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WHAT IS TRUTH? THAT WHICH IS.

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### THOUGHTFUL UTTERANCES OF RESPONSIBLE MEN.

(Church Congress, 1877.)
By the ARCHBISHOP OF CANTERBURY.

This particular Congress has, of course, its difficulties, but it has also its helps, for I am perfectly assured that it has been the subject of prayer throughout the Kingdom. The faithful members of the Church of Christ have been instant at the Throne of God that this Congress might be a source of blessing to His Church. But I say it has its peculiar difficulties. The Church of England, like the Church of Christ throughout the world, has always had its various phases of thought—three certainly very prominent: one thinking most of the deepening of the individual spiritual life; another fostering a reverend love for the corporate work of the body of Christ; another dealing most with the intellectual problems of the age; and great names famous in the Church of England and throughout the Church of Christ may be attached to each school of thought— Andrews to the second, Hall to the first, Butler to third. But men of God of each have been ready to feel for those of the other. As long as all those three schools were dead and dulness had come upon the ages and men cared little for their own principles or the cause of the Church of Christ, there was no difficulty in keeping the peace; but when one awoke, the others might express dissatisfaction at the disturbance of their own slumbers by the activity and vitality of that which had awoke them; yet still when it was only one that was awake there was little fear of collision. When two awoke it became different, and when all three awoke then, of course, there was great TS.—III.

danger that men might mistake the maintenance of their own deep convictions, of the truth for the truth itself, and that they might be tempted each to ignore the good in the others. Thank God we live in an age in which all three are awake. God for it most heartily. There is no set of theologians in the country at the present moment that is not alive, and awake, and anxious to do its duty according to its own convictions. Then the more necessity for our insisting as we have done now upon those lessons of kindliness, and tolerance, and forbearance which I have endeavoured to set before you in the few words I addressed to you before we entered upon this subject. One point I will dwell upon which is not so pleasant. It is a peculiarity of this 19th century, so apt to vaunt itself on the many excellences that characterize it, that when a war breaks out the regular armies are attended by an undisciplined following of light skirmishers. Sometimes they are called Bashi Bazouks, sometimes they are called Cossacks; but in whatever form they exhibit themselves, the civilized nations of the world are apt to say that it is quite an anachronism that such people should be found in the 19th century. Now, I do not mean to say that we have an exact reproduction of such things in our theological warfare, but still it may be well to take warning. We do not wish to return to the sort of skirmishing in argument on theological subjects which was prevalent in the dark ages. shall say no more on this point. I fear I have exhausted the time allotted to me. The work before us is great. The prospects of this Church of ours are not dark. Some think I never speak without undue exaggeration on the brightness of the prospects of the Church over which I am called in God's providence to preside; but they are bright. Look abroad. What other country in the world would you change Churches with? Look at home. Which of the other denominations would you prefer to it? Look back. What age are you prepared to say it would have been more satisfactory to have lived in? For my part, I thank God and take courage, and I hope that from this meeting you will go forth each of you to the sphere of your work, encouraged by reflecting that there is much to thank God for; many churches built, many schools endowed, and rightly instructed; much zeal of the spread of religion in the land, and a great zeal also for the spread of the Gospel of Jesus Christ throughout the world. God knows the age has its difficulties, and those very difficulties will, I doubt not, make you more ready to join heart and hand in the great work which Christ has committed to this Church of England—this grand old historical Church as it came to us from the Fathers of the Reformation the Church for which these men died: the Church of Hooker,

and Jewel, and Jeremy Taylor, of Barrow, of Cudworth, and of Warburton; the Church of John Keble, of Thomas Arnold, of Frederick Maurice, of Charles Simeon. The Church which was good enough for all these men is good enough for us. The Church which has been honoured by the advocacy of so many saints of God will I believe go on flourishing in its Master's cause, waiting for the Lord's coming, and be found ready when He comes.

# EPOCHS. By CANON LIGHTFOOT.

"I looked, and behold, a whirlwind came out of the north, a great cloud, and a fire."—Prophet Ezekiel.

THE history of the Jews was a succession of startling paradoxes, their most signal defeats ever being their most splendid triumphs. The Egyptian bondage created Israel as a nation; the Babylonish captivity consolidated the nation as a Church; the Roman devastation expanded the Church of a nation into the Church of mankind. As a paradox the Babylonian captivity was the most striking of the three. Having described minutely the range, gradually extending, of the prophet's vision, he observed that God's chief revelations have ever flashed out in seasons of trial and perplexity; and, as such had been the case at the downfall of the Roman Empire, and at the outbreak of the Reformation, as at the epoch of which he was speaking in Jewish history, why should it not be so now? He thought that there could be no doubt that our Church was passing now through one of those momentous crises which occur only at intervals of two or three centuries. The claim of Roman Infallibility, followed almost without an interval by the annihihilation of the last remnant of the temporal sovereignty, stamps our age with a significance which no time can efface; but its distinguishing feature is the simultaneous occurrence of so many various disturbing elements. Here is the vast accumulation of scientific facts and the rapid progress of scientific ideas; there is enlarged knowledge of ancient and widespread religions arising from the increased facilities of travel. Here is the sharpening of the critical faculty to a keenness of edge unattained in any previous age; there is the accumulation of new materials for its exercise from divers sources, the recovery of many a lost chapter in the history of the human race, whether from ancient manuscripts or from the deciphered

hieroglyphics and the disentembed palaces of Assyria, or even from the relics of a more remote past—the flint instruments and the bone caverns of prehistoric man. These are some of the iutellectual factors with which the Church of our age has to reckon; and the social and political forces are not less disturbing. The question of the relations between Church and State in England has awakened many animosities and started many alarms of late. It is only one phenomenon in the general disturbance, one gust in the hurricane, one eddy in the whirlwind which is sweeping over the length and breadth of Christendom. In Italy, in France, in Germany, the atmosphere is still more agitated. Even in conservative Russia the political barometer shows symptoms of a rising storm. The Canon contended that the attitude of the Church should be one of quietness and confidence; that we should not rush hastily to untie the political knot, because it will take us some time and much patience to untie it; that we shall keep our eyes open to each fresh accession of knowledge, stubbornly rejecting no truth when it is attested. rashly accepting no inference because it is novel and attractive; believing that God has much to teach us, and that for the Church of the future there is yet a more glorious future than ever attended the Church of the past. Having contrasted the vision of Ezekiel with that of Isaiah, the Canon said that the former was not a dead or a dying story, but lives still as the very charter of the Church of the future. Mobility, spirituality, universality must now, as in Ezekiel's day, inspire the efforts of Christian workers. We must not, as Christians, Churchmen, and Anglicans, cling obstinately to the decayed anachronisms of the past, nor linger wistfully over the death-stricken forms of bygone days. We must not narrow our intellectual horizon nor stunt our moral sympathies, but must absorb new truths, gather new ideas, adapt, enlarge, and follow the teaching of the And it is because meetings like this do, with all their faults, conduce to this end that they deserve encouragement. He dwelt on the notorious dangers of ecclesiastical gatherings; but he trusted that the Congress which had stormed the citadel of the English Church, and met under the shelter of a See illustrious even in pre-Reformation days, would set a higher example than any previous one. He concluded a sermon of great ability as follows:—"To hear patiently and to argue calmly; to strive to appreciate opposing views; to be willing to rectify our opinions; above all, not to esteem others worse than ourselves, but to give them credit for the same sincerity and zeal for Christ of which we ourselves are conscious—this must be our first care, if we look for the blessing of Christ. In this spirit we should meet to-day. In this spirit let us strive now

and always to labour and to wait, looking forward to the dawn of that great morning when a fuller revelation than Ezekiel's shall open before our eyes, when even the glory filling the house of the Lord shall fade before a brighter light, as the moon and stars disappear before the rising sun,—when the very temple itself—type and antitype—shall melt and vanish away; when the vision of the prophet on Chebar shall retire before the Apocalypse of the seer in Patmos; when God shall be all in all. 'And I saw no temple therein, for the Lord God Almighty and the Lamb are the temple of it. And the city had no need of the sun, neither of the moon, to shine in it, for the glory of God did lighten it, and the Lamb is the light thereof.'"

#### THEOLOGICAL VARIANCIES.

By CANON FARRAR.

Absolute unity of thought among men who think at all was a thing simply impossible. They who were there assembled differed very widely from each other; yet how insignificant were the points on which they differed compared to those on which they were one! Was there one of them who did not draw his principles of life from the Sermon on the Mount? Now he thought that these meetings, by bringing them together face to face, would tend to heal those often merely apparent and nearly always unessential differences—differences far more often about the shadow than the substance, about the symbol than the conviction; differences far more often about a vestment, a position, a ceremony of worship; about a phrase, a formula, a catchword of theology—than about any vital dogma or fundamental fact. If they were candid, if they were noble, if they would but rise on the wings of faith to an atmosphere to which the clamorous birds of faction, with those also who loved the twilight, cannot soar; they would see that the thoughts of God are wider than man. If they are sincere in the wish for united action all difficulty vanished. Solvitur ambulando. The question was not what were they to do, but would they do it? Year by year atheism was spreading; indifference was stiffening into opposition; the masses of working men held aloof from them; the statistics of intemperance were swelled by ghastlier totals; and all the while, forgetting the one new commandment of Christianity, they were rendering themselves ridiculous and helpless by party squabbles. He would ask them then to glance with him at three remedies. First, if they want unity, let them

get to the centre; from the centre, if they be Christians, they were equi-distant, though they might be separated by whole hemispheres of circumference. Not till they debased the exaltation of self, which was the curse of holiness, and the exaltation of party, which was the curse of communities, could they have that charity which was the very life of Christ. He said that, as they must bring their unity into prominence, so they must resolutely, and even contemptuously, thrust into the background "the subdichotomies of their petty schisms." They knew how the early Church was rent by the Paschal controversy, yet what says St. Irenæus? "The difference of the fact establishes the unity of the faith." It was only when we occupied ourselves with the infinitesimally little that the barren details of party polemics loomed large through the distorting mists of vanity and passion. And might not even the most blindlyinfatuated partisan among them all take warning from the fact that while they were fiercely disputing about the interpretation of a Rubric, the world was quietly discussing the very existence of a God? A clergyman, accustomed to preach in a black gown, happened to preach in a white one, and lo! the columns of a religious newspaper—as though the thing were of the slightest atom of importance—were filled for weeks with angry controversy at the very moment when our leading reviews were debating with sad and serious eloquence whether there be any life beyond the grave. These be your Christian champions! These be the things which in the nineteenth century were thought worthy of the notice of the Church of Christ! The very sacrament of love and unity, of which a Wesley and a Keble sang with equal gladness, was made a wrangling ground of savage and opposing ignorances. But it was not by barren orthodoxies, not by elaborate ceremonialisms, not by multiplication of dogmatic entanglements, not by the beggarly elements of archæologic symbolism, that the Church would live. must remind themselves as a body of the positive duty of mutual charity, the downright sinfulness and wickedness of fostering dissension. Whichever might be the right interpretation of a rubric, whether "Shibboleth" or "Sibboleth" was the true pronunciation of a watchword, hatred, at any rate, was the worst of heresies, and charity the best fruit of creeds. A Church would never cohere by the repulsion of common hatreds:—

"Non tali auxilio. non defensoribus istis."

But the Church, thank God, had nobler advocates than these, and they would, even polemically, serve her best who learned "to bind their inclinations and aversions with the golden chain of a holy love."

## SCEPTICAL CULTURE AND CHRISTIAN FAITH. By PROFESSOR PRITCHARD.

In the biography of the poet Thomas Moore there was the record of a conversation between himself and the philosopher Schlegel, in which the latter put the following question:— "If a man conscientiously and without any intentional levity published a book in England expressive of his disbelief in the Scriptures and giving the reasons of his disbelief, how would such a book be received?" To this question the poet replied, "As to the book, I don't know; but I know how the man would be received, and I should not like to be in his place." That was probably a fair representation of English public opinion among the educated classes of the last generation. But how changed was the sentiment of the present hour. believed that he betrayed no secret, but was referring rather to a notorious fact, in the establishment of a society of gentlemen in London, counting among its members high dignitaries in the English and Roman Churches, and others equal to them in rank and influence and moral worth, who periodically sat side by side with the most prominent and advanced sceptical and anti-atheist writers of the day, calmly, and without anger, or the expression of surprise, discussing questions which a very few years ago would have been regarded as dangerous to public morals, if not socially disreputable. Religious men were apt to lay very much of the atheism of the present day to the charge of scientific It might conduce to a more accurate apprehension of the fact, whatever the value of the fact might be, if it were understood that not one among the scientific professors at either of our two Ancient Universities had written or taught antagonistically to the Christian Faith. And he believed the same assertion might be made in relation to their eminent colleagues in Scotland and Ireland. But the truth was, the exact sciences did not so much as touch on the question of the immortality of the soul or on the existence of an Author and Governor of Nature. The true questions at issue were ethical and historical, not dynamical. He affirmed that all true knowledge of every kind had been born of faith, and had been nurtured by patience and hope. Scepticism was not the joyful mother of children; scepticism was barren. Restlessness was her stepmother, hopelessness and misery dwelt in her abode. It was not in scepticism, but in faith, that Galileo persevered till he wrested from Nature her secret of the laws of motion. It was not in scepticism, but in faith, that Kepler toiled and failed, failed and toiled, till he discovered the laws which he felt assured the Lord and Governor

of the universe had impressed on the orbits of the planets. in scepticism, but in faith, the elder Herschel, hour after hour, walked his weary but observant rounds, fed by a sister's hand, and stopping not till he had finished his mirrors, not doubting they would in due time unfold to him the construction of the material heavens. And in a like spirit of a loving confidence his gifted son banished himself to the far south till he had finished the work which his father had begun, and for all ages wrote "calis exploratis" upon the escutcheon of their fame. Not in scepticism, but in a spirit of faith, Dalton and Davy and Faraday laid the foundations of that astonishing advance in the domain of physics which we inherited in the arts, the conveniences, the embellishments, the intelligence of our daily lives. The sum of the whole matter was that the great Father of the universe had ordained that, in Nature as in grace, the victory of the children of light should be, not by keen scepticism, but by a loving faith.

#### MESMERINE: HUMAN SOUL POWER.

By J. ENMORE JONES.

MESMERINE is the soul-power in man. Its companions are body and spirit. Like the hair of the head and nails on the fingers, the overgrowth is removed as need directs, and so is produced a regulated and healthy action. Let us perceive these powers in physical nature, and then will we perceive the play of those powers in minute action in and on us as ghosts in flesh.

The east wind blows, it pierces through our flesh, gets between the joints of our bones, and makes us feel uncomfortable, miserable. It is unseen but potent. What is it? Where did it come from? An effect cannot be produced without a cause. That influence must be a substance.

The unseen blight passes over districts of the country, plants feel—they droop and die.

Atmospheres have a powerful effect on Man. The close muggy day produces heaviness and depression of spirits; thinking and acting alike are paralyzed. Let those atmospheres pass off, and a fresh clear *unseen* one supply their place, and the change on the physical human organization is at once apparent. He breathes, he lives, he moves, he acts with vivacity and pleasure.

Electricity in the air, if in excess, has a powerful effect on the human body, causing headache, and producing uneasiness throughout the body. Electrical storms appear to have a power over Man like the moon over the ocean, suctionizing the blood upwards, and producing what is called determination of blood to the head. Ozone unseen streams off the ocean, and being inhaled, the body permeated with it is affected by its power.

Galvanic force, liberated by the rapid oxidation of metals, is susceptible to being several times attenuated; each attenuation is as much more refined and subtle as atmospheric electricity is more refined and subtle than atmospheres, yet they are below the refinement and unseen subtlety of the nerve atmosphere that surrounds and vitalizes every one of the thousand nerve threads in the human body, and maintains them in healthy action, fit

soul power for the joint action of matter and mind.

These and other mighty soul powers from material substances, affect men, and animals, and vegetables:—come from whence they will, they have an origin, they are substances, powers for good or evil; I mean qualitively,—because, though they produce sickness to one description of matter, they are health to another. Take as an example: The periodical wind called the Harmattan, which blows between the latitudes 15 deg. north and 1 deg. south, three or four times a year; from the interior of the African continent towards the Atlantic coast. Its duration at each period is from one to six days, and its force very moderate. A fog always accompanies the wind. One of the characteristics of this wind and fog is extreme dryness. When continued for any time the foliage of the orange and lemon trees exposed to it becomes shrivelled and withered. So extreme is this dryness that the covers of books, even when closed, locked in chests, and enveloped in linen cloth, are curved by it, just as if they had been exposed to the heat of a strong fire. The panels of doors, frames of windows, and the furniture are often cracked and broken by it. Its effects upon the human body are not less The eyes, lips, and palate are parched and painful. If the wind continues unabated so long as four or five days, the face and hands grow pallid. The natives endeavour to counteract these effects by smearing their skin with grease.

Considering all these effects, it might naturally be inferred that the Harmattan must be highly insalubrious; yet observation proved it to have the extreme opposite quality. It was found that its first breath completely banished intermittent fevers. Those who had been enfeebled by the practice of excessive bleeding soon recovered their strength. Epidemic and remittent fevers, which had a local prevalence, disappeared as if by enchantment. But the most wonderful effect of this atmospheric phenomenon was, that it rendered infection incommunicable, even when applied by artificial means, such as inoculation."

"There was at Wydah, in 1770, a British slave-ship called the *Unity*, having on board a cargo of above 300 negroes. The small-pox having broken out among them, the owner resolved on inoculating those who had not taken the natural disease. All those who were inoculated before the commencement of the Harmattan took the disease, but of seventy that were inoculated on the second day after its commencement not one took the infection; yet after the lapse of some weeks, when the Harmattan ceased, these seventy negroes took the natural disease. Soon after they were attacked by it the Harmattan recommenced, and the disease almost immediately disappeared.

The country over which the Harmattan blows, for more than a hundred leagues, is a series of extensive plains covered with verdure, with a few patches of wood here and there, and

intersected by a few rivers, with some small lakes."

Here we have a minor evil for a major good. throughout nature. Many influences may be evil, or rather considered evil, that are a positive good to the mass. A fierce wind and heavy rain may cause damage in the city, but the purification of the air, by the blowing away of pestiferous vapours, and the washing away of putrescent substances, produces health and longevity to the inhabitants. We have the same principle in vegetable substances growing in our gardens and woods; poisonous to man, but medicinal to instinctive animals and birds; who, by that wonderful power—instinct, eat and are healed. All those vegetable substances give out a fragrance more or less cognizant by the man's sense of smell, and even of taste; and that smell partakes of the nature and power of the substance from which it comes; and is a substance emanating from the plant, as surely as the fogs and atmospheres come from substances and are inhaled by human lungs; and also in most instances pierce through the clothes, and enter by the pores of the skin into the body. Let us take musk, a minute portion mixed with the mortar of one of the Oriental mosques, 700 years ago, gives out its power, its substance, its smell, as full and powerful now as ever. Sulphur and tobacco fumes permeate the body through and through. If persons of a delicate organization imbibe pernicious smells or emanations, they suffer, droop, and die. The emanations proceeding from all substances we had under consideration when attention was drawn to an examination of the body and soul; and on that one grand principle of "emanations," from all animate and inanimate substances on earth, stands Mesmerine, shedding itself from Man as from all other substances. The waves of mental opposition may rise high, and dash furiously against it; but it stands so firm, as a truth in nature, that the angry surges only dash themselves into drops and foam. Man physically is a part and parcel of nature around him, subject to the same laws of affinity

and repulsion, and production—or, in other words, of sympathy and antipathy;—with their intermediate states or degrees of power and action.

Mesmerine is the heat oozing from all the pores of the human body. That heat is the product of the combustion of the chemicals contained in the food we daily consume, which get liberated from the interior of the body by the attractive power of the external element we call air. As it passes out, it has in every atom the living energy as the atoms of the east

wind have, and a carrying power as light has.

Mesmerine is a substance which may be observed in the sick chamber. Let the patient be afflicted with small-pox, putrid fever, or other contagious disease; and when a stranger comes into the room, if ventilation has been neglected, the effluvia or "mesmerine" which has streamed from the afflicted is offensive; and if the visitor be in a negative or weakly condition, he imbibes a portion of that effluvia. Sometimes the point or sting of the vapour or disease, with lightning speed, darts from the patient, and enters the receptive body of the visitor, who at once thereupon becomes the afflicted. If we could see the operation, we would be witness as to a phenomenon similar to that we call the thunderbolt, when the point of the fluid darts out and penetrates the atmosphere through the weakest of its negative parts, and enters and kills its receiver; we would witness the disease in the form of a thunder-cloud, surrounding the invalid, and discharging itself by a point of light on the new influence placed within its power. Well is it for man that his organs of sight are so opaque as to prevent him from seeing the inner or subtler operations of nature. If he were witness to them, life would be a task, fearful and severe; those emanations, and lights, and tempests, would so occupy his energies, and so cloud his vision of the solid, on which he has to depend for support, that life under such a phase would be a misery, and death happiness. It is these death-clouds which hang over the patient, and which are seen and felt by sensitive animals (such as the dog) that cause the frequent occurrence of "death-tokens" by howling under the windows of the afflicted;—the dog passing, perceives that which we do not, and his fear finds vent in howlings. Dogs are excessively sensitive to smell, and carry it to such a degree, that where the effluvia or Mesmerine proceeding from any human being is agreeable to them, they will follow and endeavour to make friends with those they never saw before: even roughness has little effect, they will run off, only to draw near when opportunity offers.

The law of positive and negative runs through nature. The giver and receiver must be in different conditions, and throw off different effluvia or emanations; and if we could see the operation,

it would be that each effluvia had a substantive existence, as real as the physical human body. All in nature are both receivers and givers, are positive to some powers, and negative to others; all have what is scientifically called Polarity. The very magnet which draws the needle, is a receiver and giver; it receives an influence or atmosphere which penetrates its solid, and passes off imbued with the nature of the metal it passes through; and that power is so strong, as I stated in past pages, it jets out the emanation, that emanation lays hold of the steel, and if sufficiently powerful, draws it up to the solid magnet. In one action, all seen substances are negatives, as the ethereal influence enters at one end, to pass off at the other; in another action, they are positives; as the influence while so passing through becomes a negative, and receives of the special quality of the substances passed through, which, borne on the atmosphere, is carried hither and thither, and absorbed by its affinity. Having thus generalized, to show the universal prevalence of "influence" from all substances, it follows that man has also an influence or emanation, which has a powerful effect on his fellow-man, and which we distinguish by the word "Mesmerine;" from Mesmer, the re-discoverer of the power man has by the exercise of his spirit or will, in directing the route of the chemical heat which passes off from his body. Mesmer found out a power, but did not understand the principles on which the effects stood. had a tub filled with various articles; glass, stone, minerals, &c.; the feet of his patients were put into the tub, and while he stood by, most surprising results were produced; faintings, convulsions, trances, elevations of mental power in patients, and cures of many of the diseases the parties were afflicted with. He found also that he had power to produce phenomena; —it was all a mystery to him; and as these results were noised about, the usual opposition to new things arose, and the schools of medicine, or rather the professors or teachers, ignored the facts, and branded him as an impostor; as in later days, George Stephenson was in a Committee of the House of Commons branded with the name of "lunatic," because he declared that locomotive engines would be able to travel along railways at the rate of twelve miles an hour. Since Mesmer's days the practitioners using "Mesmerine" have been thousands, and its phenomena have been marvellous; so much so, that Materialists have simply denied the facts, and Religionists, when they could not gainsay them, attributed them to "Satanic agency;" a slough for all the works of Deity which were not explained at school when they were boys.

Having made the declaration, that a "chemical aura" proceeds from every living substance; let us individualise the

subject by creating in perception two men; one with black hair, and healthy; the other light hair, and unwell; and a phenomenon will be produced which any man or woman can verify by his own observation, within his own domestic or social circle; and thus test the existence of Mesmerine and its astonishing results on human nature—we here recur to the experiment, page 298. Let Light hair extend the palm of his hand towards Black, let Black gently move his fingers a few times, from the wrist down the centre of the palm, to the end of the middle finger, at about half an inch to an inch from the flesh; repeat the movement, say, five to seven times, avoiding every time he returns to the wrist the passing of the operative hand over the palm; and the person operated upon will perceive, as it were, a cool or hot breeze, gentle and soft, passing along the palm as the operator moves his hand; and in most cases the operator will tell the exact spot the operated upon felt the current most powerfully. That current is Mesmerine, and is the agent or substance which enters the body, acts upon the body, and produces a result. So is it with all medicines, it is not the solid, but the essence or soul-power contained in the visible medicine, which acts on the human system.

Mesmerine is a chemical combination scientifically mixed by nature, and found in every healthy human body, male and female; and when applied with an earnest will by passing the warm hand over, but not touching a diseased part, or as near that part as possible, it acts at once; and by stimulating the physical powers, enable them to overcome an obstruction, and perform their functions naturally. Mesmerine has a living energy and power—a subtilty of action in its sphere, which the mere mineral or vegetable cannot have; it is not possible that minerals, collected, ground to powder, and boxed up in a laboratory; or that the root, bark, or leaves of the vegetable dry and withered, can have the same active chemical power that the essence has when streaming from the healthy vital body; and as the surface of the body is crowded with innumerable pores, it presents a natural and incomparable passage for the Mesmerine to be thrown by the operator into that part of the body which is diseased; say the chest, the lungs, the head, the foot, the spine, the arm, &c.; whereas ordinary medicines have to be swallowed, digested, extracted, and absorbed, and in many cases unsuccessfully.

Disease, in ninety-five cases out of a hundred, is simply an obstruction of the blood vessels, created by the languid action of the blood, for want of the due admixture of proper chemical substances, therefore producing inflammation, ulceration, death. It is evident, that if only the stoppage could be removed,

inflammation would cease; disease would be removed, and the healthy tone of the body be in full power. The essence streaming from man when directed by the will, and poured, shall I say, upon the diseased part; be it rheumatism in the arm or wrist, where the action can be watched, causes a powerful heat to be felt by the patient, frequently accompanied by a "tingling" sensation; the veins visibly swell, the chemical action of the essence acts upon, and appears to dissolve the obstruction; the enlarged veins, like enlarged drains, give passage for carrying off the inflammatory matter; and the ever onward course of the life blood forces the way, and the restored action and cessation of pain attest the cure.

The mesmeric passes are generally made by pointing the fingers at a distance of a quarter of an inch to two inches from, and over the diseased part; by contracting the fingers, and holding them over it with the same kind of feeling, and in the same position as if a pen were in the hand, and in the act of writing: and after holding the hand in that position for a short time—say a minute—gradually moving the fingers from the diseased part, and at the same distance, and then draw off the hand at a more rapid pace to the nearest extremity; thus, for the head; over the ears, and off at the shoulders; for the arm, off at the fingers; for the legs, the feet; repeat the process do it heartily, kindly, and you will, in from five to fifteen minutes, be gratified with the result.

On the essence being absorbed by the disease, it is more than likely the operator will feel as if something were coming off at his finger ends; and it is also frequently accompanied by a throbbing, accelerated pulsation in one or more of his fingers; a sensation which reminds one of water pouring out of a narrownecked phial. Nature is then carrying out the well-known law of demand and supply. Fire attracts air, and combustion is the result; heat attracts electricity, and the flash of the lightning, and the roll of the thunder, proclaim that atmosperic health is Animal inflammation attracts animal essence, and health is the result. Thus nature is everywhere in its several divisions, carrying out the great law of equilibrium; and as the atom, minute of itself, has within its acknowledged littleness, all the qualities, character, and laws of a mountain; so a human body, minute of itself, has within itself all the qualities, character, and laws which govern the mass of animal matter existing on the surface of the globe.

Returning to the action of Mesmerine on a diseased part; if at the close of the sitting, say from fifteen to thirty minutes, there should be any stiffness in the limb operated on; blow

over the part, and the stiffness will be removed. Let the plan indicated be carried out once or twice a-day till the cure is effected. If it should happen that the patient be inclined to sleep, which is likely, when operating on the chest or lungs; encourage it, as it shows that the essence is laying hold of the system, the same as laudanum or morphine does in the usual routine of medicine.

Whilst on the curative power of this subtle agent; if I had a trumpet voice to startle the chronic inertness of man, as to his own innate powers, as a living organization of chemicals; I would blow the blast so clear and shrill, as to unnerve his apathy, and start him into living action for the cure of his daughters, his sons, his brothers, his sisters, his relatives, and the What disease in Great Britain sweeps off the young, the beautiful, by tens of thousands? Consumption—consumption produced by the gross negligence of parents. Children, and young persons generally have to gather wisdom! By the observation and instruction granted to them by their parents. Is it given them? No—the more lovely the girl, the more thinly is she clad; wafer-soled shoes reverse the old maxim, "feet warm, and head cool;"—the double-soled shoe for the British climate, which a parent should explain as a necessity to avoid death; and which he should insist upon being worn, is cast aside, because "it looks so." Again; churches, chapels, theatres, social and public ball-rooms in the evenings, are the great charnelhouses of health. "Dressed for the party," is undressed; the chest has no defence from the cold air after sweltering in the crowded throng;—a touch of pride, allows the girl to uncover her bosom to show some rich piece of embroidery, or shade of colour; while the cold wind—the raw air, acting on an exhausted body, laves it in chills, and the cough, and hectic touch of death, claim the victim. Mothers arouse! act with sense, with wisdom; break through the false fondness which causes you to give a "gentle hint," instead of a "firm order," to your loved child;—give her that wisdom, and knowledge, which will carry out the divine order, or will, or wish; that the threescore years and ten be her allotted portion; and not poison her with bad air, nor the breach of the obvious laws of health, and then give God the blame of her early death. To many a parent the treatment prescribed as follows, will restore the loved one—let a healthy relative be the operator—not a stranger..

#### RESPIRATORY DISEASES CURED BY INHALING MESMERINE.

Pure Air, inhaled and absorbed by the lungs, produces health; IMPURE AIR, inhaled and absorbed by the lungs, produces disease. This vital truth is now universally admitted, in the

immense sanitary efforts that are being made in all parts of the civilised world; and as this great law in nature is so marked, and as so many thousand lives are annually sacrificed at the shrine of Consumption and its satellites; for many years it has occurred to me, that surely in nature some substance could be found, the *fumes* or essense of which inhaled by the patient would act upon the diseased lungs, chest, and blood. I had thought of several, but the practical difficulty of getting the system to accept anything by the lungs, but its ordinary food of oxygen, was too great to be overcome. On perceiving the chemical character of the human essence, it at once erected itself as the

solution of the problem.

DISEASED man will accept freely, and by inhalation with the air he breathes, a chemical essence manufactured by, and in affinity with, his own nature. The blood passes the air cells in the lungs three times in about eight minutes, and absorbs the oxygen required for its purification; at the same moment of time, the inhaled essence presents itself, and is absorbed by the lungs and blood, endowed with the living vital energy of the operator's will and health. On the other hand mineral and vegetable essense, has to be extracted from the solid, by digestion, &c., before it can attach itself to disease; and even then, it lacks that subtle vital power, that due admixture of chemical quality, necessary for grappling with lung and chest diseases; and so powerful and effectual is this remedy, that if applied, I believe eighty per cent. of ordinary patients would be cured of those scourges of Britain,—Consumption and inflammation of the lungs, as well as of minor throat complaints.

In operating by Inhalation, I suggest that after the patient has taken his seat, that the operator take a chair on the right side of the patient, facing him; or if more convenient, stand beside the person; then let the operator simply place his fingers close to the nostril or mouth, in the position detailed in page 494, and every breath drawn by the patient will carry in the essence to do its duty. Avoid conversation, you are at your work, do it, and converse after; keep before your mind the great truth, that your fingers are the wires of your chemical battery, and that your essence is streaming off as surely, though as invisibly, as electricity by the wires in connexion with a galvanic battery. If your patient drops off to sleep, let him sleep on.

I have thus fulfilled a duty to my fellow men, in pointing out the great healing power of the chemical heat, oozing out by the pores of the skin from man; and which may be directed by the Will or Spirit to curative purposes. I have been led to it naturally, as one division of the phenomena produced by man on, and in, his fellow man; and the knowledge and remembrance

of phenomena, will help the reader over some of the stiles he will have to arrive at, in the fields of nature he has to cross.

Sleep can be produced by artificial means. Morphine, and other narcotics or modifications of narcotics, produce slumber, they wrap the mental energies in quiet; the nerves get rest; the organs of the head, and the sinews of the body, get rest; the involuntary nerves, and other self-operative powers, are allowed to do their work without let or hindrance from their companions,—the voluntary powers; and physical nature is Mesmerine acts on some patients as a narcotic, it refreshed. soothes—a quiet steals over the body, as the chemical heat of the hand slowly passes over the brain, the face, and the chest; and gets absorbed by the pores of the flesh. I have frequently caused the same result by simply holding the ends of the fingers of one hand under the palm of the patient's hand, not touching it; the heat ascends, and as the positive emanation is absorbed by the patient, who in his state of disease has become a negative, it ascends the arm, and steadily passes onwards in the body, till it arrives at the greatest negative or most diseased part in the system;—it there acts, allays irritation, and soothes:—with a few, it so steeps them in forgetfulness, that as with opiates, you may talk, shout, and shake them, without producing any effect: in such cases, its medicinal energies are acting, and the patient ought to be undisturbed till he awakes himself:—no harm can arise, the longer the slumbers the more powerful the Mesmerine, and more effectual the cure. I have seen this power in action, over and over again. I have used it, I have seen others use it. I owe the life of one of my children to its power, when medical skill acknowledged itself beaten.

The following cases may possibly be interesting to the reader, as I vouch for their correctness from personal knowledge. They are illustrations of the curative power of Mesmerine.

One of my daughters was at eight months old, from bad nursing, ricketty; and the spine greatly bent: under the guidance of our regular medical attendant, we consulted Dr. Little, and under his advice, had her strapped down to a kind of butcher's tray; to make the case more distressing, she was subject to fits, having them daily; till at last, when they, some twelve months after reached to about twenty daily, our medical attendant plainly stated, that he had tried everything he could think of to quiet the system without effect; that he could do no more; that he expected death daily, as the action on the brain had been so constant and severe that it would be a mercy if she died; for if she lived, she would be an idiot. I, under the circumstances, stated that I thought of trying Mesmerine—no objection was made. A young female TS.-III. 2 11

clairvoyant friend volunteered her services; as the child lay in its cot, the head in great heat, she stood by the side, and silently and calmly passed her hand from the crown of the head to the stomach for about twenty minutes. In about five minutes, the child seemed soothed, the fits rapidly ceased, and after being mesmerised for about five weeks, twice a day, the cure was effected: strength was gained, the spine gradually straitened, the butcher's tray had been long before found useless and cast aside, and now she is strong and active both physically and mentally.

Another daughter had from birth been affected with something that caused a sudden pain at the top of the spine; and when about four years of age, in the midst of play, almost daily would come running in, with tears in her eyes, saying "Oh, my neck." I daily, for about a fortnight, made zigzag passes from the crown of the head down to the middle of the back, up and down for ten minutes daily; and the result, is I have not heard

anything about her neck since.

One of my servants having rheumatism in the ankle and foot, I operated by passes over the affected parts; in the first sitting of a quarter of an hour, the foot was relieved, and at the second sitting next day, it was wholly removed. Finding her general health not good, I, a day or two after, mesmerised her for about twenty minutes from her head to her feet, by passes made about four inches from the body; it brought on an intense shivering fit such as I never before saw; the head, the waist, the knees, the whole body seemed instinct with motion. I felt rather alarmed, but continued the passes, feeling as it were a cold current passing along the palm of my hand; in about five minutes the shivering ceased, and the following day the girl seemed endowed with fresh life, her movements were so buoyant. I found out on the evening of the fit, that a day or two previous she had laid her head on a bundle of wet clothes in the kitchen, and slept.

I have been also a looker on, while others have successfully operated for diseased liver, lungs, chest; for tic doloureux, tumours, &c.; and as the operators were personal friends of mine, engaged in business, but who benevolently set apart a given portion of their early morning and their evening to relieve their afflicted acquaintances, no charge of quackery, or imposture can stand and front them; neither they nor I have ever received, or expect to receive, any personal benefit;—we loved our fellow creatures; and as a slight evidence of our thankfulness to that Almighty Being who had hitherto fulfilled his promise that "our bread shall be given, and our water shall be sure," with an earnest heart, and a willing mind, we

endeavoured "to do unto others as we would that others should-do unto us," and as far as the Gift of Healing was involved, literally, with Mesmerine, obeyed that command of Scripture,

"WHAT THY HAND FINDETH TO DO, DO IT."

As my object is not to cite more examples in any given branch than the principle appears to require, I have in past pages preferred drawing water from the well of my own experience; and in future pages will do so again, except where the evidence has exceeded my own knowledge, and the vouchers are persons of integrity, whose words and characters are such

that we may place in them implicit confidence.

Having shown that there is a force—a substance emanating from Man, unseen by him in his ordinary state, which we call Mesmerine; and that that force, or power, can, by the will or spirit of man, be directed to pass off by the hand and fingers, in the same way as the Mind can, by its volition, cause the physical lump of flesh and bone called the arm to rise from its side, and be stretched out to lay hold of anything within its length; we pass on to ascertain some of its other powers, so that by increased knowledge of self, physically and mentally, we may understand and perceive the how and why other phenomena, yet to pass before us, may be understood. Understood, must of course be taken in a limited sense. I see my sons and daughters growing in size, I cannot deny the fact; it is produced by eating; their food has been principally milk and vegetables; but how those substances manage to turn into flesh,—into the hair on their heads, and the nails on their fingers, I cannot tell;—I cannot explain it;—but I know, by the evidence of my sight, that it is so; and all the special pleading, and mere reasoning against the possibility of these facts, are as futile to me, as the arguments of the Indian king who denied the existence of ice—denied that water could be made solid. The facts stand out in bold relief; the principles are partially known. General terms may give a hazy idea to general readers. Yeast in small quantities subdues masses of flour by fermentation. A needle's point of vaccine matter, ferments the whole human body with disease: These facts we are compelled to acknowledge, but volumes of books might be written, logically proving the falseness of these propositions; and reason would ride off apparently victorious. But the facts are before us, they cannot be got out of the perception of the observer; neither hot nor cold words annihilate Truth, however strange it may seem. We, therefore are, so far as our knowledge allows, laying principles down, based on Facts; and by an attentive examination of the laws which develope themselves as

we advance; we are prepared to believe, and partially understand, other and higher phenomena than those we have been familiar with from boyhood;—phenomena not one whit less wonderful than others our attention is now directed to.

Mesmerine is luminous; this fact is proved by the evidence of sensitives and clairvoyants, but without such evidence we have in latent heat, the principle of light; and as it is developed, light is developed. The light or Mesmerine from the human body is of various shades of colour, principally blue, red, and yellow, depending upon the preponderance of the chemical constituents of which the person may be composed; for it is with man as with animals; some are of a finer quality than others, as is the meat we buy at our shambles; therefore it is, that the quality power of one man is superior to another in producing artificial clairvoyance in individuals. The Mesmerine from some is so firm, so dense, that it cannot produce clairvoyance; but is powerful for healing diseases, and producing phenomena of the denser kind. In others, the Mesmerine is so fine, so ethercal, so transparent; that on entering the patient, it clarifies the nerves, amalgamates with the weaker Mesmerine of the patient; and produces a result analogous to the mixture of the substance which produce glass, by which the opaque substances of the body become transparent. We shall in the section on Clairvoyance more fully explain the phenomenon. Suffice it at present for the reader to remember, that even solid silver can be dissolved in nitre, and become a transparent fluid; and that if we could make a double glass case, large enough to contain us with ease, and line it with silver, so that we could not see one ray of light, could not see one item of landscape; yet let sufficient nitre be poured in to fill the space between the glasses, and the opaque silver would be transformed into a transparent fluid, and our range of observation would be extended; we should be normally clairvoyant. The power of Mesmerine to mingle with other substances is prettily developed by the following experiment made by mesmerisers with water and seen by sensitives. I find it among some memoranda; doubtless copied from some work on mesmerism, and it coincides with the experience of persons I have known, when, some years ago, I gave much time and thought to the subject of Mesmerine.

MESMERISED WATER.—Take a tumbler one-fourth full of water; place the tumbler in the palm of one hand, with the fingers of the other hand pointing downwards into it. The position of the hands should not be changed, as it interrupts the

process to throw or dart the finger at the water.

Action—The light falls from the fingers till it r

Action—The light falls from the fingers till it reaches the bottom of the water, resting there till the whole of the surface

of the bottom is covered, it then begins to rise till it reaches the top of the water, making the whole very bright. The process occupies from four to six minutes, according to the power of the mesmeriser. When the water is quite full of light, a movement, like boiling water, or the waves of the sea, takes place; increasing till the whole quantity of water is in commotion, one wave pushing on another; this disturbance then gradually subsides, and the water becomes quite still.

[We have in the past three sections—Nerves, Phrenology, and Mesmerine—shown the human machinery in existence, with which the Mind wields its power over the three. Our intention this month was to have devoted a section to Biology, but Mesmerine has given enough to ponder on. Next month we intend to unfold the principles, and give illustrations as to that "Ology," which so unconsciously acts on and leads so many persons to weal and woe. The innate powers of the mind will arise for elucidation in due course.—J. E. J.]

# VITAL USE OF SPIRIT-POWER PHENOMENA. By JOHN WETHERBEE, U.S.A.

THERE is a thoughtless disposition among some of our Spiritualists, even notable ones, to go back some way, or speak sneeringly of "Phenomenal Spiritualism." I am not one of them. I follow where truth leads, even if into bad company, and I filter, when necessary, what I drink rather than go thirsty. My spiritual absorbents are in healthy working order, and I can survive until the hour of purification comes, which may not, however, be in our day. Modern Spiritualism means Phenomenal Spiritualism, or it has no definite meaning or distinguishing feature. Of course it means Phenomenal Spiritualism and more, much more; but the "more" and the "much more" are the common property of the ethical or the religious world, including Spiritualists. The latter, by virtue of the phenomena, may have a knowledge where the others have only faith; there is a wide debatable ground between faith and knowledge, but who can draw the line between the two? Most of us may not now need the phenomena; shall we abolish the joys of childhood because we have reached maturity?

I am a Spiritualist by virtue of the phenomena, and nothing else. Trance and inspirational mediums might have talked with the tongues of angels, and I might have been interested and instructed, but they would never have converted me from materialism, with science and logic on my side; besides, I

could have presented them Theodore Parker and others, who at least could equal them, with no celestial pretensions. Of course I am not reflecting upon any of the broad lights of Spiritualism in saying this; I only mean their eloquent teachings required the phenomena, the evidence of the senses, as aid; there was not difference enough between the eloquence of Spiritualism and the eloquence of the liberal church for the one to be selfevidently influence or inspiration, and the other only born of When Phenomenal Spiritualism made it evident that there was an intelligent, mysterious power that was acting on humanity, the claim of a supermundane source for the teachings seemed reasonable, and commanded attention that if unassociated with the phenomena it would not have had. Pebble stones become jewels with an appropriate setting; it is the "setting" that has got spiritual teachings before the world, not their transcendental or remarkable intellectual character. It is not wise for the Zenobias or the Ciceros of the spiritual platform, or any of the disciples, to put on airs in the presence of the mediums of phenomena, even if now and then, or oftener, one of them is found without the "wedding garment."

Phenomenal Spiritualism presented facts, and they sustained the theory, and thousands have been converted thereby. I thank it for that lift into light, now having found both knowledge and comfort in Spiritualism. I should remain firm if for any cause or condition the phenomena should become a thing of the past. The "Dawning Light," as it has been called, is no special Providence vouchsafed to this age and generation, but has existed ever since "the morning stars sang together," only our fathers did not listen rightly; their ears had no such expectancy, so they heard nothing. Human beings survived death as spirits, and remembering their hunger on the point of futurity when they were mundane beings, have ever been ready to manifest, ever been trying hard for a hearing. History, sacred and profane, warrants that statement when the past is read with Houses have had unseen tenants, and spiritualistic eyes. ominous whispers have proved prophetic, and dreams have had method and wisdom in them; witchcraft through all time has been a fact in history with its phenomena misunderstood.

> "Delicate omens traced in air To the bard true visions are."

All these things, from "old wives' fables" to the "poet's fine frenzy," have been outside of the line of the actual spiritualistic phenomena (not spiritualistic ethics), have made that line elastic, and the so-called imaginative, superstitious, or fabulous is now, or much of it, on the inside of that line, and those enlightened with the "dawning light" can say to some at least of the

labelled superstition in man's life and history, "Daughter of Zion, awake from thy sadness, for thou shalt be clothed in the

garments of truth and beauty."

It is a pity to have Phenomenal Spiritualism degraded by fraudulently-disposed people, sleight-of-hand or sleight-of-body imitators, but mixed, as it necessarily is, it contains the accented feature of Modern Spiritualism. But for it we would have nothing distinguishable in us from other Christian teachings. The phenomena which mean facts become a glorious background for our speakers, sustaining them in their logic, illuminating their words with often a celestial prestige, and thus extending the area of spiritual thought, enabling the thoughtful hearer to cull from secular (that is, outside) sources, words of inspiration from both books, ministers and speakers, who and which make no spiritualistic pretensions. A word will explain what I mean. I could quote from Beecher, Murray, the late Theodore Parker and others, golden words contradicting their creeds, flashes of inspiration that are as spiritual in their source and quality as any Spiritualist could desire. The phenomena of facts in this connection have in the first place made Spiritualists, then they have led them to the law, which extends beyond the ism into the liberal and also the evangelical body politic, and though the phenomenal will not feed and fill the human mind, the great fact it teaches them will lead them to gather light from all sources.

I like both classes of manifestations, the intellectual and the phenomenal, but if one is to go into eclipse let it be the former, and not the latter, for without the latter a knowledge of the future life would have to give place to a hope or a faith, and without the former the libraries and the teachings of the world would be still at our command. I am not plethoric with thought, but still I do not need any instruction from spiritualistic teachers, for my re-reading of the world's books (now my eyes are illuminated with the truth of Spiritualism), from the Bible down to Emerson or Thoreau, would keep me full and fed, things that I did not see in reading when I was spiritualistically blind. The spirits have been around the writers of the world long before 1848, but the "dawning light" is a great eye-opener to a comprehension of the fact; but Phenomenal Spiritualism is a necessity, it is the only proof of continued existence; with it there are collateral evidences, but they would not be on the bedrock without the first, with its fall the rest would go; but wishing others to enter the door as I have justifies my saying of two evils (?) I choose the least when, if but one class is to remain, I say let it be at all hazards the phenomenal. How glad I am that both are permanent institutions, and will grow brighter and better into the perfect day.

Nothing is truer than that this world does not end where our view of it ends; we measure the curve and find the sphere, without seeing it; nothing is truer in our mental horizon than that there is a field beyond its reach. Modern Spiritualism is the celestial geometry that enables us to extend our lines and curves into the realm of the spirit, and it leads me to listen to the silent majority that the world calls dead, and we call departed, and I grow better for it and I hope wiser.

#### THE RACES OF MAN.

Br C. CARTER BLAKE, Doct. Sci. Lect. on Comparative Anatomy, Westminster Hospital, late Secretary to the Anthropological Society of London.

THE thought has often come across students of physical phenomena how far the conditions of mind are independent from the physical structures which are associated with various mental or moral characters. We have various races of men developed over a number of spots on the globe, and those races differ inter se by a multitude of physical, moral, and mental dis-We have the varied phenomenon presented us of diverse developments of the body existing in certain savage The Australian savage is observed to possess certain characters which are sui generis; e.g., the great relative size of the molar teeth in the lower jaw, the occasional junction of the squamosal and frontal bones, and a difference in proportion of the upper and lower limb, which, though trifling, is constant. The amount of physical variation which occasionally is associated with the distribution of certain fasciæ of muscles, appears to be regulated by different laws in the Australian and the European. However, the number of variations in the muscles of the human body, even in the European, is represented to us by a very small series.

And when the investigator seeks out for the mental differences which prevail among this human population, he encounters various plans of language, some like that of the Veddahs of Ceylon, merely being formed on the onomatopoeietic system; others, like the Chinese, being formed on the mono-syllabic, and some from which are derived the greater portion of the languages used by civilised men, being varied by grammatical inflections at the end of each word derived from the primitive root-stem. He seeks for the variations of these languages, and finds them reduced, or at least reducible, to a definite grammatical system, which system forms what is known of grammar. The number of distinct languages which prevail over the surface of the earth

may be estimated at at least 360 different types, or root-forms from which are derived the manifold series of dialects which exist, and of which many thousands have been noted.

The moral differences between the various races of man are, however, of greater importance than the merely physical or The code of elementary morality which some linguistic. presume to have been innate in all the races of man is variable in each peculiar race. The Fuegian considers the murder of aged persons to be a social virtue; the Chinese has no scruple against the constant practice of female infanticide; untruth was advised by certain of the Hindoos; the ancient Persians confined the education of their children to the three points of learning to ride, to draw the bow, and to speak the truth. Probably the second and third clauses were to be taken as mutually cancelling each other, and the modern Persians are famous for their skill in drawing the long bow. In Sparta and in Scotland theft was deliberately taught in the schools. In the Western States of America repudiation of State obligations was a certain passport to success at the election of Governor. It would be idle to say that there was any innate moral principle either felt or denied by these various races of man. Individually the Chinese is doubtless moral, according to his standard of education. does not see that there is any particular harm in infanticide, and can produce a number of texts from his sacred writings in its We saw during the Franco-Prussian war (and we see something very like it in the present war) thanksgiving services being offered up in hostile camps for the result of the same battle. Doubtless the aspirations on either side were perfectly genuine, yet one at least of the prayers must have been offered up for an erroneous object. The code of morality therefore, as well as the aspirations of religion, are found to be various in different races of man. We may then ask what binding link there is between these races. An antagonism seems to exist between some of them, which for centuries past has led to the maintenance of incessant wars and invasions. The natives on the banks of the Rhine have been fighting against each other from the period of the earliest dawn of history. ceedings at the Arminius festival in 1875 may show us that the traditions of the wars between Celt and Teuton are no vain recollections of the history of the contests between armed forces, and that the memory of Varus will survive in the hearts of every French general who contemplates the map of the Rhine, and meditates on the words of Tacitus—

Hic cecidisse legatos; illic raptas aquilas.

If we turn to the most paltry district of England, a jealousy may be observed against the man of the next parish, and this

jealousy if it cannot come to blows, as in the days of Dandie Dinmont, finds its outcome in the horse-race, or in the flower-show. The secret by which the caterers for public amusements in England have succeeded in maintaining our national sports has been in playing on the jealousies of races, and of families.

The monetary question, doubtless, enters as a factor into the matter, but the pride which the lower classes feel in the excellence of their productions have led them on many occasions to vilify their neighbours from whom they may only differ in the

most trifling physical characters.

We then see that the races of man (even if we take the family in its lowest and most trivial aspect as a type of the race), differ in qualities and attributes. Let us briefly consider some of the points of union. We have in nearly all races of men a dread of some invisible being. Even if the ideas of a future state are not closely expressed in the mind of the lowest savage, we have an idea of the visible presence of the deceased, or at least of their The dread of, or the belief in, ghosts is undoubtedly of wider universal distribution than the belief in a future state, or in a God. To appease the manes of the departed is always a desire in the lowest savage. The miserable Indian who traverses a mountain pass in Central America, will empty his pocket of the paltry meal, or tobacco, it may contain, and deposit an offering on the flat stone where his ancestors probably offered up the sacrifice of the lives of their captive prisoners. If you ask him for what reason he performs this oblation, he will reply that it is to appease the ghosts of his dead relations. This, or something like this, form of religion appears on the whole, to be of the widest distribution among savages, and it appears impossible to separate it from primitive elements in the faith of higher races. For it illustrates the primitive doctrines of sacrifice, of oblations, and of propitiation. From the commencement of the world the servants of God have always been accustomed to honour Him with sacrifice. Some of these were holocausts, or whole burnt offerings, in which the victim or host was wholly consumed by fire, and given fully to God without reserve, for the more perfect acknowledgement of his sovereignty; others were pacific, or peace offerings; and these were either offered in thanksgiving for blessings received, or for obtaining graces and favours from the divine majesty. Again, some were bloody sacrifices, in which the victim was slain; others were unbloody, as of Melchisedeck, which was bread and wine; the sacrifice of fine wheat flour, with oil and frankincense, and unleavened cakes, or of the scapegoat. All these sacrifices of the law of nature and of the law of Moses were agreeable to the Divine Majesty as often as they were accompanied with the inward sacrifice of the

heart; not for any virtue or efficacy which they had in themselves, being but weak and needy elements, but in view of the sacrifice of Christ, of which they all were types and figures, and in consideration of the faith of those who offered them, by which they believed in a Redeemer to come, whose love symbolised by blood alone was capable to reconcile them to God. It is this primitive idea underlying all diversities in physical, mental, and moral phenomena which in the higher races becomes a religion. spiritual insight into man's nature is the same in kind, though different in degree, from that which is shown by the lowest savage. Reverence for the perceived unseen; a consciousness that this life is not the only one, a belief that those who are dead are in a place where good results may accrue to them from our offerings; are conceptions which find a place alike in the thoughts of the illiterate savage and the aspirations of the highest theolo-We see alike in each the essentials of faith and morals. However the customs of the savage may be alien to those in the code of morality, sanctioned by the higher races, there can be no doubt that he possesses within himself the dread of the power of the Unseen, and fear of the Infinite. This knowledge of itself is a spiritual faith. Simple, of a less complicated nature than that of Pope's ideal savage, whose "untutored mind" could see God in clouds, and not at noon-day, or could only hear Him in the wind, when He made a noise. For, in the belief of the savage is the real germ of truth, and the actual prospect of immortality. The Materialist of the present day stands in a worse position than the typical savage; he has ears, but cannot hear; he has eyes but he cannot see; he has only his own voice in which to croak.

#### THE LIMITS OF NATURAL KNOWLEDGE.

By Professor C. VON NAGETTI, of Munich.

The practical scientific man relies upon his experience, as he says. This, however, is gained in the following manner:—Each natural phenomenon is accompanied by different and often numerous causes and other circumstances. It is the task of the investigator to find out what are the effects of each one of these causes and circumstances; and this task cannot, in most cases, be accomplished by mere observation. The practical man then selects some cause or circumstance which happens to appear conspicuous to him, and in this he finds the fundamental cause of the phenomenon. This he calls his experience. We therefore understand how these practical men may hold different opinions upon the same phenomenon, why their views bear the

stamp of the scientific epoch, and why in course of time they change. We also understand why the theories based on so-called experience are most fertile in those domains where phenomena are most complicated, as in organic morphology, in physiology,

and pathology.

What we are most certain of, with regard to the past, is the incandescent state in which our earth was at one period, and from this we draw the conclusion by analogy that the other planets of our system were incandescent bodies as well, just as the sun is still to-day. If we go backwards from these suns we get, by further conclusions, to accumulated masses of clouds, the embryos of the later suns, then to cloud-belts, and eventually to the gaseous mass distributed tolerably uniformly, and this is the original state beyond which, with our present insight, we cannot get.

All this proves distinctly that just as upon the earth an eternal change takes place, the heavens likewise are constantly changing. Each change consists of a sum of motions, and supposes a former change or sum of motions, from which it resulted with mechanical necessity, and further on a chain of changes from all eternity. Thus the gaseous state of our solar system must have been preceded by a continuous endless series of changes, and if our scientific insight does not lead us to this, does not even justify us in this supposition, it thus proves only its own

inadequacy.

We must, on the contrary, conclude from the eternity of changes in the universe that the whole process of development of our solar system or of the whole starry heaven, from the original gaseous mass, through the ball-shaped nebulæ, fiery and dark globes, to the cold, solid, and dense mass, is only one of the numberless successive periods, and that analogous periods and occurrences have preceded and will follow endlessly. It is true that we perfectly understand, according to our present physical knowledge, how a mass of gas in a state of progressing condensation produces heat, and how the hot condensed mass again gives off this heat until its temperature and that of its surroundings, in our case, that of universal space, have become equal. But we do not understand how the solid mass can again become gaseous, and how the necessary heat, distributed in universal space, can again be collected.

There is a gap in our knowledge at this point; and we may fill it by various suppositions. In the present state of almost complete ignorance among physicists and chemists of the properties of chemical elements and of ether, it is possible that, with sufficient condensation of matter and approach of its particles, forces become active of which we have no idea at present, and which may perhaps bring about an explosive dispersion of the solid mass into a gaseous state. It is also possible that the quantity of heat in the endless universe (not in our starry heaven) is distributed unequally, and that there are domains in it which are of a much higher, and others which are of a much lower temperature than our starry heaven; that in the endless space of the universe heat currents exist, similar to the air currents in our atmosphere, and that we have perhaps for some billions of years been in one of these currents of lower temperature, in which the process of solidification continues on a large scale, just as on a small scale it occurs on the earth's surface during north winds, and that some hot current, which sooner or later may pass through our starry heaven, may again bring about a gaseous distribution of matter.

This example shows that we may use our experiences of the finite only for deductions within the finite. As soon as man wishes to overstep this domain, which is opened to him by his senses and which is accessible to his knowledge, and wants to form some conception of the whole, he falls into absurdities.

In space nature is not only infinitely large; she is endless. The ray of light travels through some 190,000 miles in one second; to travel through the whole known universe of fixed stars it would require some twenty million years according to a probable estimate. Let us place ourselves in thought at the end of this immeasurable space, upon the farthest fixed star known to us, then we would not look out into empty space there, but we would see a new starry firmament. We would again believe that we were in the middle of the universe, in the same way as now the earth appears to us as the centre of the universe. And thus we may in thought continue endlessly the flight from the farthest fixed star to the farthest fixed star, and the actual starry heaven we now see, compared to the universe, are after all still infinitely smaller than the smallest atom compared to the starry heavens.

What applies to space applies equally to grouping in space, to the composition, organisation, and individualisation of matter, which is the object of descriptive and morphological natural science. Everything we know consists of parts, and is in itself part of a bigger whole. The organism is composed of organs, these of cells, and the cells of smaller elementary particles. If we analyse further we soon get to chemical molecules and the atoms of chemical elements. The latter certainly still resist further sub-division at present, but we must nevertheless look upon them as compound bodies on account of their properties. Thus in thought we may continue sub-division further and endlessly. In reality no physical atoms in the strict sense of the

word can exist, no little particles which would really be All size, indeed, is only relative; the smallest body in existence which we know, the particle of the light-and-heat ether may be of any size we choose for our conception, even infinitely large, if only we imagine ourselves to be sufficiently small by the side of it. Just in the same way as indivisibility never ceases, we must suppose, by anology of what we find confirmed in the whole domain of our experience, that the composition also of individual particles separated from one another continue endlessly downwards. In like manner we are forced to suppose an endless composition upwards in always larger, individual groups. The heavenly bodies are the molecules which unite in groups of lower and higher orders, and the whole of our system of fixed stars is only a molecular group in as infinitely larger whole, which we must again suppose to be a unite (einheitlicher) organism, and only a particle of a still larger whole.

As space is endless in all directions, so time is endless on two sides; it has never begun and will never cease. The Bible says: "In the beginning God created heaven and earth," and geologists say: "In the beginning the world was a gaseous mass, from which heavenly bodies formed by condensation." But this beginning is only a relative one, the beginning of a finiteness, and the time which has passed since this beginning is only as a moment

compared to the eternity before.

From the union of time and space an empire of phenomena results, which forms the contents of descriptive natural sciences as well as of the other part of the investigation of nature, viz., the physical and physiological sciences. Matter, which fills space, is not at rest but in motion, and as the material particles act upon one another with different (attractive and repulsive) forces, each body which moves causes the others to move as well, or rather it changes their motions. It gives off a part of its motion and of its potential energy to others, and these again to others, and so on. This is the chain of cause and effect, also an endless one, as in our conception it neither could begin with a first cause nor finish with a last effect.

Nature is everywhere uninvestigable where she becomes endless or eternal. We cannot, therefore, conceive her as a whole, because a process of conceiving which has neither beginning nor end, does not lead to conception.

THERE was a severe earthquake shock at Geneva last month. Clocks were stopped, bells were rung, buildings cracked, and the English and Russian churches were rather shaken. No great damage was done. The shock extended to Berne, Mulhouse, and Malesina, in North Italy.

#### MAHOMETAN TRUST IN A PERSONAL DEITY.

PLEVNA AND AT CONSTANTINOPLE, SEPT., 1877.

I HAVE witnessed many battle scenes, the memory of which leaves a strong impression on my mind, and will while memory lasts; but never till my dying day can I forget the overwhelming excitement of that dread and decisive moment. I was standing close to Osman Pasha; his staff was grouped around. Behind these again were hundreds of Turkish officers and soldiers who, with anxious eyes hour after hour had been watching the glorious struggle of their comrades on the hill. At that instant they saw their brothers about to rush upon the redoubt, filled to the very throat of every embrasure with Russians and armed with six guns the mouths of which belched out flame and shell. They saw them, under a terrific fire which was momentarily thinning their ranks, about to hurl themselves against the high earthworks of that powerful fort, and, as they glared like lions at the savage spectacle, from every mouth there rose a loud cry to heaven. "Allah! Allah!" resounded from all the stern lips around me. The word, swelling from a murmur to a shout, was taken up by the thousands of reserves in the valley below. "Allah! Allah!" was wafted by the wind to those fearless men rushing with manliest and most devoted bosoms upon death, and they returned the sacred name, repeating "Allah! Allah!" Amid the echoes of that brief ejaculation of praise and imploring faith in the God of Justice and Truth call Him how we will—they flew at the enemy with a force so terrific and a fury so irresistible that, leaving their artillery and throwing away their rifles, the enfeebled Muscovites literally flung themselves over the parapets of the redoubt, and fled down the steep hillside chased by the Turks, who bayonetted them in the back by hundreds. Loud sounded the bugles, as a tremendous cheer once more arose of "Allah! Allah!" Then the trumpet call for the cavalry to follow the fugitives rang high and resonant, and a loud salvo of artillery thundered deadly salutations to the great Ottoman victory. I turned to look at my comrades at that thrilling hour, and I tell you that, along with the proud gaze I met, there was hardly a dry eye in the headquarter camp, and I saw many of the Turkish chiefs and soldiers reverently kneeling down to give thanks to God, who at this moment, as they believed, had stepped in to their rescue. And then there came a messenger in flying haste to tell us of the spoil that had been taken, how four Russian guns, all uninjured, and two Turkish cannon had been captured, with

great stores of munition and vast numbers of rifles, and how

5,000 Russians lay dead on the field.

The same narrator ran the Russian blockade—reached Constantinople—had an interview with the Sultan. Read his narrative: Next night (Friday) it was my honour and high reward to dine at the Imperial Palace at Yildiz in the Kiosk, and be received in audience by his Majesty the Sultan, who was graciously pleased to ask me many questions about the gallant army at Plevna, and its brave and accomplished chief. In this interview, which lasted for nearly three hours, I was much struck by the great modesty evinced by this Ruler of so many millions of victorious people, and the simple gratitude with which his Majesty ascribed every success to the Almighty. Not one word of pride or unkindness escaped his lips. He seemed only to think that, having confided his griefs and cares to Providence, he had found therein a sure rock of defence, and might calmly await all possible events. One remark he made greatly surprised me. His Majesty said: "When Lord Salisbury was here he came to me one day with a paper which he had written, and which his lordship said contained a summary of the evils which must befall Turkey if we did not accept the conclusions of the Conference. I read the paper, and at length I remarked: 'But, my Lord Salisbury, you have left no place here for God Almighty; you have not considered the possibility of His powerful intervention on behalf of suffering but faithful Turkey.' And I felt, as I told Lord Salisbury that, that we yet had reason and right to hope in the Great Ruler of the World. How right I am, the progress of events has shown. We prayed to be delivered from war. We dreaded the misery which war must inflict. We hoped such terrible bloodshed as war must cause might be averted; and we hoped that the Czar, guided by the religious books in which he professes to believe, would have refrained. But we were forced to fight, and God has helped us. To Him alone we give the glory. When I ascended the throne, I found myself surrounded by difficulties innumerable. I did not know how to escape them. In my perplexity I did what a man does who is assailed in his house with a dagger. He grasps the naked blade, though he knows it must cut his hand, in hope of saving himself. I grasped the situation—the result is in the hands of God. Yet do not suppose, in trusting to Allah, that I myself am idle. My first thought, on the resumption of peace, will be the re-establishment of the finances and the payment of debts, the improvement of agriculture, and the re-organisation of the forces of the Empire, and I will leave no effort untried till I succeed. I long to see Turkey peaceful and constitutionally governed. My constant

prayer is that I may be loved by my subjects, and may do them good. And, when this unjust war shall cease, I will labour for them with increasing energy, striving to give them a good government and a happy and prosperous future." Thus his Majesty the Sultan gently and graciously spoke to me, who had brought him news from his still inviolate stronghold of Plevna.

### AN UNEXPECTED VISITOR: A DEVIL. By SAMUEL GUPPY.

[Previous to the death of Mr. Samuel Guppy he forwarded for insertion in the "Spiritual Magazine" the narrative as under. It has been held in reserve till now, but its publication will stay the foolish and unlearned thinkings of many who dislike the belief in personal devils—they approve of evil, mischievous spirits, but dislike that the letter "d" be placed on the left-hand side of evil. What the difference is we cannot perceive. With such a narrative as this, we can credit the more easily the action of the "devil" in the church-yard, when Christ commanded the turbulent spirit to come out of the man.]

The Davenports felt themselves at home at my house. I was introduced to them as the author of a book which some friends have told me they had had pleasure in perusing—a book of which 10 times or 100 times the number of copies I ever authorised has been put in circulation. I asked them to my house—my friends know what that means—and they came whenever they had spare time. Ferguson said to me, one day, "Mr. Guppy, these young men are under great obligations to you; you have made them feel really at home in your house, and you have never asked them for a séance."

I did not want seances, but I wanted to study the men who produced the manifestations; but it really and truly turned out that the course I took was the very one to have manifestations—not stereotyped, asked-for manifestations—but those genuine ones which arise spontaneously when the medium is happy; in

fact, it is then that the spirits hold high holiday.

To those who were not acquainted with the Davenports, I may mention that Ira had a never-failing fund of quiet wit, besides being so good an artist, that it would have been a better career for him than mediumship. William Davenport excelled in carpentry, cabinet work—that is, he had talent enough for it, whenever there was need. As for Fay, he was a perfect Babbage, never so happy as when he was engaged in making up accounts. Otherwise, as candid, sensible, and unassuming

young men as you could find in a very long search. They had at times had to bear severe and unmerited rebuffs, and had

learnt patience and firmness.

Ferguson, who conducted the séances, was a most exemplary and worthy man; he had been a preacher; had been attracted to the subject, and finding the manifestations real, had devoted his life to it. Nothing short of a perfect conviction of the reality of spirit manifestations and of the thorough integrity of the Brothers would have induced Ferguson to have joined them. He left a lucrative position, where he was esteemed and loved, to accompany and preside for them. I before said that I never asked them for a séance; but, in fact, the result of their feeling themselves at home, made their visits to me, whether at table or in the billiard room, one continued séance.

Matters standing thus, when they told me they were going to Manchester, I said I would go with them, paying, of course, my share of the hotel expenses, at which they were very glad.

We got to Manchester, and, besides bed rooms, had a sitting room to ourselves. After they had given two or three séances, they told me that they had an engagement next day for one day at, I think, Nottingham, some 70 miles off; and asked me if I would accompany them. "Certainly not," I replied; "as I have now seen full 100 séances, I am not going to travel 70 miles and back for one; so I shall stay quietly in Manchester till you return."

The next morning, when I entered the breakfast room, Ferguson said, "Mr. Guppy, we are going to leave Ira with you; he has not been well for some days past, and Fay and William can do the séance at Nottingham." "Very well," I replied. So Ferguson, Fay, and William Davenport took their

departure.

"Now," said I, "Ira, we will have a pleasant day; first we will go and take possession of some photographer's room, and do a little photography; then we can dine; and then a few

games at billiards."

It being winter, and Manchester a very smoky place, we soon found a photo-studio at our service, and I made several of those duplicate positives; one was Ira pouring out a glass of beer to himself, in another he was holding up one fist and threat-

ening himself.

Leaving the photographer to put on the black varnish, we discovered a favourite dining-place of the Manchester men of business—generally we look upwards for angels, or any human approach to such beings—but in Manchester, down in a cellar, the best dinners are given; and all the service is done by the prettiest females the proprietor can find.

We did not hurry over our dinner, then we proceeded to billiards until it was dusk—"Now," said I, "Ira, we'll call for our photogaphs, and we'll buy an empty cigar box and go home to tea, and put the box, with paper and pencil in it, under the table and see if we can get some direct spirit-writing." We went into my bed room, and there was a good fire, and it was more cozy; as the varnish on the photos was not quite hard, we stood them up on the mantel-piece.

A smallish room, feather bed, with very high top to the bedstead, washstand, with under shelf one side, my trunk open on a long stool in one corner, a table before the bright fire, with two wax candles burning, and the tea on the table, and we on each

side—you see it all.

The ball or entertainment opened by a volume of "Mary Jane" jumping from my trunk to the window seat, I got up to pick it up, and while so doing, my dress coat and waistcoat came flying out of the trunk at me; I took them up, remarking to my invisible friend, that I did not ask him to unpack my trunk. stowed all in the trunk, shut it up, and resumed my chair at the table, but trunk and stool on which it was, marched off themselves up alongside the table. A second after, a nameless something, which was on the ledge, under the washhand basin and was not empty, was emptied on the floor, and rolled under the bed. "Arn't you ashamed of yourself," said I, "to make such a mess in a gentleman's room?" The reply that I, or rather we got, was that a tumbler, half full of water, which was standing on the washhand stand, was (the water), pitched at us. "Ira," said I, "we had better get our tea, for it is getting rather lively." We sat to the table, but the table began moving about: "Hold the table fast," said I, we did, but then the teatray began moving about on the table.—"We had better get our tea over," said I," else we shall get those things broken." So we hurried, much as people do aboard ship in a storm, and sent the things away. "Now," said I, "for our cigar box," and we put paper and pencil in it, and put it under the table (two candles and bright fire), in an instant a crash came like a heavy sledge hammer—the cigar box was smashed into little bits—at the same time a very loud rapping was heard. "It wants to say something," said Ira, and he added, "What is your name?" It spelt out, D-e-v-i-l. "Nice company we are got into, Ira," said I. "What do you want?" said Ira. It spelt out W-h-i-s-ke-y. "Do you mean to say," said I, "that if I order up a glass of whiskey you will drink it?" "Y-e-s." I ordered up two glasses of whiskey, with water. I tasted the one, and putting very little water in the other, I said, "Shall we put it under the table?" "N-o." "Shall Ira hold it?" "Y-e-s."

With one hand on the table, he held the glass of whiskey and water under the table, and in a few seconds cried, "By heaven it is drinking!" He brought up the glass, it was as dry inside as if had been wiped out with a hot towel. We took a candle and examined the carpet, but there was not a trace of moisture. "I should very much like that Ferguson could witness such a thing," said Ira. "Will you repeat this before Ferguson tomorrow?" said I. "Y-e-s." And so it did.

While we were at tea, Ira said "Look at the photographs;" they were all trembling, on the mantelpiece. Examining them, subsequently we found that the figure of Ira threatening his duplicate with his fist, was entirely erased, the black varnish and face having been scraped off apparently by nails. The whiskey having been drunk (or disposed of), "Now," said I, "Ira, let us put out the fire and the candles, and I think we shall have something lively." "I should be afraid to," said he, "it might take me up by the scruff of the neck." Of course, I did not press it, and we prepared to go bed when a loud knocking was heard, and it spelt out, "Look on top of the bed." The top of the bed was too high to reach, so I put an arm chair on the bed, and holding it, Ira got on it, and reaching his arm over the top of the bed, produced—the poker.

When the party returned from Nottingham next day, we related our séance, and all assembled in my room; and again a glass of whiskey and water disappeared in the same way. These occurences suggested to me to enquire of the Brothers whether similar events had occurred in their experience, and they told me that at home, in America, in their family circle, portions of vegetable food (Indian corn), &c., were so appropriated and

carried away.

If any of your readers wish to ask me how it was that the spirit played such pranks, I shall be happy to give them a correct theory, when they explain to me to me why it was the favourite pastime of young noblemen formerly to wrench off knockers, paint over sign boards, and upset watchmen's boxes; also how it was that when the Davenports gave a séance at Oxford, the lively young "fellows" wanted to break up their cabinet, but being baulked in that they broke up all the benches.

Real human nature is not that which you see acted on the world's stage—and under the masks and dominoes, furnished by Mrs. Grundy, Mrs. Propriety, and Mrs. Decorum, are spirits in the flesh, as ready for a lark as the one which favoured me and Ira with its company at the hotel at Manchester.

Petroleum or gas made from hydrocarbons is gaining ground for lighting purposes in smaller towns.

### Physical Phenomena.

THE TRANSIT OF VENUS.—The Parliamentary papers include a copy of the Report of the Astronomer-Royal, Sir J. B. Airy, "On the telescopic observations of the transit of Venus, 1874, made in the expedition of the British Government, and on the conclusion derived from these observations." This report contains a large number of astronomical data of great value, and is accompanied by illustrations of the various phases of the transit witnessed at the different stations. The general result arrived at is that the mean solar parallax is 8.760 seconds, which corresponds to a mean distance of the earth from the sun of 93,300,000 miles.

THE Museum of the Royal College of Surgeons of England has received as a present from the Hon. Charles P. F. Berkeley, the skeleton of a crocodile 15 feet 9 inches in length, which was shot by that gentleman last winter near Hagar Silsilis in Egypt.

At the Guy's Hospital conversazione, on Monday evening, a new Government filter, invented by Major Crease, was shown, which reduced strong tea and infusions of logwood to clear tasteless water. The nature of the filtering material is not made known.

THE sea-coast branch of the United States Fish Commission has been at work for some time. The steam tug Speedwell, a powerful vessel of 300 tons, commenced operations at Salem, Massachusetts, about August 1st. Unexpectedly rich results were obtained in that vicinity, embracing not only many rare forms of animal life, but much of practical importance to Several places were found abounding in fish the fisheries. previously unknown to the fishermen of Gloucester and Marble-Flounders of marketable size in immense numbers were taken of a species (Glyptocephalus cynoglossus) previously entirely unknown on the American coast. Leaving Salem on August 19th, it arrived at Halifax on Wednesday the 22nd, trawling and dredging the greater part of the way. In the course of this journey many new animals were collected of much interest to naturalists, among them several species of Greenland fish hitherto never detected south of that country.

MOUNTAIN CLIMBING.—In our number of August 9th, we briefly noticed the ascent made by M. Wiener, of the mountain Illimani, one of the highest—if not the highest—of the Bolivian Andes, which forms a noble object from the city of La Paz, and was formerly reputed (on the authority of Mr. Pentland) to have

an altitude of no less than 24,200 feet. M. Wiener, however, makes its height only 20,112 feet, while Mr. Minchin, as we have already observed, places its altitude at 21,224 feet. If the latter estimate be correct, M. Wiener has, we believe, not only made the highest ascent which has been made in the Andes, but has attained a greater altitude than has hitherto been reached on the earth out of Asia, and in Asia has only been beaten by Mr. Johnson, who some years ago got to a height of 22,300 feet in Cashmere.—Nature.

YELLOW MARBLE.—A precious limestone has been found at Tehachepa, Kern County, California, which is said to be identical with the "giallo antico" (ancient yellow) marble of Italy. The latter is highly prized by antiquarians, as the location of the quarry from which it was procured has been unknown for several centuries. The California stone is described as white with amber-coloured veins. A specimen has been presented to the State Geological Society.

INDIAN TANKS.—The restoration of the ancient system of tank irrigation in Ceylon—a work apparently pregnant with the largest and most beneficent results to the native population of Ceylon—is in process of being carried out by the Colonial Government of that island. More than a thousand years ago a system of irrigation, the most complete and remarkable that the world has ever seen, was in successful operation in the Low Country; and the object which the Government has in view is to restore to something like its pristine fertility a large proportion of the immense tracts of land—many hundreds of thousands of acres in extent—that for want of water have fallen into a condition of the most utter sterility.

Boring Power of Magilus.—We have received from Mr. Charlesworth a preliminary note giving briefly a result of his study of the genus Magilus, the remarkable testaceous gasteropod that is found immersed in the large hemispherical corals of the genus Meandrina. The current belief, as set forth by Sowerby, Owen, Woodward, and other authorities in molluscan biology who have treated of this coral-inhabiting molluse, is that Magilus in its young state effects a lodgment in a crevice of the Meandrina, and that as the coral enlarges, the Magilus extends the margins of the mouth of its shell in the form of a cylindrical corrugated tube, the growth of this tube and of the coral proceeding together pari passu, and consequently that there is no penetration of the coral by the Magilus at all. Mr. Charlesworth, however, finds that Magilus not only drives through solid masses of coral in any direction with apparently the same facility that the bivalve Teredo tunnels

masses of wood, but he finds that it even surpasses Teredo in its power of suddenly reflecting its shell and returning to the point from which it commenced its advance; and this bending back of the shell upon itself is not accomplished in such natural cavities as frequently prevail in large corals of the Meandrina genus, but in the solid mass of the coral.—Nature.

THE BRITISH MUSEUM.—It will be remembered that an interview was held at the end of July between the Trustees of the British Museum and a deputation, headed by Mr. Chamberlain, M.P., representing 60 Municipal Corporations, Liverpool, Sheffield, Birmingham, Blackburn, including Leicester, Wolverhampton, Cardiff, Bristol, &c. A similar deputation had previously attended on the Prince of Wales and the Royal Commissioners for the Exhibition of 1851. object was to obtain for the provincial libraries and museums loans or presents of works of art with special reference to the manufactures of the particular districts represented. The Duke of Somerset, on behalf of the Trustees of the British Museum, promised that a reply should be given in writing. This reply has been sent by Mr. Winter Jones to Mr. Chamberlain and circulated among the members of the deputation. Mr. Jones writes that by the statutes which govern the Museum the Trustees are not allowed to give away any part of the collections. Many of the most important prints have been photographed, and the same process is being constantly used. There would be no difficulty in affording to the several institutions throughout the country facilities for procuring photographic copies. same time, the Trustees have not any funds at their command for making casts, models, or reproductions for presentation to other institutions. With respect to loans, it is directed by the Act of Incorporation of the British Museum that the collections shall be always kept therein for the use of students and visitors. The great object of the institution is that it should be a repository of knowledge and an unfailing centre for reference and study. Visitors ought to be sure to find the objects they require. portions of the collection were circulated to all the towns throughout the provinces, this purpose could not be obtained. It is the certainty that an object once placed in the Museum will not be removed which gives to it its importance and value.

FOSSIL CRUSTACEA.—One of the latest publications printed by order of the Trustees of the British Museum is a catalogue of British fossil crustacea, with their synonyms, and the range in time of each genus and order, by Henry Woodward, F.R.S., of the Department of Geology. Such a catalogue has been much needed by naturalists. Mr. Woodward many years ago com-

menced it, but our knowledge of the bivalved entomostraca was so imperfect that it was delayed until the work of Messrs. Brady, Crosskey, and Robertson was published. It is interesting to compare the numbers in this catalogue with those of the crustacea included in Professor Morris's Catalogue of British Fossils, published in 1854. He recorded but 81 genera and 306 species of fossil crustacea, this catalogue gives 197 genera and 1,051 species, so that since 1854 116 new genera and 745 new species have been figured and described in Britain. With regard to range in time, the fossil representatives of the class crustacea take rank in antiquity among the earliest known organic remains.

# Ethereal Phenomena.

QUERY-PHYSICAL, ETHEREAL, OR SPIRITUAL. MAD?-In one of the padded rooms was a working man who had been rescued from the Seine. He had jumped off the Pont des Beaux-Arts in a fit of madness, brought on by the fire-water sold by the marchand de vin, in the densely-populated quarters of the city, as brandy. The thin, emaciated man possesses the strength of a Hercules when the fits are on him. Bound in a hideous grey strait-jacket, he had managed to roll off the leather-covered mattress. He had torn the blankets to shreds, and he rolled about on the floor, his feet beating a devil's tattoo in the air. He would spring to his feet, rush round the cell, beating himself against the wall, and shricking wildly. exertion seemed too great for him; he never tired, and for the last two days and nights he had been raving mad. His case was hopeless, and he would have been sent to the infirmary if his wild yells and struggles would not disturb the patients there. When he calmed down he would again be put on his bed. relations had been sent for, they had promised to come, but from all accounts the dreadful example set them will not deter them from drink, which has become a curse to the working classes in Paris.

In a paper in the Journal de Physique, on the spectrum of the electric spark, by M. Cazin, the author concludes that the electric spark in a gas contains incandescent gas particles, which give a bright line spectrum, and solid and liquid particles which produce the continuous spectrum, the former coming from the gaseous medium and the electrodes, the others from the electrodes and the sides near the spark. If the pressure increases, the solid or liquid particles become more abundant, and their continuous spectrum predominates; at last this makes it impossible to distinguish the bright gas lines, or, in other words, the latter, while the pressure increases, seems to dilate, and eventually flow together into one continuous spectrum. By making photographs of the spectra M. Cazin found his views confirmed. Of the nitrogen spectrum at ordinary pressure he photographed sixty-two lines, using nine cells in the battery giving the spark.

One of most interesting of astronomical events is the disappearance of Saturn's ring, a rare phenomenon, as it only occurs once in each period of 30 years. The next disappearance will take place in February, 1878; but the planet will be so near the sun that it cannot be observed, contrary to what occurred in 1848, when it was in opposition. The face at present visible will soon disappear, and the other will begin to be apparent. By the movements of the heavenly bodies the earth and the sun are now approaching the plane of the ring, and observations will become more and more difficult.

THE OPPOSITION OF NEPTUNE.—On the 28th of September took place the opposition of the planet Neptune. Since the day when M. Leverrier indicated the presence of that heavenly body down to the present time, Neptune has not described an arc of 90 degrees, although more than thirty years have passed. In fact, the year of that distant world counts not less than 60,000 of our days. Its distance from the sun being thirty times greater than ours, it only receives from the centre of our system one thousandth part of the heat which we get. Its volume is about eighty times that of the earth. Only one of its moons is known, and that moves in an opposite direction to ours, and in a plane much inclined to the ecliptic of Neptune. singular satellite only takes five days to make its turn in the sky, although it has a distance from the centre of Neptune almost equal to that which separates our own luminary from the centre of the globe. The greater velocity of its celestial revolution is due to the attraction exercised by the planet being much more energetic than that which the earth exercises on the body she draws with her into space. [What is attraction? Something; or—Nothing substanced.—Ed.

QUADRUPLEX TELEGRAPHY.—Some novel American telegraphic appliances are now being tried between London and Liverpool, the first trial having been made on Tuesday night with satisfactory results. The system is known as the quadruplex, and by its means four messages may be sent along one wire simultaneously. At either end there are two "sounders" and two keys, with four clerks, two to send and two to receive; and

by an ingenious arrangement a conflict of currents is prevented. Thus by the aid of this invention, one wire may be made to do as much as four worked on the ordinary system. The duplex principle is a valuable contrivance, but the quadruplex is twice as valuable.

ON THE COMING WINTER-COLD.-Having recently computed the remaining observations of our earth-thermometers here, and prepared a new projection of all the observations from their beginning in 1837 to their calamitous close last year results generally confirmatory of those arrived at in 1870 have been obtained, but with more pointed and immediate bearing on the weather now before us. The chief features undoubtedly deducible for the past thirty-nine years, after eliminating the more seasonal effects of ordinary summer and winter, are:— (1.) Between 1837 and 1876 three great heat-waves, from without, struck this part of the earth; viz., the first in 1846 .5, the second in 1858 0, and the third in 1868 7. And unless some very complete alteration in the weather is to take place, the next such visitation may be looked for in 1879.5, within limits of half a year each way. (2.) The next feature in magnitude and certainty is, that the periods of minimum temperature, or cold, are not either in, or anywhere near, the middle time between the crests of those three chronologically identified heatwaves, but are comparatively close up to them on either side, at a distance of about a year and a half, so that the next such cold wave is due at the end of the present year.—PIAZZI SMYTH, Astronomer-Royal for Scotland, Royal Observatory, Edinburgh, September 27.

Spectrum Analysis.—We have just received an account of a proposed new method in solar spectrum analysis by Mr. S. P. Langley, communicated to the meeting of the National Academy held in Washington. The essential arrangements of the apparatus make provision for two pairs of right-angled prisms of total reflection so disposed in connection with a spectroscope, that the spectra can be formed side by side of light from different parts of the sun. The spectra are arranged so that one is of light coming from one edge of the sun, and the other from a The instruments being in adjustment point 180 deg. distant. if these points are in the neighbourhood of the solar poles which are relatively at rest, all the lines will be continuous in both sprectra. But if the instrument is rotated till the light comes from points on the eastern and western sides of the sun, which are in relative motion, the solar lines will be discontinuous, the one spectrum looking as if slid alongside the other. The theoretic amount of displacement is about one-half such as is capable

of being measured by other existing instruments; and Mr. Langley in his communication expressed his conviction that this he should be able to measure with exactness with his instrument. He urged that instrumental error was impossible, as by this method solar and telluric lines are alike affected. At the time of writing his instruments had not been long enough in his hands to do work.

## Spiritual Phenomena.

PILGRIMAGE TO ARABIA.—The British Consul at Jeddah gives, in a recent report, an account of the pilgrimage through that port to Mecca and Medina at this season of the year. 1876 the pilgrims began to arrive in the middle of August, and the last arrival was on the shortest day. The number reached 38,779, showing an increase of 1,000 Malays, 1,700 North Africans, 2,200 Egyptians, and 1,400 Arabs from the Red Sea littoral, but a decrease of 1,500 Indians and 1,700 from Persia and the Persian Gulf. The assemblage on the "Eid el Akbar," or closing feast at Muna, was computed at over 200,000. This enormous concourse dispersed without engendering any epidemic, though among pilgrims who embarked at Jeddah smallpox was The Jarad, a small steamer under the Ottoman prevalent. flag, owned by the Jemada of Shelu, on voyage from Jeddah to the Persian Gulf with pilgrims, was totally lost off Leet in January, and out of some 400 persons on board only eight or ten were saved.

RESULT OF A DREAM (September 27th, 1877).—The following appears in the Dundee Advertiser:—About two months ago William Shanks, portioner, Clarkston, Airdrie, who was a very eccentric person, and who was better known by the name of "Shangie Wull," died somewhat suddenly. Although reported to be very wealthy, he was somewhat miserly in his disposition; but after his death no trace could be found of any personal property, though his heritable property was intact. His relatives searched the house diligently, but could get no trace of his pocket-book. One night last week a niece of deceased's, who lives at Riggerd, and who had been one of the searchers, dreamed that she saw a hole in the roof above the weavers' shop, where her uncle's cash would be found. Early next morning she proceeded to Clarkston, accompanied by a female friend, and getting permission from Mr. Scobbie, the tenant of the weavers' shop, to make another search, they had

not been up five minutes when they returned with the missing pocket-book, which had been found in the very place indicated in the dream. The pocket-book contained deposit receipts and other documents amounting in value to £520.

#### Editorial.

Spiritualistic Movement in the Churches.—A powerful gathering of some four thousand clergymen and laymen of the official Church of the Empire met last month under the leadership of the Archbishop of Canterbury, who was supported by the leading theologians of that body. The questions were useful and important. They were: Christian Faith and Sceptical Culture; On Practical Life; The Best Means of Promoting Toleration between different Schools of Thought within the Church; Intemperance; Education; Personal Religion; Church and Nonconformity; Biblical Study; Study of Prophecy; Trades' Unions; Sabbath; Lay Help, &c.—a range of subjects ample to develope the intellectual energies of more than the twenty thousand clergymen usefully engaged daily in their practical every-day duties, while mingling with their parishioners throughout the kingdom. As there are some amongst Spiritualists who have not yet a good word for the men whose education and opportunities excel those of their detractors, we have thought it well to put into a permanent shape, through the Spiritual Magazine this month, the why and wherefore of the movements of the Church of England leaders. Religion is forcing itself to the front. The political newspapers are compelled to report the advance of the divisional forces of Christian life—a life based on a life beyond physical death; so is Spiritualism based on a life beyond physical death; the leading differences being in minor beliefs, and the use of conventional expressions understood each in his school of knowledge. Christians say "heaven," and Spiritualists "summer-land;" Christians say "devils," Spiritualists "unprogressed spirits;" Christians (some say) "hell fire," Spiritualists "mental agony;" Christians (some) "worship of God and music," Spiritualists "absent from mortal life, present with our loved ones." It is not the duty of article-writing and platform Spiritualists to nag at Christians (who are really one with Spiritualists), instead of co-operating with them. Co-operating with them in overthrowing the Materialists, the Oblivionists; those men who deny the fact of spirit-life and power. Five or six hot-headed penmen, fresh from anti-Christianity, mistake their "mission," and have

by their barking ignorance almost destroyed the inclination in towns throughout the kingdom to examine the physical evidence of spirit-life. Instead of a national development, as in temperance, scientific, sanitary, and religious associations by local power—its main supporters, having no "financial motive," quietly retire to their churches and chapels to avoid the racketing nonsense, and avoid being known as Spiritualists. Christian Spiritualists surely must be ignorant that ghosts know their mission better than they. Spirits revealed themselves first in Christian families. Prayer, praise, and work were the seance mannerism of the first Spiritualists in America and England. Christians were the first instruments, and they cannot be deprived of that fact. It was only when some Materialists, fascinated by the newness of their spiritual perceptions, and being out of church union, and having spare time, in their earnest impetuosity found fault with everybody but themselves, and so gave a public tone to the belief that Spiritualists, as a body, were ignorant bullies, and irreligious. We write of that we do know, and testify to the serious injury our vital cause has sustained, and is still sustaining in the British empire and in America. The asserted millions of Spiritualists, as such, free from the churches is a gross falsehood, a clap-trap assertion of Spiritualism lives, moves, and has its being in stump writers. the churches, but, like all other associations not on the watch, knowledge gets toned down and lost, as scientific knowledge is every year of our lives; and in both divisions up has to come a rediscovery, a reperception every now and then. The recent and present rediscovery of human ghost-life and power has been, and is naturally, assailed, because not known to the assailants. The rediscovery has to be effected on human minds in various ways. A needle will do in one case, only an axe in another. Let not the needle-holder protest against the rough axe-holder—each for his work, God for both.

SPIRIT-POWER ON SLATES.—At present ghosts are not idle, pious and impious are at work on substances, animate and inanimate. Their voices are heard, their finger works are made manifest; they laugh at the heavy review articles groaning out their logic of ignorance. "Life can only live in flesh, therefore there is no life but in flesh. We cannot understand an animate Infinite, therefore an Infinite cannot be in existence." A few years ago the same "clever" logicians could not see gas, therefore gas was not. A few months ago England rang with the asserted proof of ghost-action on slates in the presence of Henry Slade; and the vigour of non-ghost fools applied the rigour of the law. Scientific bigotry, not ecclesiastical, gained

the day. The technical conquered the equitable. Were the ghosts defeated? No. The wrath of man simply made the facts more clear, and then they again began, and are carrying on the same plans in Holland and Belgium, and are into Germany as yeast working in that tub of materialistic atoms. Ghosts are bright and elastic, like the clouds they can pass over cities, towns, and villages with speed regardless of police-courts and prisons penalties. There are evidences that the Continent, England, and America are again to be earthquaked by spirit-power. Henry Slade on the continent of Europe; Dr. Monck, lately imprisoned for proving ghost-life and energy; and Mr. C. Watkins of America, are now the three-fold cords that are binding leading human minds to the Scripture principles of spirit-life action in the affairs of man. There appeared in the Spectator, last month, a statement by Alfred Wallace, "I washed two slates, I tied them together, when I had put a crumb of pencil between them, I, Dr. Monck, and a lady, in the light, placed our fingers on the top slate, Dr. Monck asked me to name a word; I named God. With a small or large "g?" Large. Crossways or lengthways? We all heard the noise made with the slate-Lengthways. pencil; I removed the fastenings, separated the slates, and found the word "God" as I had desired. Turn to America and we have Epes Sarjent, a well-known name throughout that country, calling on a quick-silver mortal, called Charles Watkins at Boston. "The slates were new, and brought by me, enclosed in covers; I held them out at arm's length, the light streaming into the room at my back; Mr. Watkins two feet off. writing came on the slate, and the last time the words were in four lines: 'My Dear Son,—God bless you, your Father who loves you dearly.—Epes Sarjent.' The old phenomenon witnessed many years ago by me, in the presence of the late Mr. Redman, was also witnessed by Epes Sarjent, in the presence of Mr. Watkins, thus: The visitor writes a number of names on little pieces of paper, the medium, sometimes in and sometimes out of the room; the pieces of paper are rolled up as if peas, heaped together in front of the visitor, then with the point of a pencil touching a pellet in the heap, giving the name therein. Ourselves, Watkins, and Sarjent have, away from each other seen and declare we have witnessed the same kind of phenomena, but we have the scientific shams in the clubs, simply like simpletons saying 'You did not.'"

THE TESTIMONIAL TO HENRY SLADE.—The illuminated address or testimonial to Henry Slade, of America, with the signatures attached, has been photographed, and those in England who subscribed to the "Defence Fund" £5 and above

will have a copy sent to them for their albums or for framing. A few extra copies have been printed, and we dare say may, in December, be purchased at 1s. 6d. each. The address was the path open to show our sympathy to Henry Slade, and our public protest against the despicable persecution through the policecourts by men who are without belief in the being of God, and without hope of future life; men who, if they could, would "burke" the right of private and public judgment, to avoid the chance of being found out NOODLES.

LIVING WITNESSES TO SPIRIT-POWER PHENOMENA.—1855 to 1864. First ten years. Irrespective of Creed. First List:

Mr. and Mrs. Rymer and Family, formerly of Ealing.

Mr. and Mrs. Howitt and Miss Howitt, Hampstead.

Mr. and Mrs. S. C. Hall, Kensington. Mr. and Mrs. W. M. Wilkinson, Hampstead.

Mr. and Mrs. Garth Wilkinson, Hampstead.

Daniel D. Home.

J. Enmore Jones and Family, South Norwood.

Benjamin Coleman, Upper Norwood. George Wyld, M.D., Great Cumberland Street, W.

Mr. and Mrs. Newton Crosland, Blackheath.

Countess of Caithness, Portland Place. Duke de Pomar, Portland Place.

Earl Dunraven, S W.

Lord Lindsay, S. W. Cromwell Varley, F.R.S., Beckenham. William Crookes, F.R.S., Mornington | Samuel Hockley, Islington.

Alfred R. Wallace, F.R.S., Dorking. Mr. and Mrs. De Morgan and Family. Mr. and Mrs. Cox, Jermyn Street, W. Captain Fawcett and Family, Bayswater.

Charles Blackman, Dewsbury.

Henry Bielfield, N. W. Thomas Slater, N. W.

Mrs. L. M. Gregory, Green Street, W. Mrs. B. Honeywood. S. W. Mrs. M. Hennings, Norwood. Major Drayson, Woolwich.

Mrs. Milner Gibson and Family, W.

Andrew Glendenning, South Norwood.
Dr. C. Carter Blake, W.C.
Dr. Ashburner, Hyde Park Corner.
Thomas Shorter, Hendon.
Thomas Shorter, Kentish Town.

Edward L. Blanchard, W.C. George Child, N.

Jacob Dixon, Great Ormond Street.

Lord Borthwick, S. W.

#### Passed through the doorway—Death.

Robert Chambers, Edinburgh. James Wason, Liverpool. Andrew Leighton, Liverpool. Weatherhead, Keightley. Rymer, of Ealing.

William Cox, Jermyn Street. Professor De Morgan, N. W. Dr. Elliotson, Conduit Street. James Smith, Originator and first Editor of Family Herald.

In December Magazine we shall give a list of living witnesses from 1865 to 1874. Of course the list will be incomplete, and possibly there may be the mingling of a few of the names in the second epoch which ought to have been in the first. have had to work the organ of memory very hard to produce Of course, there are scores of persons who have, in the lists. the quiet of home life, witnessed the evidences of spirit-power; but they have been so quiet, so fearful of it being known while Spiritualism was publicly opposed, that they are merely drops attached to companion drops floating down the river of life, useful but not important.

Spirit-power Phenomena.—Light séances are driving dark séances away, and the result we have so many years asserted would happen is in the process of realization. rascality of sham mediums perpetrated and perpetuated by doings in the dark are in the course of punishment. D. D. Home's séances in the light several years ago; Henry Slade's séances in the light last year, Dr. Monck's new class of séances in the light this year, prove that ghost-power is more than equal to the strain. Our article on Soul in the July number of the Spiritual Magazine, and the article on Mesmerine in this number, contain the evidences that prepare the human mind to perceive the possibility of the marvellous phenomena of ghosts seen coming out of the side of Dr. Monck while he was in a state of coma, as seen and vouched for by the Rev. S. Colley, Curate. young girl, who when out, clapped her hands and spoke, and then was seen passing into the body of Dr. Monck. Second: Samuel Wheeler, an old college friend, and a Baptist minister, who also came out of Dr. Monck's body, moved about, spoke, THIRD: An Egyptian came out, who and then returned. lengthened himself out to about eight inches taller than Dr. Monck, sat on a chair, and conversed with Mr. Colley. Mr. Colley sitting on a chair between Dr. Monck and the Egyptian, who after a while, bade them good bye, and went into the medium as the other two had done. There were four witnesses. These three human disembodied spirits, clothed with substance from the mesmerine—the soul substance of the medium and the atmosphere in the room, gave evidence that illustrates the marvellous New Testament narrative of seven devils being cast out of the possessed Mary Magdalene. The divining personal spirit who, at the command of St. Paul, came out of the girl. Of the verity of the narratives of three angels who appeared to Abraham and conversed with him; also of the Spirit from God who entered into Ezekiel, and by so doing, obtained complete command of his phrenological organs, and showed him by pictures, as in dreams with us, the things that were to The devil séance, as related in this number, tones us to the vital knowledge that, if we, as responsible intelligent persons, voluntarily chose to relish a taste for physical and mental rum. and have enjoyment with the jollies of the dram rooms, the class of ghosts who love the smell, will gain power, and the morals and intellect that yield will ooze out of our manhood, while by the ordinary care we manifest in choosing our associates as in social life, we choose the pure, the good, the intellectual, the devout; we tone ourselves—spirit and body—to be the companions of angels.