FOREIGN DEPARTMENT.

EXTIRPATION OF THE SPLEEN.

IN the meeting of the German naturalists and physicians at Berlin, on the 19th of September, 1828, Dr. Schultze of Freiburg, communicated the results of his researches relative to the functions of the spleen, and of the experiments he has made, with respect to the extirpation of this organ. The following brief extract will, we trust, be interesting to our readers.

The blood of the splenic veins, Dr. Schultze found as coagulable as other venous blood, except when, a short time before the experiment, a large quantity of fluid had been injected into the stomach. The extirpation of the spleen, which Dr. Schultze has very often performed, never proved fatal, and was hardly ever followed by any great derangement of the organic functions, even for several years after the operation; nutrition and digestion were carried on as before, the secretion of bile only was diminished, but in a very slight degree; the chyle of animals, on which the operation had been performed a considerable time previously, was found to coagulate, and to become red in the same manner as that taken from healthy animals. This seems to be inconsistent with Hewson's opinion, as to the function of the spleen; Sir Everard Home's theory is refuted by the circumstance, that the animals drunk as much water after as before the operation. The growth of young animals was not at all checked by it; and young cats and dogs very soon regained in weight what they had lost by the removal of the spleen. Next to the secretion of bile, the author observed a constant effect on the generative powers; which, although not completely suspended, were, in some degree, weakened by it; dogs and cats, from which the spleen had been extracted soon after birth, always produced fewer young ones than others.* The very ancient and general opinion, that extirpation of the spleen is followed by an increased faculty of running, Dr. Schultze found always correct, at least in dogs.

ON THE SEPARATION OF THE PLACENTA,
AND THE DIVISION OF THE UMBILICAL
CHORD.

Dr. Kuestner, of Breslau, accoucheur to

* In most of the numerous cases where the partial or total extirpation of the spleen has been performed on human individuals, the generative powers remained unaltered. Haller, however, (*Elem. Physiol.*, tom. vi. p. 423,) relates a case in which the operation was followed by sterility.

the Lying-in Institution of that town, has lately published a treatise, in which, according to the results of his experience, he strongly recommends that all attempts to extract the placenta should be avoided, and that the division of the umbilical chord should be deferred, until the expulsion of the placenta has taken place. In more than 1800 cases, this method of proceeding was followed by complete success; on the other hand, in 429 cases, after the usual attempts to extract the placenta, very dangerous symptoms ensued, which, in 69 cases, ended fatally. Dr. Kuestner asserts, that he never witnessed any ill effect from leaving the expulsion of the placenta to nature, and is of opinion that the very general practice of separating it, ought to be confined to a very few cases of irregular delivery, such as where the placenta is attached to the os uteri, &c.

ON THE

ORGANIC MATERIALITY OF THE MIND;

*The Immateriality of the Soul, and the
Nonidentity of the Two.*

By G. D. DERMOTT, Esq.

To the Editor of THE LANCET.

SIR,—I feel myself bound to notice any thing you may be inclined to honour with a place in your very able Journal; and on that account, principally, I now come forward to meet two attacks, the one from a *soi-disant* clergyman, the other from a *soi-disant* phrenologist, upon my paper concerning the "Materiality of the Mind, and the Immateriality of the Soul." As affairs of argument, it would be absurd to array myself against them; both, especially the writer who styles himself "A Clergyman," have so entirely misstated my case, that I can have no fair battle with them; they both conjure up phantoms, which they call mine, and then set about to overthrow them. As somebody says, in the mock tragedy of *Tom Thumb*, they "make the giants, and then conquer them."

My theory is briefly this:—First, that the mind is a material principle; that is to say, that all the intellectual faculties are the organic functions of the cerebrum, in fact, the organic life of the brain (taking it for granted that the principle of life is that which is so essentially and specifically combined with all organic matter, as to be the immediate cause of all action, or function, in organic matter). That the brain is an epitome of nervous impressions—that the

thoughts are actions of the brain—are excited by impressions made on its nervous susceptibility, i.e. that these actions of the mind are sequent to other material impressions and actions in the nerves, occasioned by external agents, positions which, I think, are finely illustrated by the continuity and homogeneity of structure and substance between the brain and the nerves. Secondly, that this same material mind is common to all animals, being one and the same thing as the brain; but that the faculties of minds are stronger and better developed in a ratio to the size of the different portions of the brain; the vigour of its organic action, and the healthy condition of its structure.—Thirdly, that there is this difference between man and animals: another principle is attached to man's existence, which is not attached to that of animals, it is not demonstrable, but attached to our being, in some way perfectly inexplicable—we call it the soul. That this soul, being entirely spiritual, is of a nature not to be understood by a material mind; it is the spiritual part of man's existence, referred for a state of development in a spiritual world; perhaps, if I may be allowed to use a comparison for the sake of explanation, to be the future spiritual mind of what has been metaphorically called, in Scripture, a spiritual body. That it is rational to admit that this soul, in a future state, shall be responsible for the actions of the mind in the previous material existence, because it is the continuation of the same individual's existence, only in a different state or form, the mind being the ostensible representative of his existence in this world as the soul is in the next.

Having thus endeavoured to define my own theory in my own way, I return to my two assailants. The observations of the first, as I have before suggested, are any thing but argument; of course they can admit of no argument in reply. I shall, therefore, presently leave him, hopping and floundering in his marsh of contradictions, with his favourite "toads and frogs," the fit companions of a person who so admirably unites the venom of the one with the ridiculous contortions and the dirty splashings of the other. Their society will, perhaps, be a relief to him after "smoking himself," during the winter, with "sin and sea coal," as some vicars are wont to do, who love mammon more than God.* But

* I beg leave not to be understood as conveying any sneer against religion and its professors, such an idea I should abhor; I allude only to those who bring the holy office into contempt. For the rest, no man can have more reverence than myself.

before we part, I must trouble you, Mr. Editor, with an extract or two, and some comments on them, to show the consistency, the honesty, the meek, kind, Christian-like readiness to falsify not only my arguments, but my motives, with which this professed son of the church comes forward to show his zeal for true religion!

First,—He hopes I shall "feel it my duty to communicate further information;" and, "he must apply to Mr. D. for some further explanation, which he hopes he will consider it his *duty to give*." Again, he says, "After inserting this, as I take it for granted you will do, let your readers hear *no more*, either of the sublime inanities of G. D. Dermott, or the humbler criticisms of——" no one knows who! Now this seems to me mightily like daring an enemy, and then piteously asking you, Mr. Editor, to tie him hand and foot; a rare device, I must own, and one which, like the rest of his tirade, shows more familiarity with the stage than with his Bible. It is of a piece with the valour of the man in *King Lear*, who waits till Kent is in the stocks, and then capers around the sturdy old warrior, twitting him with bad jokes and poking him, at arms length, with a dull sword. So much for his consistency. Now for his honesty. He wishes to represent me as having stated, that "material and spiritual things are so different, that they cannot be existing in a state of association." No impartial person, who reads my paper, will suppose that this is the doctrine I inculcate. On the contrary, I have affirmed the possibility and the certainty of a co-existence, but deny a "*sensible* co-existence;" i.e. I do not believe that soul and body can hold a coeval, contemporaneous and combined state of *development*.

The soul is not in a state of development in our present being; we do not know its qualities, its nature, nor can we rationally demonstrate its existence; that is to say, its qualities and its existence are not known and identified by our senses and natural powers; this is what I would mean by saying, that it is in a state of insensible as well as undeveloped existence. It is a principle attached, no one knows how, by God, to man's existence, the part which is responsible for the mind's actions, in a future state; the principle which is the representative of a man's previous material existence. This non-realisation of the soul to our own reason and senses, in spite of the sagacious divine's ridicule, goes, I think, some way to prove, that it is not, in this world, in a developed state, that is to say, it is dormant, if he will admit of the term.

Mr. Editor, I admit of the existence of the soul, but differ from your correspondents in believing, that the mind and soul are one

principle, and because of this, without my opinion tending to question, in any degree whatever, the validity of one single doctrinal point in the Bible, he impeaches me, by making a false deduction, viz., that consequently I must consider "Bibles, revelations, ministers, and religion as totally useless in this present world, and owing their existence to mere delusions, and that my paper tends to shake a Christian's belief," and most unceremoniously thrusts me down amongst a list of infidels! This reasoning is logical; this palming of doctrines upon me, which I should shudder to espouse, is his honesty—his God-like grace, I suppose! He most shrewdly asks me, what kind of a being God is? How is it to be proved that such beings as a God and the human soul exist? and what sort of beings are they? Is it necessary for me to tell a *minister*, that he must not either apply to his own, or to any other man's *reason* to prove these things, but to his Bible, where he will find them explained, as far as God, in his divine dispensation, has thought fit to reveal. He will also find, in his Bible, that the impossibility of conceiving of spiritual things, excepting by the power of faith, is every where inculcated; that it was to kindle and keep alive this essential faith the Bible itself was given, and that the utter incompatibility of spiritual demonstrations with the powers of material minds, is distinctly shown in the assurance, that no man can see God, who is a Spirit, and lives.

As to his trying to suggest the possibility of an improvement in my speculations, by supposing animals to have souls, if he (being *really* a "parson?") knows sufficient of theology to prove it, or render it probable, let him do so; I frankly own I cannot. But by way of making his incomprehensibly inconsistent paper complete, he says, the "*very rarity* of my paper would redeem it, were it not as *trite* as the king's highway." I deny, also, having collected any "*scattered absurdities*," or any "*exploded doctrines*;" what I have said is my own opinion, springing solely from my own observation. I have never read any writers either favouring infidelity or even advocating the materiality of the mind. I have heretofore avoided them upon the score of the materiality of the mind having been formerly made use of to favour infidelity, and my feeling an utter aversion to all such principles. He accuses Bichat and Lawrence of having drawn conclusions which physiology does not sanction, but, in the same paper, confesses he is no physiologist! and therefore we may conclude, not able to judge of the veracity of what he states.

These are the only points at all worth notice in his paper. The rest are mere rant. His personalities, of course, I put

out of the question. I can only observe of them, that they are a sad commentary upon the influence of what he asserts to be his creed, upon his conduct.

I would next beg more particularly to advert to the opinions of your second correspondent. He says that I am a defender of the materiality of the mind, yet "*fearing obloquy*," admit the immateriality of the soul. I thank the author for the reason which he has so gratuitously imputed to me. Notwithstanding his liberality, however, I must still lay claim to its proceeding from a more honourable impulse. I have no sense of duplicity in my own mind, which would lead me to arraign without good grounds the intentions of others. The weight of your correspondent's criticisms are against my considering the intellectual faculties to be the organic material functions of the brain. He speaks also, especially, of the function that I ascribed to the cerebellum; perhaps the terms of my description may not seem to have conveyed an exact signification. I contend that the mental faculties are the organic actions of the cerebrum, that the cerebellum is the seat where the action of judgment becomes sensible, or whence its impulses are sent through the nerves to the different active parts of the frame. I may better explain myself by quoting one or two deductions, which M. Flourens has drawn from his experiments. They are somewhat different to what your correspondent is pleased to state them to be, viz., to preside merely over the forward motions of the animal: that, he will perceive, is the opinion of Magendie. M. Flourens says, "it has been shown that the immediate cause of muscular contraction particularly resides in the spinal marrow and nerves, and that the *regulating* cause of these contractions is placed in the cerebellum;" that is to say, the cerebellum is the immediate *agent* of judgment, or, at least, is the medium through which the impulses of the judgment are transmitted to the voluntary nerves. Hence we take away the cerebellum, and we take away the action of the judgment. Again, he says, "there exists, therefore, in the nervous system (cerebro spinal system) three properties essentially different; first, the *exciter* of motion; the other, the *regulator*; and the third, the *willer*, and the *perceiver*." In having asserted that perception, volition, and all intellectual and sensitive faculties reside, individually, in some certain portion of the cerebral mass, I do not pretend to go so far as (a phrenologist would) to point out the *locality* of any one portion of the brain as possessing any one particular faculty, and that the locality of such a portion of the brain, or that the seat of such an intellect, can be strictly defined by any superficial mark on the superficies of the skull—this, I

conceive, is barefacedly dogmatical, and I only mean to maintain as my belief, that as some nerves (functionally) possess sensation, as some (functionally) possess volition, as the spinal marrow (functionally) possesses both, as the cerebellum possesses (functionally) the power of conveying the mandates of the will and judgment to the voluntary muscles, so the cerebrum, functionally, possesses the sense of perception, the sense of thought, the sense of will, memory, and all the rest of the intellectual faculties.

Your correspondent, in spite of his phrenological science, seems to be frightened by my stating, that the medullary part of the brain possesses all the distinguishing living properties peculiar to the brain, as living brain—organic—functional peculiarities; but if this were not the case, it would be very strange indeed, that parts of so important a viscus as the brain should be organised and have life, and yet not have their peculiar organic functions.

I have heard it admitted that the brain possesses these faculties; that is to say, that it is the seat of these faculties, (and which, I believe, no one presumes to deny,) and yet, nevertheless, they do not admit them to be its specific organic actions, but that they are the immaterial principle connected with the substance or organisation of the brain, through the medium of life, but we should then have no function left for the brain. This is a most gratuitous hypothesis, founded not on any thing like proof, but is a mere fugitive supposition, upheld because it favours the old opinion of the immateriality of the mind, to which people are bigoted by habit and education, and by confounding two things which I believe are essentially different, the mind and the soul. We may just as well say, that it is not the function of the nerves to fill and convey voluntary motion to the muscles, that it is not the function of the stomach to digest, that it is not the function of the liver to secrete bile, but that these are powers seated in those organs, and connected to their substance by the living principle; this would be leaving no action for organic matter, consequently, none for the brain as a part of organic matter.

Your *divine* correspondent, who, of course, should have learnt by this time that the soul is immaterial, that we are not justified in attaching the idea of *locality* to any thing but what is *material*, cries out for me to demonstrate the relative position of the dormitory of the soul; this caster-out of devils calls upon me to produce from my museum souls pickled and preserved. Now I would just ask, does this minister display either his *divinity* or his *logic* by such low nonsense? Your last correspondent, accuses me strongly of being dogmatic; for

what? First, for asserting that the mental faculties are the functions of the cerebrum; secondly, that all nature is imperfect, having partaken of, or being affected by, the fall of Adam. (I never knew, Mr. Editor, that this could be denied, or that the opinion was discountenanced by Scripture.) Thirdly, that all animals should have ministers, religions, Bibles, and revelations, and should enjoy a future state; this I deny ever having written, as he disingenuously represents; he has represented me to have made use of this expression *unconditionally*, but he had not the candour to say that I mentioned it with these provisos—if they had souls—and if the mind were the soul (for, that they have minds, certainly he cannot disprove, either by religion, metaphysics, physiology, or phrenology). Now is all this, for which I am accused of being dogmatical, more dogmatical than *his phrenology*, ascribing parlours and kitchens in his brain, for his good and bad propensities?

He proposes the two following questions: Do the educated alone possess conscience? I answer, does he find man in any state quite destitute of education? All men are educated by habit to a certain extent; all men learn by experience to identify things, and to understand their own and other men's actions; if a man has not seen, felt, or heard of a thing, he is not aware of its existence, much less of its properties, for these senses are the inroads, or the means of the conveyance of knowledge to a man's mind. In my last paper I supposed an impossibility, for the sake of argument, a man born and living in total abstraction from the world; such a man would know nothing. Secondly, he asks, do animals possess conscience, do they possess education? I answer, an animal may know if he does differently to what he has been taught to do, and, knowing that, he may shun the observation of man, for fear of the punishment which he had been taught would succeed to it; the natural timidity of a mouse, or a bird, occasions the creature to shun the observation of man, because they have not been accustomed to be in his presence; just as we should shun a large animal that we had not been accustomed to see and whose powers we do not understand, and therefore our natural timidity may occasion us to suppose dangers, which may be either real or merely imaginary. But systematically accustom any timid animal to the presence of man with impunity to themselves, experience teaches them they will receive no harm, they no longer shun his presence, or, in other words, they become tame; nay, more, we have numberless instances to prove, that by systematically accustoming not only timid but ferocious animals, either

to the presence of man, or to that of each other, an influence is created over them, which could only arise from an operation on their *minds*, which enables them not only to associate in spite of what we call natural antipathies, but to associate with satisfaction, and to become attached to each other. Thus we have numberless instances of the lion, and other ferocious animals, being domesticated; and, indeed, there is an example in point, to which any one may refer, who will take a walk to the other side of Waterloo Bridge, where "the cat, the mouse, the hawk, the rabbit, the guinea pig, the owl, the pigeon, the starling, and the sparrow," live together in one cage in perfect harmony and happiness.

Speech constitutes perhaps the greatest link in society; it links men in the closest affinity of friendship, or implacably divides them; it unites our ideas, and links our comparative estimations of men's actions; if animals had this gift, and all their intellectual faculties (which they do possess in limited and various degrees) equally perfect with man, why then I do believe that the existence of a conscience in animals would be as evident to man as his own. Who can tell but that animals have a language (or some means of imperfectly conveying mental feeling as a substitute for language) between themselves; and who can tell but what they are capable (so far as may be necessary for their existence one with another) of estimating and understanding each other's actions, i. e., that they have a knowledge or a conscience adapted to their state of existence; they evidently have relative love, anger, gratitude, and even the powers of recollection, &c. &c., to a certain extent.

I had nearly forgotten your second correspondent's objection to my stating that the "cortical part of the brain is subservient to the medullary part." I answer this has always been a very prevalent, and also a very ancient opinion, amongst some of the best anatomists. The cortical part of the brain is very vascular, so minutely so, that it has been supposed to have been made up of vessels; why is this the case, if it is not *subservient* to the medullary part: the two are continuous, and the probability is, I argue, that the cortical part of the brain secretes some living principle *into* the medullary part of the brain, or is subservient in giving that same living endowment. The medullary part of the brain has no cellular substance, and I believe that the cortical part of the brain is as much the vehicle, or the medium, by which the secreting vessels undergo a minute distribution, as the *ralemia* is to the medullary substance of the nerves; and is, probably, also the

medium, or the seat of some certain secretion, peculiar to the brain, as brain.

Need I flinch from this opinion on account of the taunts of this *anonymous* writer, when I am borne out by the opinion of the most illustrious Morgagni; that the brain is a gland! And now, Mr. Editor, I dismiss my two assailants with every apology for having wasted so much time upon masked antagonists, who have met me with so little argument. Their "cap of darkness" gives them the advantage of coming to the contest with personalities, which are sometimes mistaken for the honester and fairer weapons to which I am obliged to confine my reply, and to which, I am happy to say, I conceive my cause may be fearlessly entrusted. I have only to add, that I should have made this answer at an earlier moment, had not domestic affairs rendered it impossible till now, and believe me,

Your very obedient servant,

G. D. DERMOTT.

CASE OF POISONING BY SUGAR OF LEAD.

By GAVIN MILROY, Esq.

SARAH HOOKE, ætat. 40, who had been long bed-ridden, in consequence of a complicated affection of the urinary and menstrual functions, swallowed, on the evening of the 27th April, 1824, three teaspoonfuls of sugar of lead, (*plumbi superacetat*) mixed with a cupful of milk, mistaking it for cream of tartar. Immediately after the accident, she experienced an indescribable sensation of depression and distress at the pit of the stomach, which made her suspect that she had taken something poisonous. In the course of four or five minutes she was seized with a violent fit of vomiting, which continued almost without intermission for nearly six hours. Mixed with the contents of the stomach a little blood was occasionally rejected. The vomiting had been encouraged by diluents, and by a solution of sulphate of zinc, ordered by a practitioner of eminence, who had seen the patient. A large dose of castor oil was administered.

28. Considerable pain and tenderness of the whole abdomen, but felt more especially at the *scrobiculus cordis*, not increased on pressure. The vomiting has ceased since six o'clock this morning, but much nausea and anxiety remain. Pulse 94, natural; bowels have not been opened; urine very scanty, and high-coloured; catamenia present. She complains of a sense of heat and tickling in the fauces; the tongue is covered with a black crust; breath very foetid; mind greatly depressed.

Take two ounces castor oil; and inject a purgative cluster immediately.