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PROF. CALDWELL AND THE NEW ANTHROPOLOGY.

The following private letter from the learned pioneer and leader of Phrenology in America, contains suggestions so important as to induce me to take the liberty of publishing its critical remarks in the Journal.

"LOUISVILLE, February 5, 1853.

* * * * Your last number of the Journal of Man is, *me judice*, decidedly the best you have published. All its articles are good; and some of them are (why may I not coin a word as well as other people?) *optimiously* good. This is the age of novelty and invention.

You ask me what I think of your "Review of the Gallian System of Phrenology"?

With much of it I am highly pleased, and can hardly say that I am dissatisfied with any of it. Decidedly you are on the *right track*. I say and have always said, that the cerebral organs in the system of Gall and Spurzheim are not a little below the just number. Nor do I say that your number positively superabounds. But I do say that my count is less extensive. Nature and truth discountenance *superfluity*. And to me some of your organs appear unnecessary. In plain and more definite terms; I think you bestow names where there are no corresponding organs to be named. What you represent as *organs* appear to me to be only *conditions*. For example:

Disease—Sanity—Sleep—Vitality—Felony—Sensibility—Suicide, and several others.

It does appear to me that special organs are not essential to the existence of these several results. Such I say *appears* to me to be the case. But I at the same time admit that the *appearance* may arise from some want in myself, owing to my not having of

late devoted as much time to the investigation of the subject as I might have done.

Do you see and read Elliotson's Zoist? If not, let me recommend it earnestly to your attention. It will show you the triumphs of Mesmerism in diseases of various and numerous kinds beyond even your hopes. The wonders of Clairvoyance glow in every page of it, and its brilliancy is rapidly increasing.

Present me most kindly to Mrs. B. and believe me,

Dear Sir,

Truly yours,

CH. CALDWELL.

P. S.—Though I profess to understand Phrenology as a science as fully as any other person, I am no *head reader*. From an early conviction that I could never, for want of an organization calculated to enable me, become a good one, I have never made an effort to that effect.

Your system is so much more complex and difficult to master than the Gallian, that you must make your evidence of its truthfulness perfectly demonstrative before it will be adopted. I do not say that you represent the brain as more complex than it actually is. Perhaps you do not. But however correct your representation may be, it will not be studied, analysed and understood, on an average, by one new-school physician in ten thousand. So much the worse. That is not your fault.—C. C."

The suggestions of Dr. Caldwell, in the foregoing letter, are entitled to our profound attention. They are precisely such as I expected to receive from philosophic minds, fully indoctrinated with the Gallian system, and long accustomed to the modes of thought which it necessarily involves. To these suggestions or objections, I had many years since given a thorough investigation. In departing from the old doctrine as to Organology and the modality of organs, the suggestions which Dr. Caldwell now offers, were the first that arose in my own mind. But it is to be remarked, that no one can determine *à priori*, what is an organic function, and what is but a variation in the mode of action of particular organs. Abstract, or *à priori* reasoning, has never been able to lead men to a correct knowledge of what actually exists. The constitution of nature in its complexity and wisdom, is so far beyond the theoretical constructions of the human fancy, or logic, as to render all *à priori* philosophy abortive. We can only determine what are organic functions, by positive experiment, and what are the limits of their variations, by equally decisive tests. This is equally true of the body, the brain and the mind: our physiological science is entirely the product of experiment and observation; our cerebral science commenced with the observations of Gall, and attained its completeness and positiveness by my own method of experimental investigation. In the science of

mind alone, was the *à priori* method followed to any great extent. Its results were entirely barren of positive conclusions, useful facts, and natural or practical systems of science. Practical and systematic mental science began to exist with the observations of Gall, and the experimental method which I have introduced enables us to render all mental science positive. When, therefore, philosophical objections are advanced against our system of Organology, I have only to say, this is but a question of fact, and if experiment determines the function of any convolution of the brain, our theories must accommodate themselves to facts, and our philosophy must bow before the direct teachings of the Author of nature.

But I do not desire thus to silence discussion or criticism. On the contrary, human reason rightly exercised, will always coincide with the teachings of nature, when correctly interpreted. If a proposition be absurd, the experiments upon which it was based must have been inaccurate or inaccurately understood; but we should be extremely guarded against condemning any experimental result for apparent untruth, which appearance may arise solely from its conflict with imperfect or erroneous knowledge that we had previously obtained. A new truth may apparently lead to absurdities, because we are not familiar with the proper mode of conceiving that truth, and with the true relations which it bears to other facts.

The suggestions that particular organs recognized in the Neurological system, may be considered mere modalities, instead of being independent organs, may be easily answered in reference to each individual case. The general philosophic answer, I have already given in the review of the Gallian system. I have shown that if we adopt the plan of taking a few primitive organs, and give them a sufficient variety of modes of action, we may reduce our entire organology, within a very limited compass. In fact, we are compelled to go back to the old metaphysical ground, and if we carry out our logic thoroughly and strictly, to its legitimate results, we shall come to the conclusion that we have no distinct organs or faculties whatever, and that we have but one primitive power of mind, which in its illimitable variations, and modes of action, produces the innumerable human faculties, and traits of human character. If we reason logically and boldly, we can rest satisfied with no middle ground, between the absolute unity of the mind, and unity of its organ, with illimitable modes of action, and, on the other hand, a multiplicity of organs, with every conceivable variety of mental manifestation. Taking the mind in itself, our understanding is scarcely capable of appreciating any division or modification of its unity; but when that mind becomes connected with a complicated anatomical structure, for its physical manifestation, it becomes a matter of necessity, that it should have different organs for different modes of action in the brain,

as surely as it requires eyes for vision and legs for locomotion in the body. No anatomical structure can be competent to different modes of action, so essentially distinct as the different emotions, passions and faculties of the mind, which differ from each other as much as sensation from motion. If, then, a radical difference of function requires a material difference of structure,—if it be utterly impossible, as all anatomists know, for sensation and motion to be both produced by the same nervous filaments, is it not reasonable to suppose, that *every* variation in the character of a function requires also *some* variation in the anatomical and chemical condition of its organ? If a very great variation of function requires great variation of structure, is it not also evident, that slighter variations of function, require also slighter variations of structure, and that the entire brain must, therefore, present just as many variations and distinctions in its Organology, as exist in the character of the human mind?

This proposition being perfectly reasonable, and coinciding with all my experiments upon the brain, I do not hesitate to affirm, as a positive truth, these immensely numerous subdivisions of functions in the brain, corresponding to the immense variety of powers and passions in man. The millions of fibres and globules in the brain may be rationally understood as to their purpose and utility, when the object of their peculiar structure is thus explained. When our Organology thus keeps pace with Anatomy, and with the grandeur and diversity of human mental powers, it does not run to any extravagant conclusions, or present, as distinct functions, any mere modes of action. On the contrary, it still recognizes, in the different organs, all the varieties of functional display, which legitimately belong to modes of action. For example, it recognizes moderate and natural action, predominant and excessive action, or feeble and defective action of each organ, recognizing, in each organ, every imaginable degree of excitement and power. It recognizes, also, the sound and unsound, sane and insane, morbid and healthful modes of action, and, indeed, every other mode of action, which Professor Caldwell or any other philosopher might suggest. We thus retain the doctrine of Modality, or variations of function, in full force in the new system. But here is the fundamental distinction: when we recognize any organ as capable of different degrees of excitement—different degrees of sanity and insanity—different degrees of healthy and morbid action—of drowsiness and wakefulness—of langour and energy,—we do not recognize these various conditions as arbitrary facts, existing in the organ alone, but we look for their causes. If, for example, the normal action of a certain organ is Benevolence, or Good Will, it may be, at one time, calm, tender, and generous in its influence, displaying its own true character, and at another time, violent, painful, and irrepressible; in the extravagant

and morbid sympathies which it produces. In the latter instance, there is a vehemence and excitability in the temperament, which Benevolence itself did not produce; but which arises from basilar organs, in the region of Impressibility, Excitability, Irritability, and Anger. These organs, when active, give to Benevolence and every other moral sentiment and animal passion, their own intense, impulsive, and disorderly character. In like manner, if Benevolence, losing a portion of the tender excitability which belongs to its nature, becomes a calm, steady, and heroic guidance to good deeds, neither shrinking from distress, nor disturbed at the sight of suffering, its mode of action has been changed by the predominant influence of Firmness. And, again, if instead of pursuing the calm and even tenor of a benevolent life, it overflows in morbid sympathies for the unworthy, and in quixotic efforts in behalf of those who cannot be benefited, alternating its high excitement with periods of langour and unnatural indifference, we recognize an influence widely different from that of Firmness, proceeding from the region of the brain which gives the capacity for insanity.

Thus, every organ is capable of as many different modes of action, as may arise from the different organic developements. But the objection is advanced, that certain modes of action should not have any organic source at all, but should be regarded as conditions inherent in each organ, excited by surrounding circumstances, and not originating in any organic nervous structure. Yet again, I reply, that if we exclude any mode of organic action from a definite locality, the same process of reasoning will require us, one after another, to reject the whole, and to fall back on the metaphysical system.

There is no state, temperament, or mode of action, which can be considered absolutely inherent in organs, as an essential condition, independent of organic developements. If, for example, the organ of Benevolence acts in a healthy manner, it cannot be affirmed that this health and propriety of manifestation is a quality originating in the organ of Benevolence itself; for Benevolence cannot exist alone, as an organ: it can have no qualities of healthful action at all, without the existence of those organs which produce vitality and healthy manifestation. Without a proper supply of healthy blood, it could not act; and for this supply of healthy blood, essential to its manifestations, it depends upon the whole digestive, circulating, and respiratory system; the stomach, liver, and bowels, the heart, lungs, and skin, and, indeed, every other secreting organ and tissue of the human body. Benevolence, then, has no conditions or modes of action in itself, but has a certain vital character or tendency, varied by an infinite number of conditions, derived from other organs. If its action is powerful, intense, and long continued, it is indebted to a large supply of vigorously circulated arterial

blood. In other words, it is indebted to powerful organs of Firmness, Energy, Vitality, and Health, and is but little influenced by the organs of Tranquility, Sleep, Restraint, and Relaxation.

If we fully realize that no organ can manifest itself by and of itself alone, nor could even exist in so isolated a manner, we can clearly comprehend, that all qualities or modes of action originate in special organs. Sanity and insanity, health and disease, are not mere conditions, which organs are capable of taking on in themselves, but are conditions which they derive from their peculiar associations in the brain. Thus, a certain full and favorable developement of the various organs, will produce that happy temperament or quality, which gives to the whole brain its best modes of activity; while, on the other hand, excessive predominance of the regions of Energy, Firmness, Ambition, and Excitability, will give to the whole brain an intense and overwrought excitement. On the other hand, a predominance of Sensibility and Relaxation, with a deficiency of Firmness, Energy, and Ambition, will give to almost every organ, a languid, feeble, and inefficient action.

Why certain regions of the brain produce a perfect condition of health and sanity, while other regions produce, in their predominance, insane and morbid effects, I shall not now inquire; as the subject is too extensive and important for the present brief explanation. I would merely remark, that, as we all recognize, in some of the cerebral organs, a sound and healthy influence, while others produce extreme and morbid states of mind, we may easily infer that some organs may have the highest capacity for the production of tranquility, efficiency, and regularity, in the mental manifestations, while others may have the highest capacity for producing extreme, violent, and irregular excitement, resulting in disorderly or deranged mental action, or in other words, tending to insanity. We know, also, that certain faculties or traits of character are favorable to health, while other passions, habits, and modes of life, which are prompted by particular organs, have a very strong tendency to the production of disease. In other words, we must know that there are organic developements of healthy and of morbid tendencies; and these healthy or morbid tendencies must necessarily reach their climax, in particular portions of the brain, which, by their influence upon the character and constitution, tend to the production of health and of disease.

The practical difficulty suggested by Dr. Caldwell, in reference to the complexity of the new system, and the difficulty of reducing it to practice, would be a serious matter indeed, were it as great as might be inferred, from the number of organs. If the difficulties of the science were multiplied in the same ratio that the number of the organs were increased, the new system

would present appalling difficulties; but, in reality, the difficulties of Cranioscopy are rather diminished than increased, since every organ has its position and character defined, by a few simple and fundamental principles; and I believe that, practically, it is easier to acquire a command of the new Cranioscopy, than to master that of Gall and Spurzheim, the whole of which must be learned as a set of arbitrary facts, not reducible to any simple formula of general principles. So far from finding it difficult to teach the new Organology, my hearers have been surprised by the facility with which it may be acquired. I have found no difficulty in imparting the new Organology to an intelligent audience, in a single evening, and rendering them perfectly competent to determine the localities of the Cerebral organs. Professor Caldwell has heard a number of my lectures upon the principles of the science, but has never heard the lecture upon Organology and Cranioscopy, in which I have been accustomed to impart a knowledge of the localities. Had he witnessed that demonstration of the simplicity of the new Organology, he would have been far from supposing it difficult or impracticable to the mass of mankind. Indeed, I am confident, that with a lesson or two in the new system, he would find his difficulties, as to practical Cranioscopy, entirely removed, and would lose all his diffidence, as to his power of head-reading or Cranioscopy.

OBJECTIONS TO THE NEW PHRENOLOGY.

"Dr. Buchanan: Allow me to notice some of the remarks that your developements are calling forth from the adherents to the old system of Phrenology in the East. As a specimen, we find the following from Dr. T. L. Nichols, of Port Chester, N. Y., in his recent work entitled 'Esoteric Anthropology':

"'I have examined with care and candor the classification of the faculties or passions of the soul adopted by Dr. Buchanan, of Cincinnati, for whose character I have a cordial estimation; but I am not able to admit that God has given to man any such faculties as hatred, turbulence, arrogance, skepticism, desperation, suicide, baseness, felony, profligacy, disease, childishness, idiocy, and insanity; all of which he has marked upon his chart, and for which he finds corresponding organs in that part of the brain which he marks as the region of crime. These all seem to me to be the results of diseased and discordant passions, to arise out of conditions of developement and action in which there is a lack

of individual and social harmony. In a certain sense, God is accountable for what we call evil; but not for having created organs expressly adapted to its production. I can not doubt that the normal action of every human faculty tends to promote happiness, any more than I can doubt that the normal action of every physical faculty tends to health. I may not do justice to the statements of Dr. Buchanan—possibly I have not comprehended them fully, but with my present views of the structure and harmonies of nature, I cannot accept them without the most absolute proof. It is but justice that I refer the inquirer to the published expositions of his doctrines.'

"Dr. Nichols does not deny that man manifests all these faculties, and I cannot see that it alters the accountability of God, or renders nature any less harmonious by maintaining that each of these manifestations have a corresponding organ in the brain, than it does to maintain that they are diseased passions arising 'out of conditions of developement and action in which there is a lack of individual and social harmony.' If the organs of the brain are of such a nature that certain 'conditions of developement and action,'will produce all these criminal passions, why are they not then actually just as evil, as the *appropriate* organs themselves would be? Even if it could be maintained that man was created with no other organs than those of pure morality and intelligence; yet, if these organs were so imperfect as to be changed by *any* means, into *any* condition, whereby these evil manifestations shall be produced, the accountability of God must be equivalent to that of creating organs for their express manifestations. Man did not create himself or even give directions how he should be created; and to charge him with having perverted faculties of virtue and happiness, into those of criminality and unhappiness, would be to charge God with attempting to start him with an organization that should ever propel him on in the pathway of glory—but failing in His design. Again, Dr. Nichols intimates that all the physical organs tend in their normal action, exclusively to good: and yet it is by means of the hands, eyes, and all the external senses and organs, that all the most vicious and desperate acts are performed. As these organs are also often exercised under the guidance of the higher faculties, it may be asserted that this is a perversion—that they are not in their normal action. But if we descend to the brute creation, we there find physical organs that are expressly and exclusively adapted to the manifestations of what is termed evil. The horn of the ox or rhinoceros, or the huge tusks and claws of the panther and lion, are certainly adapted to no other purpose, and must be taken as 'absolute proof' that there exists corresponding organs in their brains. The mind of man is said to represent all the faculties in the whole animal creation, and the inference must be clear that *he possesses such* faculties as Dr. Nichols questions; but the question naturally arises, do these

faculties exhibit the existence of *positive* evil in the nature of man? In other words, may not they be shown to exist only as a necessary stepping-stone in the law of progress, and thereby be rendered only *relatively* evil—or evil only when they are not sufficiently restrained to correspond with the moral and intellectual conditions of the age? The Deity must have had a design in thus creating man, and the principles of that design are deeply commingled with the great law of progression itself.

"That which is perfectly natural and harmonious in one stage of human developement, may be excessively evil in another; and hence, actions and habits which many of us considered a few years ago as harmless and just, we would now almost think the height of violence to perform; and acts which we *now* deem righteous, and which with our present developements *are* righteous, will a few years hence be cast among the errors and corruptions of the past. The brute with his deficiency of morality and intelligence, or even he that piteously claims some of the lower marks of humanity, may be allowed to perform acts of felony and desperation, without even disturbing our ideas of natural harmony; but if one who is more fully entitled to the claims of human developement, should condescend to such acts, our ideas of nature and harmony would be almost exploded. Taking this view, we cannot consider the propensities as any more than *relatively* evil. And farther than this, may it not be maintained that their unrestrained exercise in some stages of the world's progress, may have hastened the approach of millenial glory?

"Peace reformers may reasonably maintain that among a certain developed class, there is no need of war and bloodshed; but it remains yet to be shown that man could—or if he could, it would have been better for him to have waded through all the former stages of developement and progression, without giving the basilar passions considerable sway. It yet remains to be shown that the 'region of violence and crime,' as exercised in the Revolutionary war was not for the best; that a desperate and successful Hungarian conflict would be unjust; or that the extermination and supplanting of the inferior by the superior in all ages of the world, as in the case between the Indians and the people of the United States, has not had its influence in bringing about the present condition of human developement.

"The organ of Skepticism has exerted a happy influence in substantiating the principles of truth; the organ of Suicide may have forwarded the work of human progression, by transporting those of some degrees of developement into a more favorable sphere of advancement; and I am of the opinion that all the faculties mentioned by Dr. Nichols, or which may be found in the human brain, may be shown to be important links in the chain of human progression, by one who is sufficiently familiar with ancient history and philosophical research.

J. J. Wheeler."

In reference to the objections of Dr. Nichols, the best answer is that afforded by his own language, "I may not do justice to the statements of Dr. Buchanan—possibly, I may not have comprehended them fully." Had he fully comprehended them, his objections would not have been made. Organs purely and expressly for the production of evil do not exist. Every organ of the human brain has a certain sphere of normal action, beyond which its action is excessive and abnormal. The sphere of the higher organs is very extensive, but their action may become excessive or abnormal, when they transcend so far as to exhaust, debilitate, or destroy the physical constitution, and to impair that force of character, which is necessary to our terrestrial existence.

Looking at man simply as an animal being, his moral and intellectual faculties, might be regarded as evil, since, in their excess, they interfere with his animal perfection. On the other hand, looking upon him as a moral and intellectual being, his animal organs are the source of evil, as they may restrain or degrade his virtue and intelligence. The legitimate sphere of the higher powers is so much more extensive and controlling, that we habitually regard them as acting in a normal manner; but the sphere of the animal organs is so limited, that any very bold manifestation, is abnormal and excessive—and we are accustomed to think of them in their excessive, as well as in their normal condition. Their normal condition is that of subservience and restraint; their abnormal condition is that of an overruling preponderance in the brain. But it must be borne in mind that there is no essential difference between that normal action of an animal organ, which accomplishes its legitimate purposes, and the abnormal action, which is destructive to virtue—the latter is but the excessive or more powerful display of the former; and they differ only in degree. The resentment which gives a stern retort or a severe blow, differs only in degree from that which fiercely kills, or exterminates all before it. The Alimentiveness which consumes a beef-steak, with salt, pepper and wine, differs only in degree from the Alimentiveness of the glutton and the drunkard. The fear which rouses us to the most energetic preparation against danger, differs only in degree from the fear which exhausts the nervous system, and prostrates our energies by over excitement.

The error of the optimism of the present time, consists in supposing that when an organ in the exercise of its normal functions, transcends to its proper sphere, and thus becomes abnormal in its relations to other organs, it is not really the same organ, or acting in the same manner as before. As well might we contend that the alcohol which cheers and enlivens in a glass of wine, is not the same as the alcohol in a quart of brandy, which stupefies or destroys life. Let me, then, be perfectly understood;—every animal organ acting within its normal sphere, produces only good results; but when, by its own excessive cultivation, or the

paralysis of the controlling organs, it acquires more than its due influence upon the human constitution, it becomes a source of moral evil; and as the names which we give to organs express the results which they produce when acting alone and uncontrolled, of course the names of the animal organs express the evils which they produce when acting unrestrained, rather than the benefits which they produce when kept within a limited sphere.

No one who understands the matter rightly, will be deceived by such a nomenclature. The name which expresses the excessive action of an animal organ, will enable him to infer its moderate and restrained action, while on the other hand, the name of its limited or moral and healthful action would enable him to comprehend its excesses. Each system of nomenclature has its advantages, and I feel disposed to adopt both. But for scientific precision, and the perfect analysis of man, I prefer, at present, that nomenclature which expresses the ultimate destination and extreme results of organs; although, for popular purposes, the more moderate nomenclature, which expresses the moderate action of the organs, may be more convenient.

The suggestion that even the excess of the animal organs may produce incidental good, is well grounded. Destructiveness is necessary so long as objects exist which require to be destroyed. It introduces in human society a penal system corresponding to the penal system of nature which operates through physiological laws. As our violation of the laws of health is punished with death through disease, so our violation of the moral law is punished with death by the aroused resentment of our fellow beings. Thus, the worst specimens of humanity are incapacitated from doing any farther mischief, and nations in whom the malignant passions prevail are conquered or exterminated by each other or their neighbors, leaving better races to fill the earth.

Moreover, the animal passions have so intimate a connexion with the animal life of the individual, that nature takes peculiar pains to preserve their activity and power, thus guarding against the decline of the vital force which would tend to bring about the decline and extinction of the race.—[Ed. Journal.

Remarkable Coincidence.—The doctrines advanced by Mr. Vaughan, in the January number of this Journal, in reference to the philosophy of rain, of storms, etc., have since been advanced by Andrew Jackson Davis, in an essay published in the Hartford papers. Mr. Davis denies having had any knowledge of Vaughan's essay when his own was written, and this coincidence, which is interesting, is also mutually corrobative. An able clairvoyant and an able scientific enquirer should come to similar conclusions.

THE LIGHT OF THE SUN, OF METEORS, AND OF TEMPORARY STARS.

BY DANIEL VAUGHAN.

My investigations respecting the origin of the Solar Light, the result of which was published in the Journal of Man, for October, 1851, have led me to a knowledge of several facts and principles, which serve to remove the veil of mystery that has hitherto shrouded many celestial phenomena, such as the variable lustre of some of the fixed stars, the sudden appearance and extinction of others, the brilliancy which meteors exhibit, and the peculiarities which telescopic vision detects on the surface of the sun. According to my views, the material expended in the production of the Solar Light is a rare fluid, which pervades all space, and becomes luminous when subjected to a great pressure. It accumulates round the several celestial bodies in consequence of its gravity; and the powerful attraction of the Sun gives it a sufficient pressure to render it luminous around him. The planetary atmospheres of this fluid are pressed with too small a force to cause an evolution of light; but whenever a meteoric stone traverses them with an enormous velocity, the great compression it imparts to the luciferous fluid it encounters, causes a transient display of these illuminating properties, and diffuses an extraordinary brilliancy to a considerable distance around.

That the luminous appearance of meteoric stones is not due to the compression of the atmospheric air alone, is evident from the fact, that these bodies become luminous before entering our atmosphere. The great meteor of 1719 must have been, according to the estimate of Dr. Halley, more than seventy miles high; and a more accurate calculation, respecting the meteor which appeared in France in 1847, fixes its height, when first seen, at one hundred and sixty miles above the surface of the earth; while the most recent researches, respecting the extent of the atmosphere, have considerably lowered the limits first assigned to it. The air, according to some, ceases to exist at about twenty-three miles above the surface of the sea; and though this result may seem a little too low, the height may be safely estimated at less than forty miles. But a fact still more unquestionable will show, that the presence of the air, instead of being the sole cause of meteoric light, is a great impediment to its developement. In no case is greater compression of the air produced than when a meteoric stone descends almost perpendicular to the Earth's surface; for it comes in collision with the

more dense strata of the atmosphere, before receiving much diminution in velocity. Yet, in these instances, there is scarce any visible evolution of light, while the most magnificent displays of brilliancy occur when the ærolite moves almost parallel to the horizon. This can only arise from the oblique direction in which they enter the stratum of luciferous fluid surrounding the earth, and the greater time they spend in traversing it before their velocity is much reduced from a collision with the air.

A very striking confirmation of this doctrine is presented in those luminous globes of light or fireballs whose connection with meteoric stones is generally acknowledged, though it has been hitherto found impossible to explain the cause of the different appearances which they exhibit. Now, I have found, after a careful examination, that all fireballs, or meteors, of extraordinary brilliancy moved almost parallel to the horizon of the places where they were visible, and that the several kinds of ærolites in descending to the earth, exhibit less lustre, as their paths deviate from a horizontal direction. I might here remark, that, in the absence of direct measurement, the small deviation of their paths from the horizon may be inferred from the great extent of the tracks which they described. The meteor of 1719, the brilliancy of which was said to equal that of the Sun, must have moved through a distance of several hundred miles, in passing over the length of Great Britain, besides a considerable part of the ocean, where its course could not be observed. Kepler has recorded the appearance of a very conspicuous meteor which moved over all Germany; and the great meteor of 1783 passed over England and France, and described a track which, according to the lowest estimate, must have exceeded one thousand miles. It is evident, from a little consideration, that bodies, pursuing so long a route, must have moved almost parallel to the horizon, and have encountered no air of any appreciable density. Those meteors which have a less conspicuous appearance, and which appear to form a connecting link between fireballs and falling stones, vary more considerably from the horizontal motion; and indeed there is no difference which meteoric masses exhibit, in alighting on our earth, which cannot be traced to their size and the direction of their motion.

It appears, therefore, that besides the aerial ocean which invests the earth, there is also another atmosphere surrounding us, far more subtle than the air, and, perhaps, equally essential for the maintenance of animal and vegetable life, and for the continuance of those changes which enliven the surface of our planet. To the agency of fluids of this subtle nature, we may look for a solution of several important questions in physiology, which chemistry has long attempted in vain. But although chemists are, at present, unable to insulate or examine directly

these subtle fluids, as they were formerly incapable of examining the properties of gases, I might allude to one fact, which may give the chemist indirect evidence of the existence of a luciferous medium distinct from the air. It is well known, that whenever electricity is passed through rarified air, or through an exhausted receiver, it produces a luminous appearance, and light is evolved more abundantly in proportion as the air is withdrawn. That the mere absence of air could be the cause of such a phenomenon, is an idea contrary to every principle of philosophy; but to arrive at the true explanation of this singular fact, we must compare it with the effects attending the action of electricity in a parallel case. If a galvanic current be passed through a solution of two salts mixed in equal portions, it will decompose exclusively, the salt, which is more easily electrolized, resolving it into an acid and base, or, in some instances, separating the metal. When, however, there is only a very small portion of this salt in the solution, it will commence acting on the salt which was less susceptible of decomposition. It appears, in like manner, that when electricity is passed through air it acts exclusively on its gaseous elements, and neglects the more subtle fluids with which it is incorporated; but as the grosser elements of the air are removed, it acts on the luciferous medium, and this action evolves light, either by separating it directly, or (what is more probable) by causing chemical changes from which light originates.

By means of the test which Arago has devised, in order to determine the nature of luminous bodies, it has been found that the light of the Sun, of the Fixed Stars, and that evolved from rarified air by means of electricity, contain no rays of polarized light, and, therefore, they have no common origin. It is, however, to be regretted that the test cannot be applied to the light of meteors, which give too brief a notice of their visits to the earth. Arago's experiments also prove that the Solar and Stellar Light emanate not from a solid or liquid body, but from an aeriform fluid. On analysing with his polariscope, the light emitted from solids and liquids, he found that it always gave polarized rays, except in the rare instance, where the rays were perpendicular to the surface from which they emanated. The light emitted by gases, on the other hand, however closely the beam was inclined to the surface, contained no polarized rays. He next examined, with his instrument, the light of the Sun's margin, and finding it composed entirely of unpolarized rays, he was led to the inevitable conclusion, that it originated, not from a solid or a liquid body, but is entirely derived from a luminous atmosphere. The immense solid mass of the Sun, inasmuch as it emits none of his light, may be regarded as a useless appendage to this mighty luminary; but, according to the present theory, its powerful attraction is necessary to ren-

der his atmosphere luminous. I might also remark, that Nasmyth, of England, recently announced in a paper presented to the Astronomical Society, that from a course of observations on the solar spots, he has been led to regard the true source of light as existing, not in the orb of the Sun, but in space itself, and that the Sun performs the office of bringing into vivid existence its due portion of this illuminating element which space contains in an inexhaustible quantity.

The most singular phenomenon connected with the appearance of fireballs, is their great lustre and the quantity of light they exhibit, which is quite disproportionate to the actual size of the solid body to whose motion their origin must be ascribed. The apparent size of some of these Meteors equalled that of the Moon, and the actual diameter of the ball of light has been, in some instances, estimated at two or three thousand feet, while the stone which alights on the earth rarely attains a greater size than one or two solid feet. Nor is it surprising, that a body traversing a medium with a velocity of twenty or thirty miles a second, should make its influence felt to a considerable distance around; and, indeed, it would appear, from mechanical principles, that the pressure required for the phosphorescence is transmitted to a distance, which varies with the size of the stone. It is, therefore, unnecessary to refute the extravagant opinion, that meteorites are actually as large as they appear to be, some of them weighing over six hundred thousand tons; that these mountainlike masses, after brushing against the Earth's atmosphere and parting with a single fragment, sweep onward in their course without farther molestation; that notwithstanding the number of times which these bodies come into such perilous proximity with the earth, they have always the singular fortune to escape without being, in a single instance, precipitated to its surface; and (what is still more miraculous) that though traveling in every direction through space, they should be always fortunate enough, on meeting with our planet, to find the very narrow path which alone could save them from destruction.

From the immense quantity of light which meteors diffuse, when approaching the earth in a direction almost horizontal, we may gain some information respecting the occurrence of an event which has been, for some time, suspected by Astronomers. If, in consequence of a resisting medium, (the existence of which, in the planetary spaces is, according to Humboldt, proved by the exact accordance of numerical relations,) the satellites of Jupiter should gradually approach, and, finally, fall to that planet, they should previously revolve through his luciferous atmosphere, which is far more dense and extensive than the corresponding appendage of the Earth. Through this ethereal atmosphere, the satellite should move with a velocity of nearly thirty miles a

second, and in a direction parallel to Jupiter's surface, a direction the most favorable that could be conceived for the developement of meteoric light. If a brilliancy equal to that of the Sun has frequently accompanied the passage of a stone, weighing about one hundred pounds, to the Earth, the inconceivably rapid motion of a globe two or three thousand miles in diameter, in its final approaches to Jupiter, and in circumstances most favorable for the production of light, should diffuse a splendor sufficient, not only to astonish the inhabitants of the earth, but even to proclaim the destruction of the satellite to the most remote parts of the Universe.

From a careful comparison of the results which must attend meteoric displays on an immense scale, with the several facts recorded concerning the appearance of temporary stars, I am persuaded that these stars, whose appearance has ever created such surprise, are the indications of the approaching destruction of some planet or satellite, after its course of unnumbered years had been spent. The most remarkable of these stars is that described by Tycho Brache, which in brilliancy surpassed all the stars in the heavens, and was visible even during the day; but gradually lost its splendor and disappeared after having shone for seventeen months. So rare is the occurrence of such phenomena, that one hundred and seventy-eight years elapsed between the appearance of the two last temporary stars, and not more than twenty-one have been recorded during the last two thousand years. Allowing that our Universe contains twenty millions of suns with their proportion of primary and secondary planets, besides a greater number of unilluminated systems, the destruction of a world or a satellite once in a century ought to excite no surprise. In the whole human family it is computed that one death, on an average, occurs almost every second; and, supposing the planets and satellites in our Universe equalled in number the population of our globe, a century forms as inconsiderable an item in the period of planetary existence as a second does in the human life; and the space of six thousand years in which the history of our race is computed, may be regarded as less than a single minute in the immeasurable age of our world.

In my previous article on this subject, I expressed an opinion that large accumulations of matter favor the evolution of heat as well as light—both being produced in a similar manner, at the expense of materials from external space, and I regarded the high temperature of large celestial bodies, and the elastic forces it calls forth, as the means which prevents matter from accumulating in enormous and useless masses. My recent researches confirm this conjecture; but they show that the effect of these forces is manifested, not in the rare and violent convulsions which I first suspected, but in a more frequent and less conspicuous manner; and the operations which they perform resemble, in some degree, the

volcanic action of our own planet; but they are conducted on a grander scale, and urged by forces immensely greater. From some peculiarities which have long been observed in the Sun's surface, and from the facts recently discovered in regard to solar eclipses, it appears that showers of stones or other materials are constantly ejected from his surface, and that a few of them may depart entirely from our system.

To show this, I must remark that, in the same manner as a meteorite causes the evolution of light from the luminiferous region which it traverses with great velocity, so those masses projected from the Sun's surface, when sweeping through his atmosphere, will render it luminous above the regular boundary of this light, and increase the solar brilliancy in those places. I should likewise state that a body projected perpendicular to the Sun's surface will describe a conic section round his centre, and its motion with respect to the surface will be retrograde. In the Sun's equatorial regions, the path described by such a body on the solar disk would not deviate much from a straight line extending from east to west, while the curvature should increase the body was convenient to the poles. Now there can be but little doubt that the solar faculæ, or the streaks of light which appear on his disk, are caused by the showers of these masses, which being projected from his surface move in a western direction at great elevations. and sweep through his illuminating investment with incredible velocity. Indications of the same violent operations were presented during the total eclipses of the Sun in 1842 and 1841, during which protuberances or lap-formed projections were seen to extend several thousand miles above his surface, while a number of ribbon-like streaks, of a carmine color, were also observed. Such appearances give additional evidence of great commotions on the Sun's surface, and, indeed, the most powerful forces which occasionally disturb the repose of our own planet sink into insignificance when compared to those mighty agencies which produce the terrible convulsions of nature on our great central luminary.

SWEDENBORG.

One of the followers of this distinguished author writes as follows :—

"Boston, February 22d, 1853.—I am in hopes you will eventually be led, by your love of the *whole* truth in Science, Philosophy, and Theology, (which are absolutely inseparable, and are in perfect union with each other,) to read the works of Sweden-

borg on these subjects, when you will find, that although he wrote so long ago, he is immensely in advance in all these departments of knowledge; I presume, those who live centuries hence will be of the same opinion. In reading your Journal, I see, in many instances, that you are greatly in the rear of that great teacher, and might derive essential aid from him. Why, then, will you not read him more, and give the world the harvest you may reap?"

I have no disposition to neglect the works of Swedenborg, or any other respectable writer; but I must prefer the works of the great Creator to those of any of his creatures. Having direct experimental access to the great Divine volume of Anthropology, of which all books, on that subject, are but meagre and imperfect, or garbled extracts, I prefer to examine the pages of the latter, after I have examined the great original work.

Swedenborg looked into the mysteries of life, by means of the subtle, intuitive, and spiritual faculties of the human mind, the nature and source of which he did not fully understand. Having investigated those powers, and employed them, not instinctively but scientifically, in the investigation of Man, I have been enabled to speak with fullness and precision, of a vast number of facts or principles, of which Swedenborg had but a vague and indefinite conception. Swedenborg, for example, dwells upon a doctrine of correspondences, which is, in fact, the leading idea of his philosophy, as explained by his followers. Yet, his developement of the doctrine of correspondences was far from being complete and scientific. It was, indeed, far more conjectural than it should have been, and greatly deficient in those interesting and essential truths which he might have revealed, had he disciplined his mind more for inductive research, and less for metaphysical reverie. Had he pursued this course, he might have been reverenced by all as the great master spirit of his age.

THE TWO WORLDS.

There are individuals, scattered through the country—people of innocent lives—men and women of high intellectual developement,—some of whom it has been our good fortune to meet,—who are able quietly to pass into a state in which the ordinary activity of the corporeal faculties is slightly suspended for a time—and the internal instinct—the immaterial principle—the very Soul itself—displays its unfettered energies, independently of the material organs. Wordsworth, the true philosophical

poet, very accurately described this mental condition. He calmly writes, concerning this state, as one

> In whom the burden of the mystery,
> In whom the heavy and the weary weight
> Of all this unintelligible world
> Is lightened: that serene and blessed state
> In which the affections gently lead us on,—
> Until the breath of this corporeal frame,
> And even the motion of our human blood
> Almost suspended, we are laid asleep
> In body, and become a living soul:
> While with an eye made quick by the power
> Of harmony, and the deep power of joy.
> We see into the life of things.

It is not in the "tippings," and "rappings," and like developements, that the men who have given attention to this subject, find the evidence of its spiritual origin—but it is in the character of the communications that are received through these well developed mediums, in private, quiet home circles. If you would know whether these things are from above or below, meet with the broken family about the desolated hearth-stone, and as you listen to the words of Love and heavenly Wisdom, with which the spirit of the departed shall console and draw upward the hearts and affections of those bereaved ones, you may be able to judge of the origin of these manifestations and of their value to poor doubting, shivering, troubled human hearts. Such of these developements as would command the attention of men of reason and intelligence, rarely come to the public through the newspapers. They are kept in the bosoms of families, as among the household sanctities with which a stranger may not meddle. For this reason, we may not give our readers the main facts upon which we found our belief in the spiritual origin of a portion of these developements and communications. We will give two or three facts, (not the most convincing we have noticed, but such as we are at liberty to talk about with the public,) that have fallen in our way, which are not easily to be explained on any other supposition, than that of their spiritual origin.

In the family of one of the most distinguished doctors of divinity in New England, is a little innocent, guileless grand-daughter, of thirteen years of age, who is a "writing medium." This clergyman had a brother-in-law, who, in his lifetime, was a distinguished school-master in Boston, and especially known as a very beautiful penman, as well as accomplished teacher of that branch of education. A few days ago, a son of this writing-master called at the clergyman's house to seek an interview with his father, through this little girl. The child took the pen in her hand, holding it with curled-up fingers, as is common with children, when presently her fingers were *straightened out*, and the pen held as by a master, her fingers being brought into that position, as she averred, by an unseen hand, grasping her own with a man's strength; and immediately she commenced writing, in a style of penmanship of perfect uniformity and rare beauty, and absolutely

in the very style of the old master, whose name was signed to the same,—it purporting to be a message from him to his son who sat by.

On one occasion, after holding an hour's intercourse through the means of the rappings, with an intelligence that purported to be the spirit of a very dear friend, we asked if the spirit would *write its name*, thinking if this should be done in the style with which the friend wrote it in his lifetime, it would be absolute evidence to our mind of his presence. He consented instantly to the test. We took a sheet of paper from a ream that no man had ever meddled with since coming from the paper-mill—laid it, with a pencil, upon an open book, and then gently pressed it against the surface of a table, the hand resting upon the outside of the book—and the name of our friend was written, in the same beautiful style of his life-time.

On another occasion, during an interview with this friend, still *doubting* if it was really our friend with whom we were conversing, we asked for some absolute demonstration of his presence, and asked that we might know that he was with us, through our sense of *touch*—and never did the warm grasp of that friend's hand, when it pulsated with life, send through our heart stronger sense of his presence, than did his repeated touch, at this request, upon our forehead.

A friend of ours in deep grief at the recent death of the dearest of earth, sitting with two or three friends in their little home-parlor—their thoughts upon the sad bereavement—when a pencil was seen to rise from a table in the room, and without any visible agency, moved back and forth upon a sheet of paper, which, without any arrangement, chanced to lay in its neighborhood. Upon examining the paper, when the pencil had ceased its movements, it was found to exhibit a very affectionate and consoling message to this widowed heart, written in the husband's bold hand, and to which his name was subscribed—followed by another message from another friend in the land of spirits, full of choice words of kindness and sympathy and faith, written also in the style of this friend's peculiar penmanship, (entirely differing in its appearance from the other writing upon the sheet) and to which also the friend's name was appended.

A few weeks since, among our acquaintance, was a friend suffering with very severe and alarming sickness. The friends who stood about the bed, fearful of the issue, were told that the spirits of a number of the friends of the sufferer were with them, to aid by their counsels and the electrical influences they could exert upon the body and spirit of the patient, in staying the ravages of disease. A relative of the sick one, who in his life-time was a distinguished physician, announced his presence, and that with him he had Priessnitz, the German founder of the Hydropathic system of treating disease. They took the care of the patient, ordering all the details of the treatment, instructing the nurses

with a care that embraced and looked after all the minutiæ of their duties, the treatment changing and modifying with the prognostics of the disease, until, after a few hours of this watchful treatment, disease yielded its mad sway, and "gentle sleep, nature's soft nurse," came with rest for the weary sufferer, and in a few days health bloomed upon the faded cheek.

A distinguished writer upon this subject says that Goethe, the celebrated German poet—who was a strong believer in Hellsehen, as Clairvoyance is termed in Germany—remarked upon a particular occasion that when, from time to time, a man arises, who is fortunate enough to discover even one of the great secrets of nature, ten others immediately start up, who industriously and strenuously endeavor to conceal it again from view. It is so, it always was, and for a long period, probably, will continue to be. The confliction between darkness and light, ignorance and knowledge, appears to be interminable. The race of the obscurantists in politics, in science, in religion, and in literature, seems to be full of life, and promises to survive even to the end of investigation. To use the language of a favorite old author—"they are exceedingly angry with every one that hath outgrown his cherry-stones and rattles; they speak evil at a venture of things they know not; and like mastiffs, are all the fiercer for being kept chained up, and fed in darkness." Satanic agency is the cry raised by some popular minds against the toleration of a belief in spiritual intercourse; while others have another way—the supercilious pronunciation of the not very euphonious term, "Humbug," in which they attempt to solve the difficult problems presented. The mass of men walk by sight and not by faith. And they scarcely ever lift their sight, even, upward, or to the living facts about them. But they walk through life, with their eyes downward, like a man looking for treasures hidden in the earth. Amid the scorns and jeers of men of ignorance and bigotry, men may fail and fall vanquished, even with much truth on their side, but Time conquers.

The harmony of all interests in God's universe, the common brotherhood of man and the common fatherhood of God, life and death but phases in one unending but ever-expanding existence, these are the great Truths which are now commanding men's attention. George Herbert, the sweet English poet of the seventeenth century, had the true thought when he said:

> ——"Man is one world, and hath
> Another to attend him."

[*Eastern Journal, Biddeford, Maine.*

Miscellaneous Intelligence.

SILLIMAN'S LECTURE ON NIAGARA BEFORE THE Y. M. MERC. LIB. ASSOCIATION.—The eleventh lecture of the course was delivered last evening by Prof. SILLIMAN, of Louisville. Subject: NIAGARA. The lecturer commenced by referring to localities in Europe, whose renown is derived chiefly from historical associations. A romantic legend, a battle ground where a crown and sceptre were lost and won, the field wherein the charter of English liberty was extorted from a weak tyrant, castle, and cliff, and cataract, all had become memorable by human action, and old by human calculation; but in regard to Niagara, it comes to us from the Creator, and with the evidences of its antiquity in the geological features of the surrounding country, which count centuries for years, and furnishes a period which, as an unit of time, has no analogy save in the distance of Sirius or the remotest fixed star. The antiquarian of nature is a geologist, the antiquarian of man's history a pigmy beside a giant, in the objects of his investigation and the depths of his chronology.

There were two great elementary agents employed in fashioning the earth, and giving to it its peculiar characteristics; and they still operate with a gigantic force, viz: fire and water. The traces of either are distinct, and cannot be mistaken, one for the other. From the time when this planet was a globe of molten fire from its centre to its circumference, and since the radiation of heat gave comparative solidity to various gasses, immense changes have taken place. Whatever is solid owes its quality and form to chemical action by fire, while what is laminate or stratified, is just as certainly of aqueous origin.

There are no natural phenomena whatever, which are not traceable to one of these elementary forces. The almost indefinite number and varieties of condition of matter presented to the observing eye of the student of science, belong to these two grand subdivisions of the Book of Nature. The centre of our earth is still a liquid sea of fire, having about two hundred vents or chimneys through its crust, called volcanoes. This is ascercertained by Artesian Wells, which show an increase of temperature of about one degree, Farenheit, for every foot of descent; which, consideriug that the earth's semi-diameter is near four thousand miles, is a rapid increase. On a previous evening, remarked Mr. S., we treated of some of the physical phenomena, the results of fire, and of their effects upon human works and life, through a long historical period. We will now proceed to ex-

amine the operations of that other agent, water, as displayed in the most magnificent of its works.

The first account Europe had of Niagara was from Father Hennepin, a French Jesuit, and missionary among the Indians, at the close of the seventeenth century—about the year 1672, and he made a drawing of the Falls. There was also another description and draft made more than half a century later, by a Danish botanist, who had penetrated to this most remote and savage region. These were sufficiently correct in their general features for speculative purposes; and they furnished additional evidence to the geological testimony of the truth of the received hypothesis in regard to the great Falls. Sir Charles Lyell says America is the old world, not Europe, for the geological displays there are not indicative of so great antiquity as those upon this continent. The *genius loci* of America were majestic Titans—while those of Europe were Fairies, and Satyrs, and other mythical beings.

Lake Erie is over three hundred feet higher than Lake Ontario, and the waters of the former flow into the latter, through the Niagara river, on their way to the sea. The great descent is at the Falls, which are one hundred and sixty feet high, the rest of the perpendicular distance being distributed along the river in what are called rapids. To contract our spere of vision we will say that the plateau along the course of the Niagara river is level; but seven miles below the Falls, at Queenstown, there is a cliff, or natural embankment, rising from the level of Ontario. This cliff, or escarpment, was once, as is conjectured, the barrier of the ocean, against which old Neptnre beat in vain, even in his fiercest moods, and exposes the geological character of the region. The deep gorge of the river below the Falls extends to the escarpment; and it is contended, that at one time the Falls were at this point, and there the river precipitated itself into the ocean. Since that period, thousands and tens of thousands of years ago, the Falls have receded seven miles, at the average rate of forty feet in fifty years. It is conjectured, also, that at one period there was as many as three distinct Falls, (the supposed location of which were pointed out on the diagram, by the learned professor.)

This is but a meagre outline, an anatomical sketch of this very interesting lecture; but it will serve, perhaps, as a general remembrancer of what was said, and possibly prove a substitute for a hearing in propria persona.

We can scarcely conceive how our orthodox clerical friends would have felt last night if they had heard Mr. Silliman knock the Mosaic Chronology into pi, with his scientific and physical facts and demonstrations. The truth is, as we believe, our worthy friends are in the same unfortunate category as their illustrious predecessors, when they rejected the great astronomical truth of Gallileo. When geology shall become even as old as the Co-

pernican system of Astronomy—to deny which is folly—no doubt orthodox Theology will have accommodated itself as snugly to Geology, as it now fits Astronomy. May the good time ere long arrive. [*Cincinnati Daily Times.*

Spirituality in Cincinnati.—We have taken careful notes of the present state of the movement, and the facts almost stagger belief. It has been quite impossible for us to obtain full information, for several circles were found embosomed entirely in private limits, and learned of their existence by accident only, and many, we have reason to suppose, are of this class. Our list, however, reaches fifty-nine organized circles, and these figures may at least be doubled in arriving at the true number. This, however, does not include, perhaps, hundreds of circles which are held occasionally, or by those who have just commenced experimenting. The number of mediums whose names we could ascertain is three hundred and ten, which does not include those partially developed. If that class were added, from information we have obtained, the number of mediums in Cincinnati would not be less than *twelve hundred!*

The circles are not confined to any particular class of society, but are found on every street and square of the city. No particular religious sect is more interested than another, but Christians, Jews, and Infidels are earnest in their enquiries. The number of investigations here can be estimated only by *tens of thousands.*

So great has been the demand for the publications touching this subject, that one book concern, that of F. Bly, the blind phrenologist, has confined its business almost entirely to this class of books. The number which has been written referring directly to the spiritual phenomena, is thirty-five, and near a dozen newspapers and periodicals devoted to the investigation of this subject, are issued in different parts of the Union, all of which find many eager purchasers in our city. Another evidence of the interest which is felt in this matter is exhibited in the fact that the "Spiritual Beacon" commences its publication this week with *one thousand city subscribers.*

In the progress of this movement the old system of communicating by raps has been superseded by yet stranger processes. In the beginning of the excitement it took half an hour to obtain any thing like a complete sentence by the raps, but then it was said that in a few years mediums would be developed who would talk and write under spiritual influence, and that period, it is alleged, has arrived. The raps are seldom heard, but physical demonstrations are frequently witnessed which seem to indicate that the power of making noises and moving matter has not been abandoned. Numerous unquestionably authenticated occurren-

ces of this character have recently taken place, which have had a tendency to draw several distinguished minds within the arena of spiritual investigation. We will mention a few of the most boldly defined cases of this class.

At a private circle in the western part of the city, the editor of a morning paper was carried, together with a table upon which he sat, several times across the room, without there being any visible moving cause.

A lady residing on Seventh street, whose daughter, a young lady, was sick with fever, called upon the spirits to cure her child, and desired that, to fully convince her of their power, the fever should leave one side at a time. The lady affirms that the right side of her daughter's face became pale and cold, while the left was yet burning with a raging fever, but, after a few moments, it also was relieved.

An ex-Judge, on Fourth street, who had been ridiculing his wife for convening circles at their house, was prevailed on one evening to remain in the circle. He had always considered the matter too foolish to investigate, and vauntingly remarked, during the evening, that if spirit beings existed he would like to see them try their power on the centre-table, around which the party were sitting. No sooner had the expression escaped his lips than the top of the table was twisted from the column and rolled across the floor. (This gentleman, in a recent private note from Washington city, where he is now visiting, says that this subject is agitating our Representatives. He writes of a circle which he attended the evening previous, where Senator Chase and Thomas Corwin were present, and also Preston King, of New York, which latter gentleman was the medium.)

But to the communications. These are now generally made by the medium's arm being *spiritually magnetized*, and becoming obedient to spiritual direction in writing, or in pointing out letters on a large alphabet; or, as is more frequently the case, after a half hour's quiet sitting in a circle of eight or a dozen persons, who form a battery by uniting their hands, the medium is magnetized, and it is affirmed, taken possession of by the spirits, who use her organs of speech in talking to the company. These speeches are frequently of a most extraordinary character—representing, as they do, to come from the spirits of great men who have passed from earth. A blue-eyed girl of seventeen, for instance, rises and in a vigorous manner discusses politics or religion with the logic of Henry Clay or the pathos of James H. Perkins. And a man of forty speaks of John Wesley and Fourier, using accurately the manner of speech of those persons. Or, perhaps, the medium assumes the character of a near relative of some one in the circle, and although having been dead a great while, yet, by a familiar gesture, or may be an old by-

word sentence, the idea of the loved one is brought vividly to mind.

These "revelations" through the mediums vary somewhat, yet all are of a radical character. They teach the overthrow of existing church organizations, and say that vital changes must be made in the social and commercial world. The belief in the spiritual agency of these teachings being quite general, and becoming more so every day, the effect will be, as we previously stated, to form a great radical party, which will develope itself ere long, and astonish the world by its strength.—[*Times*.

A NEW FOUNTAIN OF HEALTH.—Dr. A. Underhill, a hydropathic physician, sends the following account of the new fountain to the Cleveland Plaindealer:

"* * * next morning I left with Thaddeus Sheldon, of Randolph, Cattaraugus county, for the newly discovered fountain of health, called Aqua Petræ Vitæ, or the rock water of life —a distance of 10 miles. This fountain is in the town of Pine Grove, Warren county, Pennsylvania, but only 60 rods from the south line of Chatauque county, N. Y. It is within two miles of the village of Carroll, Chatauque county, as is on the farm of John Chase. It was discovered by the direction of spirits. The fountain belongs to John Chase and Wm. Brittingham.

These gentlemen being spiritualists, and having mediums in their families, were told by the spirits of the existence of this fountain of mineral water, and such was their confidence from the numerous tests given them, that under spirit direction, in May last, they commenced sinking a shaft nine feet square. After going down thirty feet they were then directed to bore in a certain part of the pit. This they accordingly did, and after boring 16 feet, they reached the water, which arose and flowed freely. This they were directed to plug up, and bore in another or opposite side of the pit. After going down about the same distance they found a vein of salt water. Thus by spirit direction, were two valuable veins of water discovered, within a few feet of each other. They were now directed to plug the salt vein and put a penstock into the other, in which the water rises 12 feet above the surface. This water has a peculiar taste, and is unlike any mineral water known. In appearance it is turbid. They were now directed to give this water to the sick, pointing out the quantity to be taken, and the manner of external application. This was about the middle of September last. Not being physicians, their whole reliance was upon spiritual direction. The effect in every case where spirits directed was most astonishing. In this way they have been proceeding until its fame is spreading far and wide. Over both acute and chronic diseases it surpasses, when spiritually administered, any article ever before known. Spirits have directed its preparation in powder, ointment and salve, and boiled, as well as its use internally and

externally, as it flows from the fountain. It has been sent to New York, and its analyzation shows it to contain important elements.

It is not claimed to be a universal panacea, but spirits tell us that conjoined with spirit magnetism and the external use of water, there are few functional diseases, either acute or chronic, but what will yield to their powers as health restorers. But to be most effectual it should be used by direction of the spirits through mediums. A. Underhill.

Mr. Sheldon writes as follows to the "Light from the Spirit World."

Randolph, N. Y., Jan. 30, 1852.

Mr. H. Mantz:—Some twenty miles from this, lives a good spiritualist and medium by the name of John Chase, and near by him a Mr. Brittingham, whose wife is a good independent clairvoyant. In their neighborhood are several other rapping and writing mediums. Some time in the month of May last, through these various mediums, Messrs. Chase and Brittingham were directed to open a Salt Spring, lying upon a farm owned by Mr. Chase. The spirits located the spring, gave full directions as to the size to dig the pit, and the depth; described minutely the different kinds of earth, the thickness of rock to be drilled to reach the spring. The various channels through which they received their spiritual instructions, and their harmony, induced them to commence operations and follow them up. Of course the community where much excited and spared not; they were called crazy, deluded fools, with many other choice epithets. The work was pushed on amid all kinds of opposition and finally success crowned their efforts and stopped the clamors of the neighborhood. But the salt spring was only the prelude to a greater wonder. The spirits directed the drilling of another pit into the same rock, about eight feet from the pit where the salt water had been found, and they would there find a treasure that the salt spring was not to be compared with—in short, that they would reach a medical spring, the virtues of which would be known when applied to disease under spiritual direction. The drilling was commenced, the spring reached, and from September until the present time, it has been applied to various forms of disease under spiritunl direction, and in every case has triumphantly succeeded in relieving the patient, and in many cases so speedily that it seems like the miracles of olden time. Both springs are found in the same pit, and the depth from the surface is about forty-six feet, thirty feet of earth and gravel, and sixteen feet of solid rock. These springs are within eight feet of each other. One yields water that has been analyzed and found to contain salt enough to make it valuable for working. The medical water has been analyzed and is known to possess the requisite qualities for curing disease. As a more minute detail will be

given to the world by the proprietors, I will merely add that they are both fully aware that this spring has been developed to them for no mercenary or money making purpose. Spiritualists need have no fear of monopoly; this is one of Heaven's choicest gifts to man, and we may truly hope that a universal panacea has been unfolded to us that is truly for the healing of the nation without money and without price. The medical spring rises through a penstock to the surface of the ground forty-six feet, and its force is such that it is now supposed that it can be carried, if necessary, much higher. Several physicians have visited this spring already and have witnessed its effect on disease. It is quite probable that bathing houses and homes for invalids will soon be erected near the spring. The spirits through different mediums have named it "Aqua Petræ Vitæ," in substance Rock Water of Life." T. S. Sheldon.

The Mystery of Terra-Culture.—We find the following notice of Mr. Comstock's interesting discovery, in the editorial columns of the Oswego *Times*. We gather from our exchanges that this subject is attracting very general attention, not only in the States but throughout Canada. It has been used to great advantage on the cotton and tobacco lands of the southern States. We have so frequently invited the attention of the public to this subject, that we have only to state, in this connexion, that Mr. Comstock proposes to visit such other States as far west as the Mississippi, where audiences are secured for him before the first of May.—*N. Y. Evening Post.*.

Terra-Culture.—An Important Discovery by Russell Comstock.—We have been not a little interested by the examination of a paper containing a mass of matter relative to a late discovery of a principle of natural law in vegetation, by Mr. Russell Comstock, of Mabbettsville, Duchess County, N. Y. It appears that the fact of Mr, Comstock's discovery has been for sometime before the public, but owing to want of any provision in our patent copyright laws, recognizing or securing reward for such discoveries, he has thus far only made limited and confidential communications of his new agricultural theory, sufficient to test and demonstrate its practicability and importance by actual experiment. As the only method by which he can disseminate and obtain any renumeration for his discovery, Mr. Comstock gives private and confidential lectures all over the State, wherever a sufficient class or number of subscribers are obtained to justify his attendance, charging one dollar for admission, and five dollars at the end of the year to those who adopt and make practical application of his new theory.

For two years Mr. Comstock has made his confidential disclosures to agriculturists, and as the result of the information thus

large number of gentlemen of known intelligence, probity and honor, all tending to establish and prove from actual experiment the validity of this principle, and the most remarkable results of its practical application. The experiments prove a general law applicable to the whole vegetable kingdom. By the terra-culture, all kinds of trees, forest, fruit and ornamental, flourish; peach trees fifty to a hundred years old, partially decayed and barren, are restored to a healthy and thrifty condition, as when young, in a single season, so as to produce the most abundant and finest fruit. The same results are produced upon all fruit trees, and what seems scarcely less remarkable, it appears that the precise age of trees is ascertained and determined by Mr. Comstock's theory.

The terra-culture has been applied to all kinds of garden vegetables, plants, fruits and shrubbery, as, also, to all kinds of crops with wonderful success. We cannot go into details of what experiments have proved. Crops of grain, and vegetables are, at a great saving of labor more than doubled by terra-culture. One experiment shows the production of 135 bushels of shelled corn to the acre, and another the production of 1,000 bushels Mercer potatoes to the acre. It is also shown that the great crops which have commanded premiums at agricultural fairs, have been produeed accidentally, by terra-culture, of which we have an evidence in Oswego county.

On the 24th ult., Mr. Comstock lectured to a large number of the farmers of Oswego county, at the village of Fulton, among whem was Mr. Wm. Ingall, of the town of Volney, who, for the last two years has received the first premium on corn at the State Agricultural Fair. We learn from an intelligent agriculturist of this city, who was also present, that during the course of the lecture, which had the form of forty questions, propounded and answered by the lecturer, any person present being at liberty to put and answer questions, it was clearly ascertained that Mr. Ingall produced his 135 bushels of corn to the acre, by the accidental application of the terra-culture principle.

From the evidence before us, which may be seen at our office, we cannot resist the conviction that Mr. Comstock's discovery of a natural law of universal application is one of the most important of the age, a discovery that for the honor and prosperity of our country, and for the interests of mankind, should at once be made public by the patronage of government.—*Oswego Times.*

Discovery of a Pressed Skull.—The following communication from Professor Retzius, of Stockholm, intended for the Ethnological Section of the British Association, having reached Belfast too late, has been sent to us for publication:

"Monsieur Frederic Troyon, proprietor of an estate at Belair, one of the most zealous, industrious, and good Archæologists on the Continent, has found an artificially pressed skull of a man in

a tumulus, on his own ground; and his friend Dr. Gone, at Geneva, has also got a similar one from Savoie, in the vicinity of the village of St. Romain. Mr. T. adds, also, that many similar skulls were found in this place. This is valuable as a proof that people have lived iu Europe, among whom the custom existed of pressing the skull (from the front) nearly in the same manner as the Caribs, and the Huancas, etc., in Peru. Professor Rathke first found similar skulls in Krim, and fixed our attention on the description of the *Spythi Macrocephali*, by Hippocrates, in the first chapter of his book "De Ære, aquis et locis." A similar skull was found in Australia (Grafenegg), and is copied in plaster for most of the museums, regarded as an *Avarian skull*. But Dr. Tschudi persuaded many learned men that all similar skulls were brought from Peru to European museums. As I have seen from a paper from Kertzch, in Krim (Muller's Archiv. of Anat. and Phys.'), a great number of similarly pressed skulls are found there, and preserved in the museum at Kertzch. It cannot now be doubted that the same custom of pressing the skulls has existed in the ancient world as well as in America. The next question will be, whether these customs have any connection. I think they have."—*London Literary Gazette.*

Increased average duration of life.—Prof. Buchanan, in an interesting lecture before the Mechanics' Institute of Cincinnati, makes the following observations upon the average duration of life, the effect in part of the medical science. He says that in the latter part of the 16th century, one half of all that were born, died under five years of age, and the average longevity of the whole population was but eight years. In the 17th century one-half of the population died under twelve. But in the first sixty years of the 18th century, one-half of the population lived over twenty-seven years. In the latter forty years, one-half exceeded thirty-two years of age. At the beginning of the present century, one-half exceeded forty years, and from 1838 to 1845, one-half exceeded forty-three years. The average longevity of these successive periods has been increased from eighteen years in the 16th century up to forty-three by our last reports. These facts are derived from the medical statistics of Geneva. Applied to this country, such an improvement as is here exhibited from 1500 to 1845, would make a variation in our bills of mortality or more than half a million, or 1,500 deaths daily.—*Express.*

Geology.—Geology is comparatively a modern science, yet there are scores of volumes, even now, of a controversial character, written by some of the most learned and pious Orthodox Divines of America and Europe, at first ignoring the facts and demonstrations of this science, as standing in positive antagonism to scripture declarations; further along, yielding to what could no longer be denied, the harmony of the words and works

of the Creator was sought in a modification of the terms of the sacred text, saying that days mean centuries—this means that, and that means t'other. Now, it always seemed to us that this was a very unsatisfactory way of working out the problem; this system of guessing, if guessing can be called a system.—*Times.*

Mr. Webster's Brain.—Dr. Jeffries, Mr. Webster's medical attendant, has given, in the January number of the *American Journal of the Medical Sciences*, an account of the last illness of the great statesman, which we propose to copy in our next number. In the mean time we give the admeasurements of his brain, as taken by Dr. Wyman, who was present at the post mortem examination.

Cuvier's brain is the largest of which we have any account in works on anatomy, and weighed 4 lbs., 5 drs., and 10 grs., or 28,147 grains. Mr. Webster's weighed 3 lbs., 15 ozs., 12 grs., or 27,891 grains—just 256 grains less than that of the renowned naturalist. Dupuytren is mentioned in several physiological works as having had a brain only a little less than that of Cuvier; but it turns out to have been inferior in size to that of Spurzheim and Abercrombie, and to have weighed 14 ounces less than Mr. Webster's. The circumference of Napoleon's head is stated to have been 23 inches; that of Mr. Webster's was 23¾ inches. From ear to ear over the top of Cuvier's head was 15 inches; Mr. Webster's measured the same in that direction. The capacity of his cranium was 122 cubic inches, while of the 623 crania measured by Dr. Morton, the capacity of the largest was only 114 cubic inches. That of Mr. Webster exceeded any which has yet been recorded. The brain evinced marks of disease, and it was remembered after his death that he had manifested a short time previously some hesitation of speech, and other slight indications of nervous disorder. —*West. Journal of Medicine.*

Spiritual Demonstrations.—The *Tribune* says it learns that a variety of what are called spiritual manifestations took place at the house of the Postmaster General, in Washington, the other evening, in the presence of Hon. John Bell, Gov. Davis, Professor Henry, and other gentlemen. Tables moved without apparent agency, danced to the tune of "Yankee Doodle, and otherwise gave evidence of being possessed by some extraordinary influence.

A Good Word for Protestantism.—The Freeman's Journal and Catholic Register of our city has a favored communication on "Civil Toleration," based on the Madiai case in Tuscany, wherein the writer says:

"I would conclude by observing that it is easy to show that, while *the Catholic Government* of the entirely Catholic community *is not bound*, in order *to be consistent to its principles to tolerate any other* religious teaching, *the Protestant State*, though having no Catholics established in its realms, *could not, without denying the*

essential principles of Protestantism, oppose the introduction of Catholicity, or any other religion."

It is a long day since any Protestant has said so good a word for Protestantism as this Catholic has done.—*N. Y. Tribune.*

PRESERVING ANIMAL SUBSTANCES AND CURING CERTAIN DISEASES.—Armand Lecomte De Fontainemoreau, of France, has recently taken out a patent in England for the employment of metallic salts, but principally of sulphate of zinc in aqueous solution, for the preservation of corpses, and anatomical parts, and animal substances generally, and to the cure of wounds and external diseases.

For the preparation of sulphate of zinc, any salt of that metal may be employed; but the patentee prefers to employ metallic zinc in a granulated state. This he dissolves in such a proportion of dilute sulphuric acid as to produce a solution of strength of about 30° to 40° Baume. After allowing the solution to stand for a time sufficient to cause the deposition of the foreign matters held in suspension, he decants the clear, and employs it in the preservation of corpses by injecting through an artery. If the subject is to be exposed to the air, or kept in a naked state, the patentee recommends that a third part by weight of spirits of turpentine should be mixed with the solution; he employs, also, other essences when odors of any particular kind are required, and colors the fluid red.

When animal substances are to be preserved by immersion, the solution is made in the same way as above mentioned, only that it is employed at a strength of 20° to 25° Baume. If the solution is to be employed for purifying rooms from the taint of decomposing organic matters, it is used of a strength of about 10° Baume.

For the cure of wounds, the solution is prepared in a highly concentrated state, and reduced to 30° to 40° Baume, by the mixture therewith of decoctions of linseed, marsh-mallow and other emolient herbs. In this state it is used by saturating lint, and applying it to the wound. The solution may also be reduced to 2° or 3° Baume. and used as a wash for the hands.—*Exch.*

[In the Eclectic Medical Institute, the sulphate of zinc has been freely used, and the study of anatomy relieved from its usual repulsiveness.—ED. JOUR.]

THE STATE OF EUROPE.—A writer in the December number of Blackwood gives the following truthful picture of the present condition of Europe:

"The continent now resembles a vast dungeon, with one half of the population in arms to keep the other half in jail. The monarch is only the head jailor."

PRACTICAL SPIRITUALISM.—The Spiritualists of Cleveland have organized a benevolent association under the title of "Cleveland Harmonial Benevolent Society," the object of which is to aid the poor and needy in sickness and health. They also have in contemplation the establishment of a Dispensary where medical assistance may be furnished to all the needy.