strap, from three quarters to a yard long, of the same width, and made of the same material. A pad for the axilla, made with bran, with a tape to pass round the patient's neck, completes the apparatus.

I will now show you the manner in which it is to be applied; we will suppose that you have a fracture of the acromion process or of the neck of the scapula; in the former, as I have already told you, you should not place a pad in the axilla. In the latter you must not only use a pad for the axilla, but also one between the elbow and the side, or one which, extending from the axilla to the elbow, will answer the purpose of both. I first put the sleeve on the injured arm, with the elbow projecting through the opening made for that purpose, and then, bending the forearm, place it horizontally across his chest. I carry the bandage from the digital end of the sleeve under the opposite arm, obliquely across the back, from below upwards over the front of the injured shoulder, without pressing upon the acromion process, under the opposite arm round the back under the elbow of the injured side, and pin the end to the band crossing the breast. I now carry the strap from the humeral end of the sleeve upwards across the back towards the opposite shoulder, and pin it up to the oblique band, by which the head of the bone is drawn upwards and backwards and completely supported against the acromiom process. Should the case be one of rupture of the bicipital tendon or fracture of the coracoid process, you employ the axillary pad, and apply the apparatus as follows:—Having put the patient's arm in the sleeve, you rest his hand on the shoulder of the opposite side, and carry the long bandage obliquely across the back, over the elbow of the injured side, round the waist as often as it will go; pin it there, and support the elbow by carrying the short strap over to the sound shoulder and fasten it to the bandage encircling the waist.

You will observe that this apparatus is free from the objection urged by Mr. Chapman against that invented by Mr. Earle, as it leaves the motions of the sound shoulder entirely free and unimpeded, and the seat of injury uncovered, enabling you to watch the state of parts, without the necessity of disturbing the apparatus —*Prov. Med. and Sur. Journal.*

Reduction of Dislocation of the Scapula.

By Jonathan Toogood, Esq., M. D., Bridgewater.

Dr. Toogood has published the following plan of fixing the scapula:—"Having seated the patient on a low chair or stool, firmly secured the body, and fixed the pulley, he stands over him, and places the heel of his right hand on the acromion process, bearing his whole weight on his hand."

By this method the scapula is rendered fixed and immoveable, extension is made and reduction quickly follows. A patient, a tall and remarkably muscular man, about forty, had his right shoulder dislocated, and the united strength of one physician, four surgeons, and sixteen assistants were required to reduce it; he again met with the same accident, but on the left side, when Dr. Toogood reduced it in two minutes by his method of fixing the scapula.—*Ibid.*

Sterility is one of the consequences of chronic serosis, or tubercular disease of the uterus, for which the magnetized gold pill is the specific, as is well known to many physicians.

On the Cure of Hydrocele Encysted Tumours, and Fistula in Ano, without Operation.

By Dr. Alfred A. Harvey, Bristol.

[Dr. Harvey has for thirty years successfully employed the following treatment in hydrocele, obtaining a radical cure without injection: his mode is as follows:—]

First, discharge the fluid with a trocar, or pocket lancet, and then apply a warm vinegar poultice all over the scrotum, in order to bring on inflammation, which generally takes place in a few hours, and becomes painful. When sufficient inflammation has been excited, remove the vinegar poultice, and apply a bread-and-milk poultice. In a short time, the pain and inflammation generally subside, and the cure is completed. Give a few smart doses of purgative medicine. Dr. Harvey adds the subjoined:—

"*Cure for Encysted Tumours*, or Wens of the Head, or other parts of the body, without cutting them out."—First, make a longitudinal cut along the scalp. This is performed with little loss of blood Next press out the contents of the cyst, and apply, freely, alcohol in the cavity, with a camel's hair brush. Then place in the cavity, also, from two to six grains of nitrate of silver, and bring the edges together with strappings, when inflammation takes place. Should it inflame too much, apply cold-water dressings, and give a few doses of active purgative medicine. This plan has ever been found to complete the cure in a few days.

Fistula in Ano (blind external) can often be cured without cutting, by injecting alcohol the whole length of the sinus, three or four times a day, until it brings on inflammation; when that takes place, the cure is generally completed in a short time. In full habits, bleeding by the arm should be practised, if required, and the bowels opened pretty freely, before the alcohol is injected. Should the inflammation become too severe, it should be regulated by poultice or cold-water dressings, and low diet should be strictly attended to.—*Lancet.*

New Method of Introducing the Catheter.

M. Maisonneuve read a memoir upon a new method of introducing the catheter, even in the most difficult cases. He preceded his description by pointing out the difficulties and dangers in many cases of introducing the catheter, and he described the various methods of its introduction, which, as they are known to the profession, we need not here enumerate. He described his method as follows: He first introduces into he urethra a very fine gum-elastic bougie, of size No. 1 or 2, and he then slides down upon this bougie a sound, open at both extremities, and proportioned to the calibre of the canal; the introduction of the sound is facilitated by means of a thread of silk or metal, which is fixed to the external extremity of the bougie. Having previously passed it into the canal of the sound, it suffices to push gently the sound upon the conducting bougie, first stretching the thread so that it may glide easily, and without causing pain, into the bladder. M. Maisonneuve says that in all cases where he has tried this method, he has succeeded, though many of them were serious, and all attempts to introduce the catheter by the ordinary methods had failed; and from his experience he draws the following conclusions:

1. The introduction of the catheter by means of the conducting bougie is the most easy and the most certain method known. 2. It succeeds perfectly where the ordinary methods are applicable. 3 It succeeds also where the ordinary methods fail. 4 It guards securely against painful explorations (tatonnemens douloureux), lacerations of the canal, false passages, &c. 5. It requires no particular dexterity, and can be used by the most unskilful. 6. It renders useless the "arsenal" of instruments recommended to overcome different obstacles, and requires the employment of the ordinary instruments only.—*Lancet, March* 1, 1845.

This method of passing the catheter Mr. Barrington states to have been known and practised in the Dublin Hospitals so far back as five years ago, when Dr. Hutton, of the Richmond Hospital, employed it. The mode there adopted is perhaps preferable to that of M. Maisonneuve.

A fine catgut bougie, eighteen or twenty inches long, was first passed within the stricture; a gum-elastic catheter, open at both ends, was then passed upon the catgut down to, and, by proper management, unerringly through the stricture. The difference, then, consists in employing catgut of such a length that enough may remain external to the urethra to be passed through the canal of the catheter with facility, rendering the use of string of any kind unnecessary.

Lancet, March 15, 1845.

Creosote in Nævus Maternus.—Dr Thornton informs us that of all the applications he has tried against nævus, the most effectual is creosote. He had treated three cases in the course of the year successfully with this substance. It is applied two or three times daily, more or less diluted. Excoriation, ulceration, and gradual disappearance of the nævus ensues; the cicatrix had always been smooth and sound.—*N. J. M., Dec.*, 1844.

SWEDENBORG'S ANIMAL KINGDOM.

Introductory Remarks by the Translator,

JAMES JOHN GARTH WILKINSON,

Member of the Royal College of Surgeons of London.

[*Continued from page* 168.]

If the reader can once succeed in apprehending it, there will be no danger of his letting it go again even among the perilous quicksands of modern experience. It is one of those truths that rest upon the facts within the range of the most ordinary observation, and require but little anatomical investigation to confirm and demonstrate them. It is visible in its ultimate effects during every action that we perform, and at every moment of our lives. Perhaps there is nothing in the history of physical science that is more illustrative of the native ignorance of the mind, or that better shews how far we have departed from the simplicity of nature, than the manner in which this grand office of the lungs has been overlooked; particularly when coupled with the fact, that it should have required a great and peculiarly instructed genius, by an elaborate process, to place it once again under our mental vision. But nature is simple and easy; it is man that is difficult and perplexed. Not only in the lungs, but in the whole body, the primary office is disregarded, and the secondary substituted for it. It has been supposed that the lungs inspire simply to communicate certain elements of the air to the blood; and expire for no other end than to throw out by means of the returning air certain impurities from the blood. Under this view, their motion is only of use for other things, or instrumentally, and not as a thing in itself, or principally.

And yet it is not confined to the sphere in which these secondary offices of the lungs are performed, but pervades the abdomen as sensibly as the chest, and according to the shewing of the experimentalists, extends also to the heart, the spinal marrow, and the head. It was therefore incumbent on the physiologist to shew what its function was in all the regions where it was present, and to declare its action as a universal cause, as well as its action as a particular cause. Now the motion itself which the lungs originate, is their grand product to the system: the inspiration and expiration of the air are but one part of its necessary accompaniments, being performed in the chest alone. Granting that the inspiration and expiration of the air are the particular use of this motion in the chest, what then is the use of the rising and falling which the lungs communicate to the abdomen, the heart, the spinal marrow, and the brain?—What office, analogous to respiration, does the motion of these parts communicate to the organs? It manifestly causes them all to respire, or to attract the various materials of their uses, as the lungs attract the air. For respiration is predicable of the whole system, as well as nutrition: otherwise the head would not be the head of the chest, nor the abdomen the abdomen of the chest; but the human body would be as disconnected, and as easily dissipated, as the systems that have been formed respecting it. The universal use, therefore, of the respiratory motion to the body, is, to rouse every organ to the performance of its functions by an external tractive force exerted upon its common membranes; and by causing the gentle expansion of the whole mass, to enable the organ, according to its particular fabric, situation, and connexion, to respire or attract such blood or fluid, and in such quantity, as its uses and wants require, and only such. Each organ, however, expands or contracts differently, according to the predicates just mentioned; the intestines, for instance, from articulation to articulation, to and fro; the kidneys, from their circumference to their sinuosity or hilus, and vice versa, the neighborhood of their pelvis being their most quiet station and centre of motion: and so forth. In a word, the expansion as a force assumes the whole form of the structure of each organ. In all cases the motion is synchronous in times and moments with the respiration of the lungs. The fluids in the organs follow the path of the expansion and contraction, and tend to the centre of motion, from which these motions begin, to which they return, and in which they terminate. The lungs, however, only supply the external moving life of the body; but were it not for them, the whole organism would simply exist in potency, or more properly speaking, would cease to be; or were it permeated by the blood of the heart,—a condition which can by no means be granted,—the latter would rule uncontrolled in all the members, subjugate their individualities, and not excite them to exercise any of the peculiar forces of which they are the forms. In a word, the whole man would be permanently in the fœtal state, for ever inchoate and ineffective.

It need not surprise the members of the New Church that no writer before or since the time of Swedenborg should have seen the primary function of the lungs in the human body. For it is shewn in those won-

derful theological treatises with which they are familiar, that the heart and lungs of the natural body correspond to the will and understanding of the spiritual man; and as the understanding or rational mind has hitherto brought out none of those truths which enable man spiritually to live, nor been an external cause co-operating with the Word as an internal cause in the work of regeneration, so it had in itself no ground from which to recognise the necessity of the above function in the human frame; but its lower chambers alone being opened, took cognizance only of the lower and relatively passive offices of its bodily correspondent, the lungs. Unwittingly it yielded up the sceptre of the body to the heart, and here again obeyed the law of correspondence. But the truth is that the lungs mediate between the brain and the body, precisely as the rational mind of man is intended to mediate between heaven and earth.

The brain supplies the body and the blood with life, and its functions in this respect combine nutrition, circulation, and respiration. It respires the ethers of the world, it nourishes its life with ethereal chyle, and it circulates the animal spirit elaborated therefrom through the corporeal system. It may be regarded as a unity which involves in principle and idea all the varieties that are manifested in the two inferior regions of the thorax and abdomen. Its cortical substances involve the functions of both the heart and lungs, because they are in the degree above both. They are so many corcula propelling the animal spirit through the medullary fibres and nervous system, and so many pulmuncula performing an animatory motion synchronous with the respiratory motion of the lungs, although not dependent upon it, but automatic or self-derived, and which indeed generates the motion of the lungs, as the end generates the cause, or the cause the effect. The ethereal medium that they respire they derive principally through what are termed by Swedenborg the corporeal fibres, which originate in the skin, and run back from the last boundaries of the body to the first in the brain. Now the physiologists have never discovered the animation of the brain, because they have never seen the respiration of the lungs in its primary light. Had they done this, it would have been evident that the respiratory motion exercises a traction upon the sheaths of all the great nerves, and expands them, and that this traction is the external cause of a nervous circulation; for were there no fluid to respond to the force, there would be a tendency to a vacuum in these most impressible organs, and their parts would be strained, or drawn asunder. But if there be a real circulation in the nervous system, it must have centres that propel it, and times and moments in which it is performed. We have already seen that in this case the fluid is externally drawn forth by the attraction of the lungs, consequently in the times of the respirations, and hence it must be drawn in by the brains in the same times; in short the animations of the brains must be synchronous with the respirations of the lungs. Hence it is that the brain supplies the body with internal motive force at the same instants as do the lungs with external; the heart only maintaining the organs in a state of potency and supplying what they demand by the influx of this compound attractive force operating according to their various fabrics.

It must not be inferred that a truth of such paramount importance in physiology as the animation of the brain, rests upon the slight chain of reasoning attempted above. No; its attestation is as general as the truth itself is universal. But since Swedenborg has taken the proof of it upon his own Atlantean shoulders, the reader is referred to his treatise* on the subject for further corroborations. But it may be useful to indicate, that the doctrine is in no way shaken by the existence of the pulsatile movement so readily felt in young children, nor yet of that other movement, alternate and not synchronous with the respirations, which has been observed by some experimentalists. The truth is that all the three movements proceed uninterrupted by each other; and that the alternate movement, which is referable to the blood rushing out by the veins during inspiration, is what chiefly masks the synchronous movement, which is automatic, or referrable to the brain itself.

There is no part of Swedenborg's system which is better worthy of attention than the doctrine of the skin. As the skin is the continent and ultimate of the whole system, so all the forms, forces and uses of the interior parts coexist within it. Moreover as it is the extreme of the body, and the contact of extremes, or circulation, is a perpetual law of nature, so from the skin a return is made to the other extreme, namely, to the cortical substances of the brain. Hence the first function of the skin is, "to serve as a new source of fibres." For the fibres of one extreme, to wit, the brain, also called by Swedenborg the fibres of the soul, could not of themselves complete the formation of the body, but could only supply its active grounds; and therefore these fibres proceed

* Economy of the Animal Kingdom, tr. ii., 1—68.

outwards to the skin, which is the most general sensorial expanse of the brain, and there generate the papillæ; and again emerging from the papillæ, and convoluted into a minute canal or pore, they take a new nature and name from their new beginning, and become the corporeal fibres, or the fibres of the body, which proceed from without inwards to the brain, and unite themselves to its cortical substances. These are the passives of which the nervous fibres are the actives; the veins or female forces of which the nervous fibres are the arteries or males; and "they suck in the purer elemental food from the air and ether, convey it to their terminations, and expend it upon the uses of life."

Besides this, the skin has a series of other functions which there is not space to dwell upon at present. Inasmuch as it is the most general covering of the body, therefore it communicates by a wonderful continuity with all the particular coverings of the viscera and organs, and of their parts, and parts of parts. And as it communicates with all by continuity of structure, so it also communicates by continuity of function; the whole body being therefore one grand sensorium of the sense of touch. In short, the animal spirit is the most universal and singular essence of the body and all its parts; the skin, the most general and particular form corresponding to that essence.

Having thus bestowed a cursory glance upon some points of Swedenborg's doctrine of the three spheres of the body, and their most general and particular continent, the skin, we shall now enlarge a little on certain subjects that have already been mentioned, in order to give them a more distinct place in the reader's apprehension. And first with respect to the circulation. It is clear that in assigning its due weight to the primary function of the lungs, we obtain a law which enables us to limit the functions of the heart and arteries; and the result is, that the heart and aorta simply propel the blood to the mouths of the arteries leading into the viscera, and the viscera themselves attract it thenceforth, and dominate over the circulation of their own vessels, commanding it to take place in the times of the respirations, and not in the times of the pulses of the heart. As one means to this end, the vessels which supply the organs, generally come off at right angles from the great artery.

But there is another branch of this subject which is worthy of attention. The circulation in the great vessels is comparatively inordinate or confused, because in them the blood is all mingled together in a heterogeneous mass, and propelled onwards by an external force; but the circulation in the capillaries is most orderly and distinct, being an automatic movement performed by the single globules of the blood, in vessels which correspond to them individually, and where they are perfectly at home. If a comparison be permitted, they constitute a medley crowd in the heart and aorta, but march separately, man by man, in the capillaries. Hence the blood in its mass can but imperfectly manifest its living endowments, but when sundered into its individualities or leasts, it distinctly exercises its dynamic nature, and flows spontaneously; for it is a spiral and circular force and tends therefore to a spiral gyration, or to circulation. Indeed in a universal sense, the leasts of the blood are the causes of the heart's action, and the grounds of the whole sanguineous movement; although speaking in generals, the heart, and the lungs acting on the viscera, are the joint causes of this effect.

The blood is the product of the whole organic system. The brain and lungs give it soul and spirit; the abdominal viscera, by means of the food, supply it with body or embodiment; wherefore each globule is an image of man inasmuch as it has both a soul and a body. Every viscus contributes a distinct share to its generation and regeneration. The animal spirit is its organizing principle. The blood consists, in the language of Swedenborg, of mere simples; that is to say, it contains the primal unities of all the series in the body, and being readily resolvable into each, can give origin and seed to all its possible compounds, whether they be solids or fluids: Nothing exists in the body that did not pre-exist in the blood. As it is distinctly compounded of a triple order of substances, so during each round of the circulation it is distinctly decompounded or resolved into each. Its spirit, spirituous lymph, and bodily portion are sundered as often as it circulates; the former is claimed by the cortical substances of the brain; the lymph is rendered back to the blood in a circle by the lymphatics; and the embodiment, by the veins. The reason why it undergoes this resolution is, that thereby, when its simples are disengaged, it gives birth to all the vital fluids, and renovates all the solids; and moreover submits itself to perpetual purification, self-examination, or lustration. Those portions of it which are no longer of use are thrown out of the system by various excretions, the loss thus occasioned producing that sense in the little veins all over the body, which in the aggregate we term hunger and thirst. The blood of the jugular veins which has been de-spirituated in the

brain, is vivified afresh in the lateral sinuses, by a spirituous lymph sent forth from the pituitary gland, which is the conglobate gland of the cerebrum. Thus the effete spirit of the brain unites with its effete blood, and both together serve as menstruum, medium, or saliva for introducing the new chyle into the sanguineous system. It is for this reason that the thoracic duct is inserted at or near the bottom of the jugular vein. But the circulation of the blood, although it may be considered by itself, yet like all things in the body, is but a part of a more universal order, termed by our author the circle of life; and which involves in one the circulation of both the blood and the spirits.

All the fluids of the body institute circulations after the image of the circulation of the blood. Such may be readily seen to be the case with respect to the saliva, the bile, the fat, &c., &c.

The circulation of the animal spirits, supplied to the brain through the corporeal fibres from the ethereal media of the universe, as well as by the blood of the carotid arteries, and elaborated in the cortical substances, is not a simple circle, like that of the blood, but a transcendent circle, leaping from series to series, omnipresent in all things and conjoining all. For the spirit is propelled by the cortical substances or "corcula cerebri" through the medullary and nervous fibres; by the nervous fibres into the arteries, where it is inserted into the globules of the blood, and constitutes their life and soul; and it is carried back in the bloodby the carotid arteries to the same cortical substances, there to be purified, conjoined with fresh spirit, and begin its circle anew. The animation of the brain is the first moving cause of the circulation of the spirits; the respiration of the lungs the secondary or corporeal cause, which operates by a general traction upon the external membranes of all the organs, vessels, and fibres of the body. For the brains give the universal or most internal life of the body, and in this respect, as propulsive causes, represent the capillaries or distinct corcula of the nervous circulation; the lungs, the general, or most external life, and represent the one heart of the same.

The above doctrine may conveniently suggest the idea, that points of analogy are not points of sameness or identy, but in reality, of harmonic difference. The circulation of the blood is one thing, and images that of the spirits; but notwithstanding, the circulation of the spirits is quite another. Each fluid has its own peculiarities, and its circle is applicable only to its own sphere. It is an abuse of analogy if we use it to destroy and not to reconcile differences; and if so abused, it becomes a childish and paltry instrument, totally inadequate to guide the mind through the labyrinths of nature. To revert to the present case, it has been attempted to be shown, that the circulation of the animal spirits is a simple circle, precisely like that of the blood. But for the purposes of analysis, it ought to be paralleled with what is higher than itself, and not with what is lower. Let us take as illustrative the grand circle involved in generation; for "all things that involve an end constitute a circle." In this example, the male and female conspire to generate a new being; the male fluid is propelled out of the body into the body of the female, or from one series into another; here it is developed or embodied, and is again propelled from the maternal series into that of the external universe; afterwards it is developed inwards from the body to the mind, and when its circles of education and information are completed, it returns as a member of that society from which it proceeded, to commune with the principles that gave it origin in the parents, to amplify their sphere, and enlarge their amount of social life. The circulation of the spirits is more like this of generation, than like that of the blood; for being a universal it belongs to the sphere of universals, and is but poorly imaged in particulars, which are, indeed, but portions of itself.

We have already treated of the limits of the circulation considered as proceeding from the heart, and have had occasion to hint at the attraction exercised by the several organs. The truth is, that the latter demand different and varying quantities and qualities of blood at different times, according to their different states as determined by and determining the state of the body; and that the heart and aorta, as a propulsive power, can have no share in apportioning these. Hence an attractive force is given to the viscera themselves, whereby all the commodities in the body are placed at their disposal; or as Swedenborg says, "they are enabled to summon what they require, from the universal mass of the blood." For each organ, and each part and particle of each, is an individual member of a perfect society, possessing the form of a stupendous rationality whereby to discern its wants, and of an equal liberty to enable it to supply those wants from the community, on the condition of reciprocation of use: not the smallest intrusion upon its individuality by the common powers is permitted for a moment; for should this take place, disease is the inevitable consequence. But let it not

be imagined that the attraction exerted by the organs is of a violent character, or that that their movements are other than gentle and tranquil. It is unnecessary that such should be the case; inasmuch as there is always a propulsion or incitation corresponding to the attraction or invitation, so that what the organ demands is immediately supplied. For when the unities or leasts of an organ expand to draw in their blood, their vessels contract to propel it; and by virtue of the simultaneous expansion of the unities and contraction of the vessels, the size of the organ is scarcely altered, and its motion is almost imperceptible.

The motions of the organs of the body are an important subject in Swedenborg's theory; occasionally seen in glimpses by many writers, among whom may be instanced our own philosophic Glisson,* yet not recognized by them as a necessary law. It has been remarked before, that the lungs and the brains give each organ a universal motion, at once internal and external. But it would be an error to suppose, because the motion communicated is one and the same, that therefore it is not received and appropriated differently, in other words, modified, by the organs themselves. So truly is this the case, that the motion takes place in every instance in accordance with the geometrical form of the organ, as made up of lesser and least parts, and these forming axes, diameters, and circumferences, general, specific, particular, and singular. Always indeed it is expansion and constriction, these being nature's own motions, and pervading the universe, elemental, material, and organic. Nevertheless it is an expansion and constriction proceeding according to the form of the organ. As a general rule, the most fixed point of every organ is its centre of motion, from which its expansion and constriction begins, to which it returns, and in which it terminates. For each organ is an individual, made up of an infinity of lesser individuals, whereof one and all live their own lives, exercise their own forces, and perform their own actions, and only rely upon the general system for supplies, which they can convert to use in their own way, and according to their own essence: and this, no matter whether the supplies be supplies of blood and fluids, or supplies of motion. The material always comes from without, but the disposal of it from within. These motions convert the organs from powers into forces; so that it may be stated as a law, that the heart and the blood generate the body; but that the brain and the lungs make use of it, and wield it as an instrument of action. As a rude illustration of this, we may instance the case of human machines The fabrication of a steam engine by artificers in the workshop is one thing, and analogous to the formation of the body by the blood, the vessels, and the heart; but to make use of the same engine requires altogether a different series of powers,—fire, water, steam, and a new order of workmen, analogous to the brain, the lungs, and their motions.

As motion is a necessary condition of actual life in the whole body, and all its organs and their parts, so likewise is sensation. For without sensation the organs would not be able to exercise their attractions and repulsions with benefit either to themselves or the system. The cerebrum is our general sensorium, in which we are conscious of all the impressions that rise from the external sensoria, of sight, hearing, smell, taste, and touch; which sensoria occupy the circumference of the body: but the cerebellum takes cognizance, apart from our consciousness, of all the impressions that are made in the interiors of the body; namely, of every contact,* in general and in particular, between the solids and the fluids. Therefore the cerebellum is aware of the whole state of the kingdom of the body in its minutest details, and disposes and governs it agreeably to the ends for which corporeal life is instituted. Now the human frame, unlike that of other animals, is co ordinate with the *whole* external universe; it is an organization correlated and responsive to the entire series of the natural creation. The brain is a form of the elemental kingdom; the lungs, of the atmospheric world; and the abdomen, of the terraqueous globe. Nothing less than this can be the case, inasmuch as the body descends from the highest sphere to the lowest, and, by the heart and its vessels, reascends from the lowest to the highest, and thus doubly draws with it the order of the universe. Each degree of the body involves a sensation of its external co-ordinate. Of the external senses specifically, sight is co-ordinate with the ether, and apprehends its modifications; hearing, with the air, and perceives its vibrations; smell, with the effluvia of matter; taste, with the essences of body; and touch, with body

* Glisson is well worth consulting on the motion of the liver; see his "Anatomia Hepatis," pp. 62, 63, 67, 68, 69; 12mo., Amsterdam, 1659.

* It is suggested to the medical reader to consider, whether Swedenborg's theory, that the sense of touch, and its organism and accidents, pervade every particle of the body, lends any support to the remarkable view taken by Hahnemann, that seven-eighths of the chronic maladies afflicting the human frame are forms of psora, and that *all* such maladies are referable in some sense to three types of skin disease.

in its ultimate or concrete form. The first two senses therefore are atmospheric senses; the latter, material, and may be fitly regarded as different forms of touch. There are then three grand genera of touch. The first genus prevails all over the circumference, and constitutes touch proper: the second prevails in the innermost parts of the body, beginning from the tongue; namely, in the æsophagus, the stomach, the intestines, and all the viscera of the abdomen, and at the threshold of this series is called taste: the third genus prevails likewise in the innermost parts of the body, but beginning from the nares; namely, in the trachea, the larynx, and the lungs, or in the viscera of the thorax, and at the entrance to these is called smell. The sense of taste again is divided into as many species as there are viscera of the abdomen, and these species into as many particular differences as there are unities in each viscus. "From the variety of the particular sensations of one viscus, a common sensation arises; and from the variety of sensations of many viscera, a still more common sensation arises. And from all and each of these sensations conveyed by the fibres to the cerebellum, the soul, by means of this sense, here apperceives specifically the states of chylification, sanguification, and purification; in a word, of nutrition; and according to the perception, disposes those viscera to the conservation of the whole and the parts, which is the effect and use that this sense produces." The villi on the internal surfaces of the abdominal organs are the papillary sensoria of the above sense.

Digestion of Saccharine and Amylaceous Matters.

M. Mialhe has recently made numerous researches with reference to the physiology of digestion. The essential basis of the alimentation of animals, he states, is constituted by three distinct groups of bodies: albuminous, fatty, and saccharine matters. The labors of modern chemists have shown that albuminous substances become assimilatable through the assistance of the gastric juice, which, by its acid, swells these azotized products, and by its *pepsin* liquefies them, a phenomenon analogous to that of diastasis on amidon. Fatty matter becomes assimilatable by the intervention of bile, but with regard to feculaceous and saccharine matter, says M. Mialhe, there is nothing positive known. This lacuna in science he has endeavored to fill.

The new facts at which M. Mialhe has arrived, tend to show that all hydro-carbonaceous substances can only undergo the phenomenon of assimilation when they have been decomposed by the weak alkaline dissolutions contained in the vital humors; either immediately, as with glucose, dextrine, sugar of milk; or mediately, as with cane-sugar and amidon, which have to be first transformed in the economy, the one (cane-sugar) into glucose, the other into dextrine or glucose. As to hydro-carbonaceous substances, which are neither susceptible of fermentation nor of decomposition by weak acids, or alkalies in solution, such as lignite or mannite, they escape, in man, the digestive and assimilating action. But by what chemical action is the amidon transformed into dextrine and glucose? Numerous experiments have proved to M. Mialhe that this transformation is produced by the saliva, through a principle which this humor contains, a principle comparable, in every respect, to *diastasis*. In order to isolate it, human saliva, first filtered, is treated by five or six times its weight of alcohol, alcohol being added until precipitation ceases. The *animal diastasis* is deposited in white flakes. It is gathered on a filter, from which it is taken still moist, and dried in layers on glass, by a current of warm air, at a temperature of from 40 to 50 degrees (centigr;) it is preserved in a well-stoppered bottle. This active principle of the saliva is solid, white, or of a greyish white, amorphous, insoluble in alcohol, soluble in water and weak alcohol. The aqueous solution is insipid, neutral; the subacetate of lead does not give rise to a precipitate. Abandoned to itself, it soon becomes acid, and whether or not in contact with the air. This *animal diastasis*, studied comparatively with disastasis extracted from germinating barley, presents the same modes of action. It transforms amidon into dextrine and glucose; acting on starch, and elevating the temperature to 70 or 75 degrees, the liquefaction is nearly immediate. One part of this substance suffices to liquefy and convert two thousand parts of fecula. The agents, such as creosote, tannin, the powerful acids, the salts of mercury, of copper, of silver, &c., which destroy the properties of *diastasis*, act in the same manner with respect to the active principle of saliva. At an equal weight they both liquefy and transform the same quantity of hydrated amidon. It appears, even, that the active principle of germinated barley is seldom as energetic as that of saliva, which is owing to the greater facility of obtaining the latter in a pure state. Finally, as a last resemblance, the *animal diastasis* existing in the saliva of man rarely exceeds two thousandths, and this is exactly the proportion of the diastasis contained in germinating barley.—*Lancet.*

ACADEMIE DES SCIENCES--PARIS, 1845.

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Researches on Generation.

The researches of M. Pouchet on the progression and the state of the seminal fluid found in the genital organs of female rabbits, have led him to the following conclusions; —From the sixth to the twenty-fifth hour, zoospermata are found constantly in the vagina and in the uterine cornua. Until the twenty-first or twenty-second hour, these animalculæ are very agile, but they soon after become less active, and towards the twenty-third hour they dry, and appear to undergo a kind of cadaveric rigidity, as characterized by the rectilinear direction which their caudal appendix assumes. After this period, they are only found lacerated. Sometimes, nevertheless, and principally when the death has been preceded by violent convulsions, living zoospermata are still found, towards the twenty-fifth hour, engaged in the entrance of the uterine extremity of the Fallopian tubes. They never ascend beyond a depth of twenty millimetres, the mucus which fills the Fallopian tubes, formed of dense globules, offering an insurmountable resistance. It is, therefore, only in the uterus, and, perhaps also in that part of the Follopian tubes which approximates to the uterus, that fecundation takes place in mammalia. If the zoospermata reach the ovaries, it can only be in the abnormal cases which give rise to extra-uterine pregnancies.—*Lancet.*

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Mr. Bonjean on the poisonous effects of the Secale Cornutum.

The ergot of rye, taken as an alimentary substance, may give rise to two kinds of symptoms; to convulsive phenomena or to gangrene. These series of symptoms may present themselves singly or combined. A year ago, M. Bonjean attended a family in the vicinity of Chamberry, all the members of which were attacked with the convulsive form; he has lately observed, in the same neighborhood, a case in which the gangrenous form alone prevailed. A family composed of eight individuals—the father, mother, and six children, between the ages of two and seventeen—ate, during three weeks, bread containing one and a half per cent. of ergot. The father and mother merely experienced lassitude in the limbs; the three eldest children present no abnormal symptom. Two of the youngest only were attacked with gangrene; one, a boy, ten years of age, after eating the bread during fifteen days, felt a severe pain from the left groin to the calf of the leg. The feet and legs became tumefied, covered with phlyctenæ, and the gangrene, appearing at the inferior third of the legs, descendedt owards the feet, and ascended to the upper part of the legs, where it became limited. The other, aged twenty-eight months, was attacked in the same way, but on one leg only. There were no premonitory symptoms whatever in either case. The two children were admitted into the hospital at Lyons, where the gangrenous limbs were taken off, and they were subsequently quite cured.—*Ibid.*

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On the Value of Vaccination and Revaccination.

In 1842, the Academy of Sciences offered a prize for the best treatise on the above subject. Thirty-five candidates responded to the call, and the perusal of their labors has proved so laborious an undertaking, that it is only very lately that M. Serres has been able to present a report to the Academy, in the name of the committee appointed to decide on the comparative merit of the essays. M. Serres' report is a remarkable document, and is also important from its conclusions having been adopted by the Academy after mature deliberation We extract the following data from this report:

"Vaccination preserves the human species from variola, but its preservative power is not absolute. Variola itself, either spontaneous, or produced by inoculation, does not preserve absolutely from future attacks, therefore it is not extraordinary that vaccination should not. Thus, Mead mentions having seen three variolous eruptions take place successively on the same woman; the son of Forestus was twice attacked with variola, and Dehaen states that one of his patients was attacked six times by variola with impunity, but died of a seventh invasion of the disease. Although, however, vaccination is sometimes powerless to preserve us from variola, it *always* diminishes the gravity of the malady. This property, which Jenner and his first successors did not even suspect, is thoroughly proved by the various facts which have been recently accumulated. In one of the most terrible epidemics of variola that has taken place in Europe since the discovery of vaccination, —that of Marseilles, in 1828,—more than ten thousand persons were attacked. Of these, two thousand only had been vaccinated, and of that number forty-five only died, whereas, one thousand five hundred of the eight thousand who had not been vaccinated were carried off by the pestilence.

"Vaccine matter evidently loses part of its efficacy in passing from arm to arm; it is therefore desirable to renew it as often as

possible. A remarkable fact mentioned by one of the competitors, supplies us with a means of renewing it, as it were, at will. A cow was vaccinated with matter taken from a child. Not only did the pustules rise, but they were communicated to other cows, so that the cow-pox was observed nearly in its natural state. The pustules were identical in both cases.

"The propriety of revaccination is now fully established. In Germany, the various governments have been induced to pay great attention to revaccination, owing to the circumstance of epidemics of variola having latterly manifested themselves with a severity to which we had become quite unaccustomed since the introduction of vaccination. Revaccination has, consequently, been resorted to on a very extended scale, and has had the effect of arresting the epidemics Thus, in Wurtemburg, forty-two thousand persons who have been revaccinated, have only presented eight cases of varioloid, whereas, one-third of the cases of variola have latterly occurred on persons who had been vaccinated. It is principally between the ages of fourteen and thirty-five that vaccinated persons are exposed to be attacked by variola. When there is an epidemic, the danger commences earlier, and children of nine years of age may be seized. Prudence, therefore, requires that, under ordinary circumstances, revaccination should be performed at the age of fourteen or fifteen, and four years earlier if within the radius of an epidemic of variola."—*Ibid.*

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On the Anatomy of the Sympathetic Nerve.

M. Bourgery states that the sympathetic divides at its cephalic extremity into two branches, one vertebral, the other carotidian. These branches offer five modes of termination, to which are associated the cephalic nerves and the pituitary gland. M. Bourgery looks upon the latter, along with Gall, MM. Blainville, Thierry, and Bazin, as a ganglion of the great sympathetic, which appears to be the intermediary, or the organ of reunion, of the encephalic mass—that is, of the psychological and instinctive nervous centres, and of the cephalic nerves, their most active agents, with the great sympathetic, which on its side represents the entire splanchnic nervous system. The most voluminous terminations of the great sympathetic, that which appears to constitute the suture of the splanchnic nervous system with the encephalic mass, takes place in the pituitary gland. That which forms the two median plexuses has for its object the anastomosis, external to the central ganglion, of the two lateral halves of the sympathetic. The apparent termination on the cerebral arteries may be considered more as an origin, and would appear to be no other than the proper visceral nervous apparatus of the encephalic mass, united in the middle—like all the extra-visceral plexuses—with the central ganglionic mass, the pituitary ganglion, but like these plexuses, continued on the arteries with the great common chain of the sympathetic. The last termination of the sympathetic consists in its anastomoses with the grey twigs emanated from the cephalic nerves. Considered in their common chain of connexion, the three kinds of nervous organs of sus-sphenoidal region, offer seven varieties of anastomosis, by means of which all the parts of the encephalic mass, and the origins of the proper nerves of the face, are placed in communication with the cephalic extremity of the splanchnic nervous system: and if we add the chain of the sympathetic, and of its annexed organs, we find that the entire central cerebro-spinal nervous system is in relation with all the splanchnic nervous system. This intimate connexion of the pituitary ganglion, and of the sympathetic, between each other, and with the cephalic nerves and encephalon, unites all the parts of the two great systems of organic and of animal life one to the other. It shows clearly the anatomical reason of the *consensus*, as prompt as lightning, which manifests itself between the nervous organs, and more especially between the cephalic organs.—*Ib.*

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The Functions of the Pancreas.

MM. Bouchardat and Sandras, following out their researches on the chemical phenomena of digestion, have recently ascertained that the pancreatic juice possesses the same properties as the saliva. This liquid, taken from the Pancreas of strong farm-yard fowls, was transparent and viscous, presenting a slightly alkaline reaction. Mixed with amidon jelly, it liquefied it and transformed it into dextrine and glucose By adding alcohol, it formed a white deposit, which also acted on the jelly of fecula in the same manner as diastasis. A temperature of 100, (centig.) or the adhesion of various substances, such as tannin, the mineral acids, or the metallic salts, destroyed its properties. The pancreas itself, extracted from animals, and carefully separated from the different vessels which pass through it, and from the blood by which it may be soiled, possesses in a high degree the property of giving rise to the transformation of fecula. A few fragments of the gland, mixed with starch, tepid, and very consistent, convert it, after a few minutes, into a liquid free from viscosity. Pounded and

mixed with water, they give a fluid, from which it is possible to separate, with the assistance of alcohol, a flaky precipitate, endowed with the power of dissolving fecula. Other organs, such as the liver, treated in the same manner, do not give the same results. We may therefore conclude from these facts, that the principal function of the pancreas is to secrete a liquid able to dissolve feculaceous substances, to allow of their absorption in the intestine by the smaller ramifications of the vena porta, and consequently, to admit of their utilization by the economy.—*Ibid.*

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ACADEMIE DE MEDICINE, PARIS.

(MARCH, APRIL, MAY, JUNE.)

Autoplastic Operation in Cancerous Disease.

M. BLANDIN presented to the Academy a woman on whom he had extirpated an inferior eyelid affected with cancer. The loss of substance thus occasioned was then remedied by a flap taken from the forehead. This operation he considered calculated to prevent the return of the cancerous disease. The operation was successful. The views of M. Blandin, with reference to the influence exercised by autoplasty in preventing the return of cancer, were supported by M. Roux and M. Berard.

M. GERDY stated that he was not a great friend to autoplastic operations, the result of which was seldom or ever satisfactory. In the case of M. Blandin, he thought the operation would have been more successful if the flap had been taken from the cheek. He did not believe that the healthy flap would so modify the parts as to prevent the return of the cancerous affection. Cancer returns either from some of the tissues affected having been left in the wound, or in virtue of a general predisposition, the essential nature of which is unknown, and which autoplasty does not remedy.—*Ibid.*

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On the Causes of Insanity.

M. BELHOMME, in a communication addressed to the Academy, endeavored to prove that insanity is always, and necessarily, connected with acute or chronic phlegmasia of the brain, or of its membranes. Chronic encephalitis, characterized by the hardening of the cephalic substance, coincides with chronic insanity, and with dementia, accompanied by paralysis, whilst acute inflammation, with softening, gives rise to acute insanity, or to mania with delirium. M. Belhomme supported his views by fifteen cases. The report of the lecture of M. Jolly, who was appointed by the Academy to examine the communication, gave rise to an interesting discussion.

M. JOLLY maintained that the opinions of M. Belhomme were inadmissible. It is possible, he stated, that physical and moral similitudes in families, or individual organization, may constitute the morbid hereditary predisposition so frequently observed in nervous diseases. It is also possible that anomalies in the intellectual functions may depend on some accidental molecular modification in the cerebral fibre. But we are not warranted, on that account, in asserting, in the present state of science, that material lesions—lesions of texture—are necessary to produce insanity. We are not sufficiently acquainted with the normal conditions of the intimate organization of the brain, to appreciate the modifications which may correspond to anomalies of motion, of sensation, of intellect. Microscopical anatomy may some day show us the connexion between the structure of the brain and the acts of the mind; but until this is accomplished, we are not authorized to do more than simply to observe facts. The attentive examination of the causes, the symptoms, and the progress of insanity does not enable us to recognise the characters of insanity in acute or chronic inflammation of the brain. Children and young people are very frequently attacked with inflammatory affections of the brain, but are not insane. Insanity is nearly exclusively experienced by persons of a nervous, irritable temperament. The lesions of the intellect do not require for their manifestation, inflammation, softening, hardening, or any other material lesion. Hereditary predisposition, a bad education, moral commotions, alone suffice to give rise to them.

M. ROCHOUX was ready to admit that it is impossible to attribute insanity to acute or chronic meningo-cerebritis; but, on the other side, he could not allow that lesions of the intellect could take place without a material alteration of the brain. There was no effect without cause. Insanity must depend on a lesion of the brain, or of the mind, and no one had ever attempted to establish the existence of diseases of the mind distinct from the brain. Every functional disturbance presupposes the disturbance of the corresponding organ. To assert that a lesion of the functions of the mind can exist independently of a lesion of the brain, is to assert that the same sounds may be obtained from a violin, whether the strings are tight or slack. The views of M. Belhomme, thus supported by M. Rochoux, were also defended by M. Ferrers in an animated discussion, whilst MM. Gerdy, Prus, and Castell, joined with M. Jolly in strenuously denying the possibility of connecting functional disorders of the brain with material lesions.—*Ibid.*

Fistula of the Urethra Cured by Autoplasty.

M. Jobert has again succeeded in curing by autoplasty an urethral fistula The fistula was situated at the root of the penis, in front of the scrotum, was two entimetres and a half in length, and the result of retention of urine. Two unsuccessful attempts were made, which M. Jobert attributed to the patient's laboring under chronic syphilis. He was treated for this disease, and then he proceeded to operate as follows:—After refreshing the margin of the solution of continuity, and excising the skin around the fistulous orifice to a width of several lines, two incisions, parallel to the axis of the penis, were made on a level with the inferior orifice of the fistula, and prolonged on to the scrotum, so as to comprise a cutaneous flap as wide as the denuded surfaces on each side of the fistula. This flap was then dissected off, dragged up, applied on the fistulous orifice and the denuded surfaces, and carefully attached by means of interrupted sutures to the surrounding parts. A sound of middle caliber had been previously placed in the urethra, and slight compression was exercised on the flap, in order to maintain it in its place. The adhesion was complete in the five-sixths of the extent of the fistula. There remained, however, a small latteral orifice, which gave considerable trouble. The twisted suture was resorted to several times, the edges having been freshened with the bistoury, but without success. This method of treatment, followed by cauterization with the nitrate of silver, proved at length successful, and the fistula became completely cicatrized.—*Ibid.*

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Relation between the Extent of the Brain and the Intellect.

M. Baillarger, in a paper on the above subject, states that he has been able to unfold the cerebral substance by a process different from that of Gall. He takes away gradually, and by a long and minute dissection, all the white substance, and when the brain has been thus reduced to a very slight thickness, the peripheric membrane developes itself as it were. Operating as we have stated, he has been able to model with plaster the extended hemisphere, and to take its exact measure. For the brain of man, M. Baillarger has found a medium of one thousand seven hundred square centimetres. The measure of the extent of the surface of the brain has been obtained in the same way.

If we now pass to the physiological application of these researches, we find, in contradistinction to what has been advanced, that the development of the intellect is not at all in relation to the extent of the brain, for the brain of dogs is smaller than that of sheep. Even in taking into consideration their relative size, the brain of the rabbit is found to present twice and a half as large a surface as that of man, who in this respect is at the bottom of the scale. In order for it to be otherwise, it would be requisite for the circumvolutions to be both more numerous and deeper. The brain follows this mathematical law: the volume is as the cubes of the diameter, whilst the surfaces are as the squares of these same diameters. Thence it follows that the most voluminous brains have, relatively, a very small surface. The cerebellum alone, by the extent of its surface, can bear comparison with the brain of the inferior mammalia. Thus the development of the intellect, far from being in direct proportion to the relative extent of the surface of the brain, appears to be in an inverse proportion.—*Ibid.*

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A new Mode of Treating Spermatorrhœa.

M. Brachet, of Lyons, stated that he had been induced, accidentally, to try the effect of pressure on the perinæum in spermatorrhœa, and had obtained very advantageous results. He had resorted to this mode of treatment in four instances, in each of which the cause was different, and had been successful in all. Evidently, this means of treatment would not apply to all cases, but he thought it might be useful when the disease was the result of atony, occasioned by the abuse of venereal excitement, or following repeated blennorrhagia. According to M. Brachet, the injurious effects of spermatorrhœa are the result of the too abundant deperditition of the seminal and prostatic fluid. The latter he compares to that which is furnished by the mucous crypts of the vagina. Compression, he says, by keeping the seminal fluid in its natural reservoirs, (the seminal vesicles,) accustoms the latter to retain it during a longer time; compression, also, modifies the physiological state of the urethra, of the prostate, and of the secreting glands. The apparatus by which pressure is applied is very simple. It consists of a leathern belt, from the back part of which descends a band, which is passed between the thighs, and which dividing, so as to leave the genital organs free anteriorly, is attached to the belt on each side. In the middle of the band is a small moveable cushion, which is adapted to the region of the perinæum, where the pressure is to be applied, and which is tightened as much as possible. Pressure thus exercised is very different to the circular compression of the

penis by rings or strings which has been recommended, but which exposes the patient to serious accidents, the least of which is the regurgitation of the spermatic fluid into the bladder.—*Ibid.*

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The Operation for Hare Lip in Infants.

M. Paul Dubois brought forward some interesting data respecting the period at which the operation for hare lip ought to be performed. He does not agree with the generality of surgeons, who think that it should be deferred for several years, or at least several months. He thinks, on the contrary, that great advantages are obtained by performing the operation soon after birth These views he substantiates by his own practice In various operations which he has performed, he has merely refreshed the margin of the solution of continuity, and then brought the parts together by means of insect pins and the twisted suture. The wound has always been dressed with the greatest facility, often, indeed, whilst the infant was asleep. The pins were withdrawn on the third or fourth day. Two of M. Dubois's patients swallowed blood: one vomited it; with the other, it followed the course of the intestinal canal, without giving rise to the slightest accident. This circumstance has some importance, as the swallowing of blood by infants has been given as a contra-indication. All the children were fed as before the operation, by means requiring suction—that is, the breast or the feeding boat; so that the early operation cannot be objected to on the plea of its necessitating an abstinence of several days' duration. It has been stated that the cries of the child might derange the dressing, but this objection is likewise unfounded, as it resists the child's cries, as well as suction. The principal advantages of an early operation are the following—the cicatrix is smaller, and more linear: the education of the child becomes much easier; and the anxiety and distress of the parents are calmed.

M. Roux thought that the early operation although occasionally useful, could not be generalized. He had seen serious accidents follow it. One child was found dead in its bed, another was seized with convulsions, which all but proved fatal. Hare lip, in his opinion, offered such a great variety of forms, that it was very difficult to lay down a principle applicable to all cases.—*Ibid.*

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Microscopical Anatomy of Tubercle.

In a communication on the above subject, M. Rochoux reproaches those who have made microscopical researches in pathological anatomy, with having examined the morbid tissues at too advanced a stage, when their degeneration had modified the characteristic features of the disease. Avoiding this source of error, he has arrived at novel results. If, for instance, a tubercle in its incipient state is placed under the microscope, it presents the form of a rounded, globular, badly circumscribed, production, of a diameter of 0.15 to 0.20 of a millimetre; it is lost, as it were, in the midst of sound pulmonary tissue. In this state, it is impossible to isolate it, to extract it, without tearing numerous filaments, the remains of pulmonary tissue, of vessels and nerves, which form around it a kind of *tomentum*. Its color, which at a later period becomes of a dull, greyish white, is then that of gelantine, with a rosy tinge, the more marked the smaller the tubercle. If, after cutting it in two, the surface of the section is examined with a magnifying power of forty or fifty only, the morbid tissue appears homogeneous, as jelly or gum about to solidify; but under a magnifying power of five or six hundred diameters, it offers a very different aspect. We then perceive that it is formed by the interweaving of filaments nearly as small as those of cellular tissue, and containing no visible fluid in their interstices. The mode of texture is regular enough, and recals to a certain degree that of the crystalline lens. The incised surface presents a very pale-reddish color, with a metallic reflection.—*Ibid.*

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Pellagra in Gascony.

It appears that within the last few years, pellagra, a disease which has long exercised great ravages in the north of Italy, has been found to exist in the department of La Gironde, in Gascony, and that it is making rapid progress. The central board of health of the department, becoming alarmed at the extension of the disease, has latterly taken every possible means to ascertain its nature, causes, symptoms, and treatment. Every practitioner residing in the affected localities has been applied to, medical conferences have been held, and a vast amount of information has been collected. The board of health of La Gironde, considering that the data which their investigations have brought to light are of importance to humanity, recently addressed the results of its labors to the Minister of Public Instruction, with a request that they might be published under the sanction of government. The Minister having forwarded the document which he received to the Academy of Medicine, requesting its opinion respecting their value,

the committee appointed by the Academy to examine them, has, through the medium of M. Jolly, its reporter, recommended their immediate publication. M. Jolly's report contains the following interesting details with respect to pellagra as observed in France.

The existence of pellagra in the *Landes* of La Gironde was first noticed in print by M. Hameau in 1829. Since then it has been insisted on by various physicians, but more especially by M. Leon Marchand, a recent writer. "The most striking character of this affection," says M. Marchand, "is a squamous erythema, which occupies the uncovered parts of the body, principally the dorsal surface of the hands, and which returns every year, at spring, with the same series of symptoms, the intensity of the latter depending on the duration of the disease." The erythematous erruption, which may successively present itself under a papular, vesicular, or pustular form, disappears at autumn, leaving on the skin shining cicatrices, which assume the appearance of a burn. The general phenomena that accompany the cutaneous affection diminish, at first, along with it, to return again the following spring. As, however, the disease becomes more chronic, they not only assume a severer form, but last during the interval of the disappearance of the erythema. The principal general phenomena of the pellagra proceed from two sources, viz: First, from the digestive apparatus, redness and fissures of the tongue and of the lips, a scorbutic sanguinolent state of the gums, ptyalism, dyspepsia, vomiting, and diarrhœa. Secondly, from the cerebro-spinal system; pain and weakness of the limbs, titubation, vertigo, obliteration of the senses of the intellect, mania or dementia, generally presenting the form of suicidal monomania, with a tendency to drowning. In many cases there is progressive marasmus, slow and gradual sinking, often dropsy. The disease invariably terminates by death. Pathological anatomy has not hitherto thrown any light on the intimate nature of pellagra. "Its true nature," says M. Marchand, "must be sought for in the attentive study of the local and topographical influences which favor its development."

The locality in which endemic pellagra appears to exercise its greatest ravages, is the region which borders the Gulf of Gascony. It is the most sterile part of the country—a district exposed to the most depressing and the most debilitating influences; where everything (men, animals, and plants) languishes and dies before its time. The fœtid emanations from the marshes, the insalubrity of the habitations, deficient and bad alimentation, the dirtiness and scantiness of clothing—in a word, all the evils to which extreme poverty exposes, are the causes which contribute to the developement of this disease. But these causes alone are not sufficient to produce it, otherwise pellagra would be found wherever extreme poverty prevails. There exists, probably, some principle peculiar to the localities which the disease ravages, which has not yet been discovered.—Great stress has been laid on exposure to the sun as a cause of pellagra. M. Jolly does not think that it exercises so great an influence over its production as some writers suppose. Were it the real cause of this disease, the latter would have been observed previous to the commencement of the last century, when it was first described in Italy; moreover, it would be common in warm climates, which is not the case. Nevertheless, it is certain that the heat of the sun performs an important part in the symptomalogy of pellagra, as is proved by the constant return of the malady in spring. The opinion of M. Gibert, respecting the mode of action of the sun, is most likely correct. He states, that it burns the skin. The explanation of the lesion which the sun thus produces is to be sought for in the alteration that the skin of the patient affected with pellagra has undergone, along with the entire organization, in its intimate texture. It may be compared to the bark of a tree deprived of sap, which dries and cracks under the influence of the sun's rays.

Whatever may be the cause of the disease it appears to be above the resources of art when once declared. All the means of treatment which have hitherto been employed have proved useless. The plan generally followed is to protect the skin from the direct action of the sun, to combat by regimen and medicinal agents the various accidents which are the result of the general weakness, or of the lesions of the principal viscera; recourse is had to bleeding, baths, astringents, or narcotics, according to the nature of the symptoms and the indications presented. Such being the case, it is evidently principally prophylactic measures which are most needed, and it is to them that the attention of government should be mainly directed. It ought, therefore, to be the endeavor of government, by administrative measures, to improve the hygienic and sanitary state of the poverty-stricken population affected with this fatal disease.

In the course of the debate which followed the reading of M. Jolly's report, M. Gaultier de Claubry stated that he had seen cases of pellagra in the Landes and in the Asturias as far back as 1809. This fact is

important, as the first cases that were noticed in the Landes occurred in 1818 only. The disease, may indeed, have been long endemic in this part of France as in Italy, although not described until within a recent period. *Ib.*

Contagion of Typhoid Fever.

M Gaultier de Claubry, in a communication read before the Academy, endeavored to prove—First, that typhus and typhoid fever (dothinenteritis) are identical. Secondly, that typhoid fever, like typhus is contagious. These propositions M. Gaultier de Claubry supported by numerous arguments drawn from his personal experience. He had within the last few years met with eight cases of undoubted contagion in his private practice, the patients being all in easy or wealthy circumstances. In concluding, he reminded the Academy that his views on this subject were also those of MM. Chomel, Louis, Andral, Moreau, Jolly, and many others.

M. Rochoux disagreed in every respect with M. Gaultier de Claubry. In his opinion, the diseases were perfectly distinct, differing in their causes, their symptoms, their pathological anatomy, and their treatment. *Ib.*

On the Localization of Speech in the Anterior Lobes of the Brain

M. Belhomme endeavored to prove, by the analysis of ten cases which had occurred under his care, that speech is localized in the anterior lobes of the brain. His summary contains the following propositions: First. Any alteration in the faculty of language depends either on a cerebral affection, or on a lesion of the organs of communication between the brain and the apparatus destined to the articulation of words. Second. The *sudden* loss of speech depends on an hæmorrhagic lesion of one, or more especially of both, of the anterior cerebral lobes. Third. Convulsive and paralytic phenomena which modify language, must not be confounded with the sudden loss of the memory of words and subsequent difficulty of speech. Fourth. In an affection partially destroying the anterior lobes of the brain, and suddenly arresting speech, it is only when a cicatrix has formed in the brain that it recovers more or less its functions.—*Ibid.*

Statistics of Bethlem Hospital, with remarks on Insanity. Part II.

BY JOHN WEBSTER, M. D., F. R. S., &C.

After referring to his previous paper, published in the 26th vol. of the Society's *Transactions*, the author makes some remarks respecting the period of the year when mental diseases were most prevalent, when the greatest number of patients were cured, and when the larger proportion of deaths occurred at Bethlem Hospital. These points he illustrates by a table compiled from the official registers, (which shows that most lunatics were admitted into the institution during the second and third quarters of the last twenty-two years, most were cured during the third and fourth quarters, whilst the largest number of deaths were met with in the last, but especially in the first quarter of the above series of years.) The author next alludes to the occupation of insane patients, and states that sixty-six per cent. of the inmates of Bethlem Hospital are now employed. This employment of the insane is found to have a very beneficial influence in their treatment, and tends materially to diminish the necessity of using personal coercion in the management of lunatics: in proof of which, the author states, that five years ago the weekly average of persons under restraint was thirteen, whereas at present, when the system of employing the insane patients is more developed than formerly, during some weeks only one, and occasionally, not even one individual is in restraint. The author subsequently gives a synopsis of twenty-eight autopsies recently performed at Bethlem Hospital by Mr. Lawrence, thus making one hundred post-mortem examinations of lunatics, if the seventy-two dissections previously reported are taken into the account The diseased alterations of structure are succinctly described in the twenty-eight cases now brought before the Society, of which the following may be given as a summary:—In twenty-five, there was infiltration of the pia mater: in twenty-four, turgidity of the bloodvessels; in nineteen, effusion into the ventricles; in twelve, fluid was found at the base of the brain; besides other varieties of morbid appearances. In twenty-two cases, the organs of the chest were diseased; and in thirteen, the abdominal viscera were more or less affected. In conclusion, the author makes some general observations on the facts contained in his paper.

Electro Magnetic Clocks.

Which never run down, and never require winding, have been invented by a Mr. Brain. A writer in the Polytechnic Review says—"he set up a clock in my drawing-room, the pendulum of which is in the hall, and both instruments in a voltaic circuit, as follows: On the N. E. side of my house, two zinc plates, each a foot square, are sunk in

a hole, and suspended to a wire. This is passed through the house, to the pendulum first, and then the clock. On the S. E. side of the house, at a distance of about forty yards, a hole was dug four feet deep, and two sacks of common coke buried in it; among the coke another wire was secured, and passed into the drawing room window, and joined to the former wire at the clock. The ball of the pendulum weighs nine pounds, but it was moved energetically, and has ever since continued to do so with the self same energy.—The time is to perfection, and the cost of the motive power was only 7s. 6d. There are but three little wheels in the clock, and neither weights nor springs, so there is nothing to be wound up. To another friend in Battersea, he has given three clocks, two small ones, and one a hall clock, all moved by one current, and regulated by one and the same pendulum. This is all he has completed in England, having just reached Edinburgh, where he is to establish a manufactory of these clocks, which, for accuracy, cheapness, and utility, will, I believe, surpass every time piece hitherto contrived.

Extracting Teeth in the Mesmeric Sleep

The Nantucket Inquirer states that Rev. L. R. Sunderland lately put a woman in that place into the Mesmerice sleep, and that while in that state Dr. D llingham extracted a tooth in which two physicians had examined and pronounced to be firmly set in her head. The Inquirer says:

"During the cutting of the gums, fastening the forceps upon the tooth, and the actual drawing of the tooth, the patient did not exhibit the slightest consciousness that the keen eyed physicians could detect. She appeared to us (and we were upon the platform, close beside her,) to exhibit about as much sensation, consciousness, feeling as would be exhibited by a stick of wood into which a penknife had been thrust, and not a jot more. It was a successful operation, and the physicians stated to the audience that they were perfectly satisfied that the patient was in a state of perfect unconsciousness, totally insensible to pain; of which fact every fair minded person in the audience was undoubtedly convinced. What the agency was that produced this unnatural state, those who attended the lectures can judge for themselves, without any aid from us. Thursday evening, another tooth was extracted from the same person by the same operator, under the scrutinizing eyes of several additional physicians with similar satisfactory results."

Successful application of Mesmerism to a Surgical operation

Mesmerism, or animal magnetism, is attracting at the present day, no inconsiderable share of attention and investigation from all classes of the community, in both hemispheres. It finds advocates and opponents among the learned and illiterate, the profound and superficial, philosophers and physiologists. By many, its power and influence are doubted, by some denied, and by others derided as imposture. Whilst a cautious remove from that credulity which would swallow with avidity the most ridiculous absurdities, deserves the highest commendation, that scepticism, which closes every avenue to conviction, and discards belief in facts without investigation, because the human mind cannot comprehend them, merits reprobation. Our present knowledge of its nature and power is confined to narrow limits, and the discovery is a goal yet to be reached by some future voyager, that it is subject to the same universal laws that govern matter. To the future belongs the developement of its destiny—to the present, scrutinizing investigation into its concealed mysteries. Suffice it for my present purpose, to narrate facts presented to my own observation, without entering the broad field of hypothesis, or ascending into the regions of fiction; to relate in brief and simple phrase, one benign visitation of this incomprehensible agent, which like an angel of mercy from the skies, bore on its mission not only comfort and consolation, but entire immunity from the pain and torture attendant on a severe surgical operation. As the object of this communication is simply to report the fact that animated animal matter has been disintegrated without pain and without the knowledge of the patient, the particulars relating to the nature and progress of the disease will be necessary. Miss Cromett, the well known subject of the operation which has excited a large share of curiosity and interest in this place, possesses an exalted nervous temperament, with the least possible share of fortitude and firmness—acutely sensible to painful impressions, aggravated at the time, by an accumulation of morbid nervous irritability. When first advised by her physician, that excision was the only remedy to arrest the disease and stay the advance of death, so repugnant was the remedy to her feelings, that she avowed her preference for the latter alternative, rather than submit to the tortures of the knife.

In this state of painful anxiety and suspense, three months elapsed, adding vigor to the disease, at the expense of the patient's welfare. Representations of the dangers of

delay, of the certainty of a fatal termination, remonstrance and persuasion, were alike impotent to overcome her opposition and dread of the operation. At this critical juncture, some friends advised and aided her in procuring the services of Dr. Josiah Deane, of Bangor, an experienced and successful operator in Mesmerism. He came, remained five days, and favorably succeeded in magnetically subduing the patient. Untoward circumstances at this time forbade the operation, and a short delay was recommended for the removal of local inflammation.

After an interval of ten days, the local disease beginning to assume a more inauspicious aspect, Dr. Dean was again called in on June 28th, but owing to some adventitious illness, prudential considerations recommended a delay until July 3d, at 10, A. M., when the tumor, involving the whole of the right breast was removed by Dr. H. H. Hill, of this village, in presence of Dr. Hubbard of Hallowell, Doctors Snell, Briggs, Myrick, and Nichols, of this place, Rev. Mr. Burgess of the Episcopal Church, J. L. Child, Esq., Counsellor at Law, Mrs. Smith, and some other ladies.

The urgent solicitation of the patient prevailed over the concealment previously determined on, and she was apprized on the day previous, of the hour appointed for the operation. Notwithstanding her fancied fortitude forsook her, so irresistible was the power of magnetism, that in about ten minutes she was beyond the control of fear, and secure from the influence of pain. The operation was performed by two incisions, measuring on the line of their curvature, twelve inches each, the whole enlarged glan removed, (weighing two and a half pounds,) the arteries secured, the wound carefully examined, the surfaces brought into apposition and partly secured by sutures, without a motion, a groan or sigh, or even the most remote indication of pain or sensibility. It would have appeared to an observer, "that life itself was wanting there," had not respiration given assurance that the spirit had not departed.

At this period, when a few more stitches would have completed the whole operation, the Mesmeriser unintentionally permitted his attention to be withdrawn from the patient, when she awoke to the consciousness of having passed an ordeal without a pang, which, without the oblivion of magnetism, would have severely tried the fortitude of the firmest, and have convulsed with the keenest agony every fibre that had been reposing in softest slumber. The acute sensibility to pain betrayed by the introduction of the remaining stitches, would, I think, convey conviction to the mind of the most obdurate disbeliever that such a result could be produced by no art of legerdemain, nor by any other known agent. The circulation was slightly accelerated—the respiration natural, and an entire freedom from the faintness, exhaustion and prostration, so often attendant on severe corporeal suffering.

The facilities furnished by this quiescent state, essentially aided the operator in abbreviating the time usually required in such operations. The writer was present during the whole process—has visited and conversed with her since, and up to this date (July 9th) she has been rapidly convalescent—having been visited by no secondary hæmorrhage, no inflammation, pain, sleeplessness, nor inquietude, and with better health than the last two months have afforded.—*Kennebec Journal.*

Augusta, July 9th, 1845.

The case of Miss Cobbett, above described, fell under our observation, and the material facts are truly stated.

John Hubbard,
H. H. Hill,
Cyrus Briggs,
Issachar Snell,
Lot Myrick,
Henry L. Nichols.

Having been present during a part of the operation, and had an opportunity to verify the facts above stated, I have no hesitation in certifying to their accuracy.

James L. Child.

The Wonders of Electricity.

The Hartford Courant says, that on the 26th ult., Mr. Fowler of Mansfield, took a bed at Nottingham, and in the morning was found apparently dead from poison. The usual remedies were applied without effect, when electricity was resorted to. At the first application of the conducting wire to the chest of the patient, he rose up, but gradually fell back again. At the second shock he rose up, crying out "Oh," and then fell back again; but on the third shock he started up, crying out, "Oh God!" and sat upright with ease. In a short time afterwards, he asked for something to drink, and tea and coffee were administered to him; in three quarters of an hour he dressed himself, and appeared almost entirely recovered. He had purchased two ounces of laudanum, and had taken the whole of it in two doses. Some disagreement with his wife is said to have been the inciting cause.

Statistics of Insanity.

According to an abstract of returns recently made to the British Parliament, of the number of lunatic and idiot paupers in the 589 unions of England and Wales, the following facts have been developed;—

	Population.	*Lunatics.*	*Idiots.*	*Total.*
England..	13,026,664	7,274	6,882	14,153
Wales . . .	884,173	379	820	1,199
	13,910,837	7,680	7,702	15,452

In addition, there is a population of 1,574,371, not included in these unions, where the returns show the number of lunatics to be 1,086; idiots, 458; total, 1,544.

(Communicated for the Dissector.)

Boston, August 9th, 1845.

Dr. Sherwood:

I was very glad to see by the last Dissector, that you and Mr. Fowler proposed to start a Mesmeric Journal. I deem it a matter of importance, and only regret, that it is not your plan to associate it with one or the other of the journals already in your care. Periodicals multiply so fast that one cannot reach the whole unless abounding in funds.

Phrenology and Mesmerism are each incomplete without the other; why not have a Journal devoted to the two.* Both sciences suffer for want of a better knowledge of their principles among those who know a little and *think* they know every thing. Mesmerism, especially, is exposed to much opposition from the pretensions of those Charlatans who think to make their little knowledge and great pretensions a means of playing upon the curious and of obtaining a livelihood. No doubt there are many who honestly think they understand the science, who have read but little and thought less, and who might be induced to read a popular periodical.

Besides these, many are led from curiosity and some, as it were, accidentally to attempt to mesmerize without knowing the power of the agent which they thus tamper with. I will mention some cases in my own experience.

Mr. S., a friend of mine, curious to see the wonders of Mesmerism, magnetised Miss S. F., who was a natural sleep-walker. She was very susceptible, and in a few moments he for the first time saw a person in the Mesmeric sleep. He was elated and curious, and began to astonish himself and others with wonderful experiments. After an hour or two he awakened her, and she seemed as usual. But there was a great call to see her in the sleep, and he elated at the idea of "showing off."

In a few days the subject was so affected, that as soon as she fell asleep at night, she appeared like a crazy person, could not be confined to the bed, or her room, and it was very difficult to rouse her. In this state of things, S. called on me in great excitement and anxiety of mind, and in the most unfit state possible, for having a subject under his control. I fully believe that if he had not been able to obtain advice, his friend would have become permanently insane. Timely treatment, however, brought her into the control of a calm magnetizer and secured her recovery and entire relief from any tendency to sleep-walking. She has been well for 3 years, and a good subject.

A. R. complained of the headache, and a person present who had seen another mesmerize attempted to relieve her. He charged her head until it ached no more, and left her in that state for a town some miles distant. The effect of this seemed to increase for a day or two until she could tell whether her mesmerizer was sitting, eating, walking, or talking, and yet she could attend to business. Her friends were compelled after 3 or 4 days to send for her mesmerizer, and with the aid of one who understood it relieve her from this unpleasant and dangerous state.

I was called after meeting one Sunday afternoon to see S. W. who had been several days in the mesmeric state, having occasional intervals when she appeared naturally conscious, and then relapsing into a distinct mesmeric and clairvoyant state. With proper treatment, she was relieved of her unpleasant situation, but I think she had been in the mesmeric state eight days.

B. N. a young man about 18, had been frequently mesmerized by myself and others. One day he came to my study to be mesmerized, having felt quite unwell for a few days. Under the most gentle mesmeric influence I could not prevent his being thrown into distressing spasms. I consulted two somnambulists and found that Mr. L. had magnetised him (the first one he had ever tried,) and then excited different organs of the brain, and left his head in a state of confusion which no one can understand who has not had much experience in Phreno-Mesmeric experiments. The consequences would have been very injurious but for timely attention.

By such facts as these I am more and

* This is a mistake in supposing Mr. Fowler or myself proposed to commence a new Journal. We only offered to disseminate a knowledge of important facts in mesmerism, &c., through our respective Journals.—Ed.

more impressed with the importance of earnest effort to spread light on this interesting subject.

Many of us have facts of interest to others, and of great importance to those who are every day awakening to an interest, and especially, should it be known that no one is guiltless who ignorantly meddles with an agent so important and powerful.

O. H. W.

Thomasville, Geo., August 25, 1845.

Dr. H. H. Sherwood.

Dear Sir:—I received the lectures of J. Davis on Clairmativeness, by the Rev. Gibson Smith, and am truly obliged to you for the favor. On reading them, I was strongly impressed with the wonderful statements of the clairvoyant, relative to the opening of his spiritual sight;—the correctness of which is fully corroborated by Swedenborg in his experience. As an illustration of this fact, I will cite you to the work "Angelic Wisdom concerning Divine Love and Wisdom," No. 252, where it is declared, "that the natural man is a full man when the spiritual degree with him is opened; for he is then consociated with the angels of heaven, and at the same time consociated with men in the world; also, that his spiritual mind is filled with a thousand arcana of wisdom and a thousand delights of love by the Lord, and that he comes into them after death when he becomes an angel. In No. 257 of the same work, it is further stated; "1. That the natural mind can be elevated even to the light of heaven, in which the angels are, and perceive naturally what the angels do spiritually, thus not so fully; but still the natural mind of man cannot be elevated into angelic light itself. 2. That man, by his natural mind elevated to the light of heaven, can think with angels, yea, speak; but then the thought and speech of the angels flow into the natural thought and speech of the man, and not the reverse: wherefore the angels speak with man in natural language, which is the man's vernacular. 3. That this is done by a spiritual influx into the natural and not by any natural influx into the spiritual. 4. That human wisdom, which is natural so long as a man lives in the world, can in no degree be exalted into angelic wisdom, but only into a certain image of it; the reason is, because the elevation of the human mind is made by continuity, as from shade to light, or from grosser to purer. But still a man with whom the spiritual degree is open, comes into that wisdom when he dies, and *may also come into it by the putting asleep of the sensations of the body*, and then by influx from above into the spirituals of his mind. 5. The natural mind of man consists of spiritual substances: wherefore that same mind after death, when a man becomes a spirit or an angel, remains in a form similar to that in which it was in the world. 6. The natural substances of that mind, which, as was said, recede by death, make the cutaneous envelope of the spiritual body in which spirits and angels are. By such envelope, which is taken from the natural world, their spiritual bodies subsist, for the natural is the containing ultimate. Hence it is that there is not any spirit or angel who was not born a man. The Arcana of Angelic Wisdom are here adduced, that it may be known what the natural mind with man is, and what the spiritual, which is also further treated of in what follows," throughout the work.

The principles laid down in this important work, are but imperfectly known to the world, for they have appeared to transcend the common sphere of human knowledge. Hence the little attention comparatively, which they have attracted, aside from the receiving of the New Church doctrines. But the time is coming, yea, now is, as is fully believed, when a very different estimate will be placed upon them. Another century under the providence of God, and nothing will be found in the old and labored structure of Physick and Metaphysics, but the voice, "he is not here, but is risen."

Very respectfully,

Wm. Hunnewell, M. D.

MAGNETIC SLEEP.

Continued from page 158.

In the first state of magnetic sleep, persons retain more or less of their intellectual faculties, and are more or less susceptible to external influence.

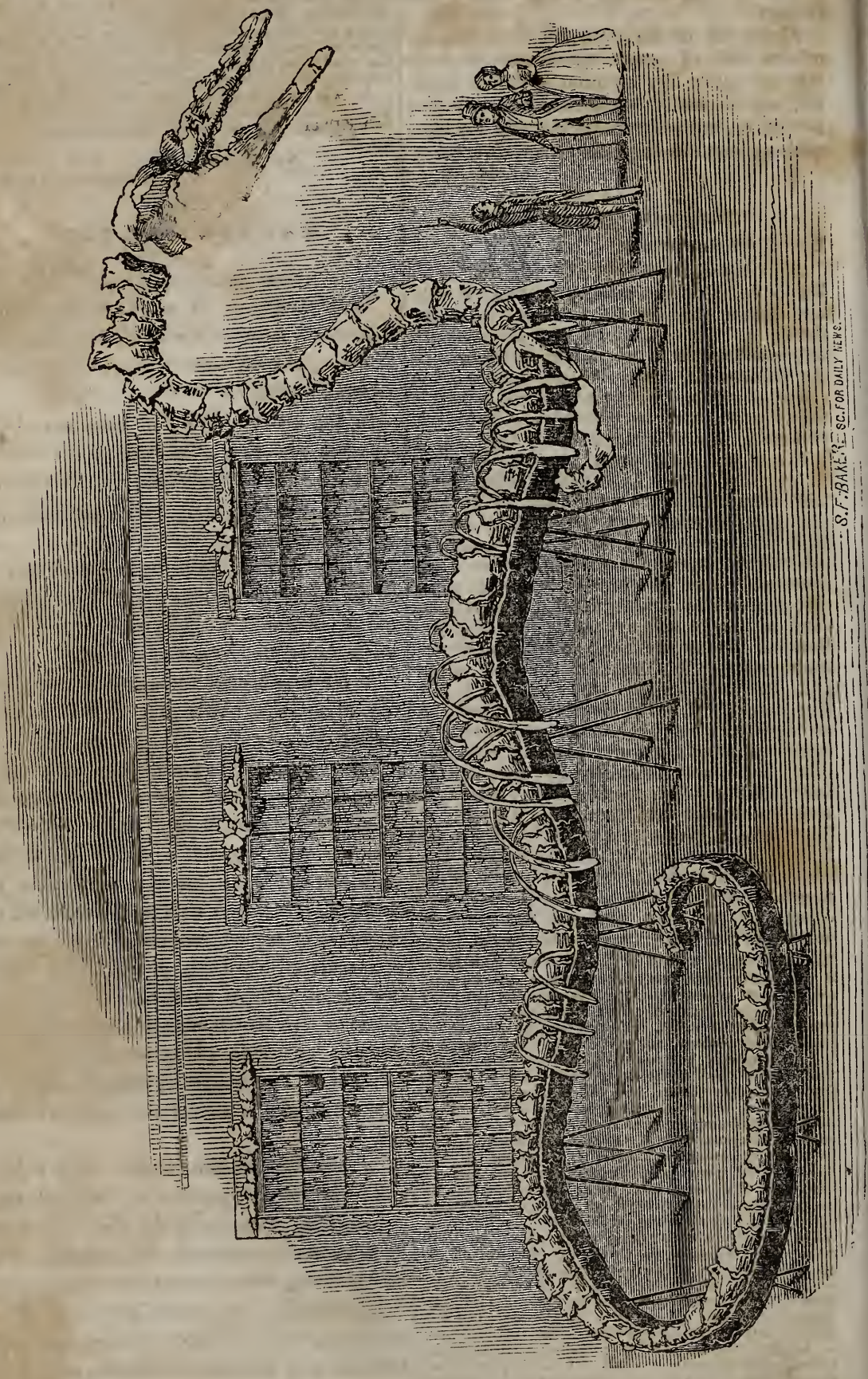
In the second state the paralysis of the muscles, and the insensibity of the skin is complete—the natural sight lost, the hearing more or less impaired, and a muscular attraction established.

In the third state a strong sympathy is established between the mind of the subject and the magnetiser—the mind of the former being under the control of the latter.

In the fourth state the mind of the clairvoyant soars far above that of the magnetiser and becomes free and independent.

These phenomena are the consequence of reversing the natural order of the magnetic or spiritual organization of the body. The negative and insensible forces connected with the inner or mucous membranes or surfaces, and molar nerves, are attracted to the outer or serous membranes, and nerves of sensation, while the positive and sensitive forces in these external surfaces are repelled to the inner or mucous membranes and surfaces, and hence the cause of this reversed order of the sensibility and insensibility of the opposite or serous and mucous surfaces.

In passing into the magnetic state a person feels first a disposition to sleep and then a prickling sensation in the skin, followed by a general numbness—the natural light fading away, when perfect darkness ensues. A glimmering of magnetic light then begins to appear, when a shock ensues, followed by a blaze of light, consciousness and clairvoyance.


S. F. BAKER SC. FOR DAILY NEWS.

THE HYDRARCHOS,

Or, Great Fossil Sea-Serpent.

Astounding as the progress of geological discovery has been, for the prodigies of the animal kingdom which it has developed, and the enlarged views of the pre-historical epochs of our globe which it has demanded, it has hitherto produced nothing so highly calculated to impress both the scientific and the popular mind with the wealth of its resources and the magnificence of its instruction, as the stupendous fossil skeleton represented in the annexed engraving. In presenting to us the osseous and petrified remains of a marine serpent whose original length was evidently, at least, 130 feet, with a bulk in due proportion, we have tangibly and palpably realized not only the ophicular descriptions of the ancient poets and historians, heretofore deemed fabulous, but the attestations of modern mariners and voyagers, which assert the existence of a similar terror of the ocean, even in our own times, and off our own shores. The serpent of the Deucalian deluge, slain by Apollo Pythius, is beheld, with scarcely the aid of the dullest fancy, in the Apollo Saloon in Broadway. And the gorgeous portrait of the Leviathan, (Heb. *levi-ten*, or "doubled dragon") in the matchless poetry of Job, has found its first conclusive prototype in this Hydrarchon—so strikingly, so, indeed, to every scholar who will undertake a critical examination of the original language, as to completely supercede every animal heretofore proposed by commentators as the subject of the description, together with the Missourium, recently proposed for this purpose by Dr. Koch, the discoverer of this more appropriate exemplar. He who, "when he raised himself up caused the mighty to be afraid;" who, "laughed at the shaking of the spear, and spread sharp-pointed things upon the mire;" who made "the deep to boil like a pot of ointment;" who made "a path to shine after him, so that one would suppose the deep to be hoary," *is here*, in bony majesty, filling us with wonder and awe, at the proofs we behold of his speed, destructiveness, and incomparable power. Indeed, we are confident it will ultimately be a point of unanimous opinion that the Leviathan is the apt and distinctive title which this re-discovered creature should permanently receive.

It was discovered by Dr. Koch, (pronounced K-ch) a zealous German Geologist, in the early part of the present year (March, 1845,) in a small prairie in Clarke Co., Alabama, near the Basseluge, called by the Indians, "Snake River." The field in which it was found, had been but a short time in cultivation, and the vertebræ first disinterred were turned up by the plough. Dr. Koch was induced to explore this district for the purpose of procuring, if possible, a perfect skeleton of the gigantic saurian, denominated from the immense dimensions of its vertebræ the Basiliosaurus, or the King of the Lizards, which had been found in the vicinity, some years previous, by the late Dr. Richard Harlan, of Philadelphia. It appears, by the following extract of a letter upon this subject, from Professor Silliman, addressed to the Editors of the New York Express, (Sep. 2, 1845,) to be extremely questionable whether the bones thus supposed to constitute the Basiliosaurus were not, in reality, portions of another massive specimen of the sea-serpent, now called by Dr. Koch, *Hydrarchos Sillimanii*—a name which, it will be seen, the Professor very modestly and justly deprecates, suggesting, instead, the merited suffix of *Harlani*, to whatever principal name (instead of Hydrarchos, from *Hydra*, a water serpent and *Archo* to rule) may be finally adopted. He says:—

"Several years ago, the late Judge Creagh, of Clarke Co., Alabama, found similar bones on his plantation, in such abundance, that they were often destroyed, as far as possible, by fire, in order to get rid of an incumbrance that interfered with agriculture; the negroes, also, were in the habit of building their fireplaces of them. The late Dr. Richard Harlan, of Philadelphia, and more recently of New Orleans, where he died more than a year since, first described and figured these bones, and supposing them to belong to a gigantic fossil lizard, he imposed the name of Basiliosaurus or King of Saurians or Lizards.

He several years afterwards carried with him to London, some of the bones, and they were there reviewed by the great compara-

tive anatomist, Professor Owen, of the Royal College of Surgeons, who was of the opinion that the animal must have had more resemblance to the whales than the lizards This opinion Dr. Harlan had the candor to present to the Association of American Geologists, together with the bones, at their meeting in Philadelphia, in April, 1841, where I heard his statements. Not long after, Dr. Bulkley brought to this city, and eventually to Albany, an entire skeleton of the animal, which is between seventy and eighty feet long, and is now in the State Geological Collection at Albany; but I believe it has not as yet been set up. This skeleton was fully described by Dr. Bulkley, in the American Journal of Science and Arts.

Dr. Kosch, the proprietor of the skeleton now in this city, made a journey of discovery a few years since into Alabama and other Southern regions, with particular reference to this animal. He had the rare good fortune, as the result of his perseverance, aided by the kind assistance of the inhabitants, to disinter the stupendous skeleton which is now set up for exhibition here.

It has, evidently, been done at great expense and personal toil, and the public, while they owe a debt to Dr. K., will, when paying it, receive a high gratification in contemplating the remains of a race of animals whose length exceeded that of all other creatures hitherto discovered; the spinal column of this skeleton as now arranged measures 114 feet in length. The skeleton having been found entire, enclosed in limestone, evidently belonged to one individual, and there is the fullest ground for confidence in its genuineness. The animal was marine and carnivorous, and at his death was imbedded in the ruins of that ancient sea which once occupied the region where Alabama now is; having myself recently passed 400 miles down the Alabama river, and touched at many places, I have had full opportunity to observe, what many geologists have affirmed, the marine and oceanic character of the country.

Judging from the abundance of the remains (some of which have been several years in my possession) the animals must have been very numerous and doubtless fed upon fishes and other marine creatures—the inhabitants of a region, then probably of more than tropical heat; and it appears probable also, that this animal frequented bays, estuaries and sea coasts, rather than the main ocean. As regards the nature of the animal, we shall doubtless be put in possession of Professor Owen's more mature opinion, after he shall have reviewed the entire skeleton. I would only suggest, that he may find little analogy with *whales*, and much more with *lizards*, according to Dr. Harlan's original opinion.

Among the fossil lizards and saurians, this resembles most the Pleisiosaurus, from which however, it differs very decidedly.

Most observers will probably be struck with the snake-like appearance of the skeleton. It differs, however, most essentially, from any existing or fossil serpent, although it may countenance the popular (and I believe well founded) impression of the existence in our modern seas, of huge animals to which the name of sea-serpent has been attached. For a full and satisfactory statement of the evidence on this subject, see a communication by Dr. Bigelow, of Boston, the 2d volume of the American Journal.

Dr. Kosch has committed one error in naming the fossil skelton now presented here for inspection. By every claim of scientific justice, the epithet—Harlani, should be suffixed to whatever other principal name may be finally adopted. It is but simple justice to the memory of our most distinguished comparative anatomist—who first called the attention of the scientific world to the stupendous fossil animal of Alabama: and there can be no propriety (however kindly it may have been intended)in imposing the name of another individual, who can claim no other merit in the case, than the very humble one of endeavouring now, as well as formerly, to awaken the public attention to the most remarkable of our fossil treasures. Dr. K. is therefore bound to recall his new epithet, and restore to Dr. Harlan the honor which is his due. I remain, my dear sir, with great regard, your friend and servant,

Brooklyn, L. I., Sept. 2d, 1845.

B. SILLIMAN.

P. S.—It should be remarked that Dr. Kosch has also brought to light the most gigantic fossil skeleton of the Mastodon family that has ever been found. It was exhibited in our cities, and is now in the British Museum, having been purchased for two thousand pounds sterling, by that institution.

If the bones examined by Professor Owen, in London, and the "entire skeleton, between seventy and eighty feet long," now in the State Geological collection at Albany, be those of a creature identical in kind with the Hydrarchos, it is but little complimentary to the anatomical science of the examiners that they should have confounded them with those of any known variety of the saurians. The teeth, at least, should have been taken as evidence of a decisive distinction. None

of the saurian family have teeth of more than one fang, while the incisors of the Hydrarchos have two, more and more forked as we proceed from the anterior to the posterior of the jaw. Dr Koch thinks that these incisors, while like those of all the serpent tribe, have also some analogy to those of a marsupial animal — a singular thing enough, if we overlook the fact that all serpents are so far pouched animals as to swallow, or present an internal receptacle of refuge for their living young. It is evident, moreover, that the Hydrarchos did not masticate its food, but gorged it entire, although, says Dr. Koch, it was provided with palate bones which might have been used simply to crush its food. "Its greatly elongated snout was armed with fifty or more spear-shaped incisors whose fangs were deeply inserted in spear-shaped sockets. The pivocation is in the extreme anterior ones, and only marked by a groove; the spear-shaped crown of these teeth is divided into more or less minor spear-shaped fronts, which increase or diminish in number according to the situation the tooth occupies in the ramus; the central one of them is the largest, and those nearest the gum are the smallest. These crowns are covered by a thick coating of enamel, which had a rough surface, and are marked by small scale-like elevations which are narrow, lancet-shaped, and elongated, with their points upwards." "All the incisors are so set in the ramus and maxilla, that their extremities have an inclination backwards towards the palate, like the shark, and that the victim caught could easily enter the mouth, but could not possibly escape." The canine teeth correspond with the incisors in this position, while they are from six to eight inches long.

That the creature was an air-breathing reptile, is conclusively inferred from the nasal cavity, in which the posterior vents are at the back part of the mouth, enabling it to respire deeply and freely. It is not improbable that, like the Pleisiosaurus, this stupendous serpent was a coasting rather than a deep ocean reptile, as indeed are all known marine creatures of a kindred form. Not only its necessity of breathing, but the prodigious size and muscularity of its cervical vertebræ, indicate its habit of rearing itself above the water; and when we also examine the peculiar structure and marvellous strength of its massive lumbar vertebræ, which may be regarded as the axis of its muscular power, we feel authorized to conclude that it could erect nearly two thirds of its entire length from this basis, in a majestic curve above the surface of the tide—often, doubtless, in tranquil seasons, a glowing mirror of its gorgeous form and stately movements. Its eyes, too, which were from six to eight inches in diameter, were so prominently situated on the forehead as to secure it a vast circle of vision, and render it a vivid object of terror; and when Job says of his leviathan that "his eyes are like the eyelids of the morning," the force and beauty of the poetic hyperbole are as appropriate to the eyes of the Hydrarchos as to those of any animal, not purely imaginary, of which we can form an idea.

Upon the general osseous structure of this mighty being, we will quote the description given by Dr. Koch:—"The propelling motion of the animal was, like that of all the serpent tribe, dependant upon the action of its powerful vertebræ, and the strong muscles and ligaments acting in harmony with them. The strong and lengthy tail, was more particularly used as a rudder to direct its course, as well as for the purpose of propelling. The transverse processes, which are very large in the whole spinal column, are more especially so in the caudal or tail vertebræ; the canal for the spinal marrow is very much compressed and flat, and the spinous processes have a great inclination backwards, [probably enhancing its springing or ejaculative power]. The dorsal and lumbar vertebræ are greatly elongated, measuring each from fourteen to eighteen inches in length, and having a circumference of from twenty-four to thirty inches. Their construction differs from those of any animal with which I am acquainted, as each body of these vertebræ is composed of five sections. In the centre, we observe the main body to which all the pro-

cesses are attached, and which measures from five to seven inches in length: to both extremities of this is a pelvis. The section is anglelozed, measuring from three to four inches in length, and to the extremities of these again we find a pelvis. The whole is anglelozed and ossified together in an adult, but will separate in younger animals, as I have had an opportunity of observing personally. [Dr. Koch found several imperfect skeletons of younger specimens of this creature.] The cervicle, or neck, and the coxyxal, or tail vertebræ, have powerful processes, but their bodies have not the additional divisions described above, as found in the dorsal and lumbar vertebræ. The ribs are of a very peculiar shape and form; so much so that I know of no animal to which I might compare them. The greater number are small and remarkably slender on their superior extremities, until we arrive within two thirds of the length toward the inferior extremities, where they begin to increase in thickness most rapidly, so that near the lower parts, where they are flattened, they have three or four times the circumference that they have on the superior extremities, and have very much the curve of the sickle From the whole of their construction, we may justly form the conclusion that the animal was not only possessed of a fleshy back of great power, but also of remarkable strength in its belly, by which means it was enabled to perform very rapid movements. Notwithstanding its two fore feet, or paddles, are quite small in comparison with the rest of the skeleton, yet they are in proportion with the short and thick humerus and ulna or forearm, which, together with the paddles, must have been concealed under the flesh during the life of the animal, in such a manner as to be only perceptible through muscles and cartiliges, similar to the fins of an eel. The humerus and ulna are not unlike those of the Icthyosaurus; and each paddle is composed of twenty-seven bones which form, in union, nine forward and backward articulating joints."

Upon this description we have only to remark that the peculiar form here correctly assigned to the ribs of this ponderous creature, in being so much thicker and stronger at the part of the curve where they turn to bend under the belly, is evidently an admirable provision of nature for sustaining the immense superincumbent weight of its mass, when resting upon a shore, or depositing its bulk for repose, upon the bottom of any other shallow waters; and as a respiring reptile, this sea-serpent must have often enjoyed the ease of such a position, fearless of every foe. That none of the saurians, nor any other animals, should be found to exhibit this very striking singularity of costal structure, is simply because they were otherwise furnished and did not need it; while to this creature, devoid of legs, and all pedal points of support, the provision was indispensable, and he accordingly possessed it. After all, the ribs seem exceedingly slight for so bulky a mass, and there can be no doubt that they were strengthened with those well-knit bands of intercostal cartilage and muscle, which supply the place of osseous ribs in the large conger eel, and other varieties of the serpent race.

Concerning the natural habits and capacities of this wonderful animal, comparative anatomy will spread a rich field of beautiful analogy and scientific induction.

Whether he was amphibious, to the extent of our present water snakes, may well be doubted from the evidence afforded by his side fins of a more decidedly piscine character. The last joint of his tail, too, indicates a final bifurcated fin; and the finding of this termination of the vertebræ, cannot but be regarded as a most felicitous circumstance, for while it tends to determine the animal's distinctive nature, it also proves an admirably tapering symmetry of form, peculiar to the serpent species.

The following is a summary of Dr Koch's unpublished description of the upper and nether stratification of the spot and neighborhood in which these stupendous fossil remains were discovered; and we have great pleasure in presenting to our readers a matter of so much scientific curiosity:—

A. A stratum of diluvial gravel with shells.

B. A stratum of a blood-red color, from a deposit of clay, highly impregnated with iron, and exhibiting grey veins.

C. A stratum of peculiar lime stone, forming in some places remarkable terraces, in divisions or steps, from five to seven feet high, and from thirty to forty horizontal breadth, exhibiting great regularity. These occur in locations, in the vicinity, where traces of a most violent and rapid current appear, and apparently of diluvial action. This lime-stone is termed "chimney-rock," by the inhabitants of the neighborhood, and is so soft as to be sawed into blocks for building, with a common cross-cut saw.

D. A stratum of volcanic origin, forming an extensive bed of volcanic matter, inclosing and cementing various kinds of fossil wood, some partly in a crystaline state and others reduced to charcoal. These specimens of fossil wood, which increase as we leave Clarksville and approach the Mississippi, prove the existence of dry land vegetation at this epoch; and from the admixture here found of fresh water shells with a large number of beautiful marine fossils, the spot seems to have been connected, at the time it was on the surface, with some shallow sea or bay. In Clark and Washington counties this stratum is frequently laid open, forming, indeed a considerable portion of the present surface, and often appearing like a dark brown vegetable mould, mixed with corroded volcanic substances and calcareous matter. Its volcanic origin is clearly traceable whereever it is laid bare; fragments of lava are thrown for miles around the vicinity of Clarksville, and we frequently find extensive beds, formed of a mixture of sand, iron ore and lava, once in a melted state, but now broken in layer, or smaller sections. Sometimes pieces of pumice stone are found here with bituminous coal, and an extensive bed of the latter is said to exist in the Tallehalla Hills in Clark Co.

E. A stratum of yellowish lime rock, containing fossil remains of myriads of animals and shells. In this stratum, at a spot near a chasm, where it had been lifted to the surface, and where the superincumbent strata were thrown to the right and left, by volcanic action, was found the skeleton of the Hydrarchos, or as we would have it called, the *Leviathan*. The vertebræ, with the exception of one or two joints that had been turned up by the plough, were found and dug out in the natural order in which they lay, and in which they are again put together in the skeleton as exhibited.

F A stratum of quartose sand, ten or twelve feet thick, which Dr. Koch conceives to be a continuation of the stratum marked "I," (see below.) He says that at Clarksville he found the upper section of this stratum, containing oysters of a large size, while, on the Tombigby side of the dislocated elevation, he found the lower portion of this stratum, containing oysters in quite a young state of growth. He adds that at Coffeeville, the same stratum appears ten or fifteen feet thick, the lower portion as marl, and the upper as laminated lime rock of the same color as at Claiborne.

G. A stratum of rich green sand, containing highly brilliant shells, of a light green color. This stratum is particularly characteristic, having a bed of oysters entirely different from those in the underlying bed (I), and forming a bank which appears never to have been disturbed. Indeed the shells of many of these bivalves still remain united.

H. A stratum of quartose sand, fourteen or fifteen feet thick, containing shells of oysters and other oceanic shells. Here, in the neighborhood of Clarksville, occurs a miniature species of the saw-fish, its saw, although of a similar construction to that of the existing species, being but about three inches long, instead of as many feet Several species of oysters occur here, which must have originated at this epoch, as they are not found either above or below. "I discovered" says Dr. Koch, "that this last bed is identical with the one of green sand (G) mixed with blue clay, and with an over-lying osseous conglomerate, containing principally the remains of sharks; the first being also mixed with yellow lime stone, and the second with mould of the prairie of Alabama: the latter proving by its numerous fossils to be the upper section of the transi-

tion series, uniting the highest cretaceous with the lowest eocene region. The yellow limestone and the green sand both contain the remains of the largest reptiles; for the Zuylodon, [by some called the basiliosaurus] I discovered at Gay Head, Martha's Vineyard, where it occurs only in the green sand; and in Alabama, where it as exclusively occurs in the yellow lime stone. The remains of extinct crabs occur in both localities, of an identical character; and several species of sharks and saurians, found in the osseous conglomerate of Gay Head, are identical with those of the prairie mould of South Alabama.

I. A stratum of light blue and yellowish limestone, in some places 70 feet thick, as a rich greenish white marl. Where it occurs as a limestone rock, it has strongly the appearance of an uninterrupted bed of the same species of oysters, small and frequently mingled with the casts of oceanic shells, which formed the principal portion of the above mentioned under-lying bed. As we ascend the oysters increase in size, that they may be termed the giants of their race, forming almost a solid bed.

J. A stratum of dark greenish sand, in some places 15 feet thick, containing a great variety of shells, all belonging to those species which we find in deep open seas in tropical latitudes. They are generally in broken fragments, with a few in good con dition. We also find a few young oysters, of a kind belonging to the chalk formation. Dr. Koch considers the whole of this bed as the upper part of the secondary formation, and consequently of a far older date than has heretofore been assigned to it.

From this clear and interesting account of the strata among which the Hydrarchos was found, and which in Dr. Koch's exhibition room is illustrated by a sketch on canvass of their present dislocated position, relatively to the perpendicular bluff in the neighborhood where they appear in their original and undisturbed level, it appears that there was one stratum of volcanic origin and formation, and three strata of oceanic deposite, piled above the remains of this animal, upon the surface on which he expired. As the volcanic stratum D, occurs next above the one E, in which these remains were found, it is not improbable that the immense submarine volcano which then burst forth, was the immediate cause of this creature's destruction. But the strata, C. B. A. above this volcanic one, being oceanic, must have been deposited at three several and distinct periods, or geological epochs, when the ocean arose and overflowed the strata that had previously been formed. Geologists, as yet, have furnished us with no data by which we can determine the length of those periods, nor indeed any chronological key whatever to the stratification of the earth. Thus is geology left without a chronology which alone can harmonize its phenomena, and elevate it to the dignity of a science. That chronology, however, like every other, must be sought for, and, we have long thought can only be found, in an astronomical source, developing and demonstrating the changes in the position of the earth's axis towards the plane of the ecliptic and the sun, under the influence of the spiral motion of the magnetic poles, as calculated and published in our Astro-Magnetic Almanac for 1843. From the calculations there given it appears that it requires 2,304,000 years, or one complete siderial revolution of the earth's axis, for the ocean to deposit two strata; and, consequently, that the period of of 3,456,000 has elapsed since the three oceanic strata were deposited over the skeleton of the Hydrarchos. We say nothing of the time during which the volcanic stratum was formed immediately over these remains, because this occurred in the interval between the formation of the yellow limestone stratum in which they were found, and that of the limestone stratum C, next above the volcanic stratum itself. But since the deposit of the third oceanic stratum A, a period has elapsed of 1,008,000 years, during which the ocean has again advanced from the equator towards that latitude, in its progressive formation of a fourth stratum; so that this time must be added to the one before given, to make the total period 4,464,000 years, since the Hydrarchos was destroyed. And immense as this period may seem to those who are unac-

customed to the contemplation of the astronomical causes of stratification, it cannot be abridged without resorting to a succession of miraculous causes to explain the phenomena which undeniably exist It was sometime in the last intermediate period of 1,008,000 years, that the new subterranean disruption of the strata of that locality occurred which raised these stupendous relics from the place of their protracted oblivion, to become the wonder of the present age.

Motion of the Magnetic Machine.

In running the vibrating Magnetic machine, we sometimes find a point of about the size of a small needle projecting from the end of the screw, which rests on the vibrating spring and impedes its motion. This should be removed with a penknife or file, when the spring will again vibrate in the best manner.

Experience has also shown that the spring is sometimes bent by pressing the screw so hard upon it so as to prevent it from vibrating. In this case, the spring must be straightened, when it will again vibrate in the usual way.

LE ROY SUNDERLAND.

The tenth and last lecture of this gentleman on the Human Soul, was delivered, according to previous notice, in Morris Place, to a crowded and highly intelligent audience on Saturday evening last. Long before the appointed hour the house was filled, and "expectation stood tip-toe," to witness the extraordinary phenomena promised for the evening. At half past 7 the lecturer made his appearance, and immediately commenced the experiments, which were brought on while he was in the act of explaining some few things peculiar to his new theory of mind, denominated Pathetism. In the course of some fifteen minutes, about a dozen of the audience were found to be in a state of trance; and six of the number arose, one after another, and walked, in a peculiar unnatural gait, up to the platform, and by the assistance of the lecturer seated themselves upon the sofa. Among those taken upon the platform under the power of the charm, was Dr. H. G. Payne, Mr. Ketchum, and a young man by the name of Althiser. The other three were ladies. After causing Mr. A to dance, and a few other results, Mr. S. proceeded to prepare one of the ladies for a surgical operation, and invited the medical faculty, the clergy and gentlemen of the press, present, to the platform, for the purpose of having them inspect the tooth to be drawn, and notice the manner in which it was done. He then took hold of Dr. Payne (who was still under the influence of the spell,) and led him up to the lady seated in the chair. And now occurred a sight upon which, probably, mortal eyes never gazed before! It was to see the somnabulic Dr. in the process of extracting that tooth, while he and the patient were in a state of trance, and neither of them able to open their eyes or move a muscle without consent of the lecturer! The tooth was very firmly set, and it required an extraordinary outlay of strength to extract it. The lady sat, during the operation, without the slightest manifestation of consciousness, though she is well known to be one of the most fearful and timid in her natural state: so much so, that she has been thrown into spasms, it is said, when attempts have been made to draw her teeth when she was awake.

In a few minutes after, the Dr. himself was seated in the front chair, the spell still upon him, and another physician present, (Dr. Lyman,) proceeded to perform a similar operation upon him! It was one of the wisdom teeth, and had grown in such an unnatural manner, as rendered the extraction exceedingly difficult. Five times the key or forceps slipped from the tooth, and the violence done to the jaw was such, that the Dr., we learn, has scarcely been able to open his mouth since: and though he declared that he suffered no pain at all at the time, it would seem that he has since suffered enough to make it up.

This experiment was intensely interesting, and highly satisfactory to the audience; as we suppose it the first and only one of the kind ever performed since old Adam was put into the "deep sleep," for the purpose of having the rib taken from his side.

After the above, Mr. S. informed the audience that another lady was present in a state of trance, who would submit to have two of her teeth drawn, if they had patience or a desire to see any more blood shed, A wish being expressed to see it done, Dr. Payne was now restored to his natural state, and in a few minutes he drew two of her

molar teeth, while she manifested not the slightest knowledge of what was going on. And both ladies operated on declared, after being restored, they had no knowledge whatever of any thing done to them while upon the stage in the state of trance!

What Mr. Sunderland has accomplished during his visit to this city, has abundantly confirmed the newspaper reports we have seen of his wonderful performances in other places; which, in the production of psychological phenomena, especially those peculiar to what are called spells and charms, place him far before all other men of whom history has given us any account. He has evidently left a good impression on the minds of our citizens, as was manifest by the audience, last Saturday evening, when he declared his determination, at some future day, to visit our city again.—*Troy Budget.*

"Clairmativeness."

DEAR SIR:

The publication containing "All the Mysteries of Human Magnetism and Clairvoyance Explained, by the celebrated Jackson Davis of Poughkeepsie," promised in the Tribune some time since, by Rev. G. Smith, has just come to my notice; and, as I know many of your readers feel considerable interest in the subject, I beg the privilege of offering a few remarks concerning it. And, I am the more inclined to do so, from knowing, as I do, that many candid persons like Mr. Smith have been so completely carried away with the oracular proofs of young Davis, as to admit and believe most or all he has said without the shadow of a doubt! Had these friends heard as many "revelations" of theories from somnambulists as it has fallen to my lot to listen to within the last seven years, I do believe it would have very much moderated the ardor of their faith in the "Clairmativeness" of Mr. Jackson Davis. Swedenborg was a far more remarkable Somnambulist than Davis, or indeed than many others of the present age who have been thought to be so very extraordinary. More beautiful theories were never conceived, perhaps, in the human brain than were put forth by Swedenborg, while in a state of Somnambulism, or one identical with that to which we now apply this term. Somnambulic revelations of theories have often been made by Mormons, French Prophets, Anabaptists, Methodists, Catholics, Presbyterians, and others. Witness the Trance of Rev. Mr. Tennant of New-Jersey. These visions, or Somnambulic descriptions, may be classed with the phenomena of Dreaming, and are no more to be depended upon as truthful than many cases of dreaming, which are of constant occurrence.

Many of the representations made by Davis, are not only puerile, but they are false in fact, as any one may easily know. See page 34 of his book. "Clairmativeness," he tells us, "is a compound word, and literally signifies clearly reversed"!!! "Clair," is a French adjective, and literally signifies "clear," and not "clearly," as Mr. D. thought; and, then as to the literal meaning of "mativeness," who knows?

His stories about the inhabitants of Saturn, may be classed with the visions of Joe Smith. I no more believe them than I do the following, where (page 36) he speaks of himself in the following terms:

"When in the state that I now am, I am master of the general sciences, can speak all languages, impart instructions upon those deep and hidden things in nature, which the world have not been able to solve, as I have done in these lectures [!] can name the different organs in the human system, point out their office and functions—tell the nature, cause and symptoms of disease, and prescribe the remedies that will effect the cure," &c. &c.

Did that youth ever converse with any intelligent person, in a foreign language? And, into what egregious delusion must that mind have fallen which could utter such language as the above! Many things he affirms about the state denominated the "magnetic sleep," I know to be untrue, but it would not be worth the space to point them out here. Page 21, he undertakes to prove that "magnetism" is "animal heat," and the cause of all "feeling or sensation;" and says: "Take for example a limb that has received a paralytic shock—it is entirely insensible to touch, no sensation can be produced in it."

This is a great mistake as every Pathologist knows, and shows how really ignorant this youth is, notwithstanding his assumption that he is "Master of the general sciences!" I have seen and treated numerous cases of paralysis, where the sensation was far greater than in other parts of the system not affected.

Mr. Davis seems to have borrowed largely from numerous writers in his sleep, and from one he has quoted ideas about the "sympathetic nerves," page 10, and the effects of manipulation, page 21, without giving credit for them.

The pamphlet is interesting as a Somnambulic performance, though it contains much that amounts to nothing, even if admitted to be true; and still more which may be easily demonstrated to be false in philosophy and unsustained by matter of fact. In saying this much, however, I must not be understood as attaching the least blame to Mr. Davis, or his amenuensis, Rev. Mr. Smith. The former told his somnambulic visions, containing some truth, mixed up with a vast amount of fancy, and the latter gentleman believed the whole. Time will show that they were both deceived, as thousands of others have been before them, who have depended upon similar revelations for what they should believe both in science and religion.

LE ROY SUNDERLAND.

BOSTON, Mass. Sept. 25th 1845.

Tribune.

This number completes the second volume of this Journal The first number of the third volume will be issued on the first of January next.

Erratum.—Page 215—Article "Magnetic Sleep," 18 lines from the bottom of the second column, for molar read "motar."

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