MIND IN NATURE:

A Popular Journal of Psychical, Medical and Scientific Information.



NEW YORK ACADEMY OF ANTHROPOLOGY.

The discussions at the Summer Sessions of this Society at Golden Hill on the Hudson, Aug. 26th and 27th, took a wide reach and verified the pertinency of the society's motto. "Humani nihil a me alienum puto. A paper from Dr. J. H. Raymond, professor in L. I. College Hospital, considered a "Curriculum of Study," and gave priority to Physiology and Anatomy. Psychic phenomena and topics pertaining to the Natural History of man are better understood after the student is grounded in these ele-mentary facts. Dr. T. D. Crothers superintendent of an Inebriate Retreat at Hartford Conn. read a paper on "Inebriety and Civilization," and later on, in the discussion of " Prison Problems,"added forcible facts drawn from five years professional connection with Albany Penitentiary. Convict labor, he said, not merely aids the State in the support of the penal institutions and so reduces the taxes on honest labor, but it has a curative moral influence on the prisoner, Idleness is a physical and moral curse. Opposition to prison industries has come from the drinking classes and their political manipulators.

The President, Dr. Thwing, reviewed "Pessimism" rather as a temperamental, pathological phenomenon than a philosophical system. Whether life is worth living or not depends largely on the liver. Moreover, what climate is to a country, temperament is to an individual, his fate. "American Business Life" was considered in some of its relations to climatic and social conditions; also as influenced by our political system. Doctor Dodge of Kingston N. Y. gave a paper on "Human Credulity" which showed that *faith-cure* is about as old as the race. The Secretary, Professor H. S. Drayton, M. D., read an admirable review of the newest and most striking physical and spiritual manifestations of what is called "The Sixth Sense." It appears entire in the Phrenological Journal, of which he is editor.

The members of the Academy are entitled to the Transactions and also copies of special papers in pamphlet form. The third annual meeting for election of Officers occurs October 6. Membership is fixed at the nominal sum of two dollars per annum.

What a man desires he easily believes.

MIND IN NATURE.

A. E. SMALL, A. M., M. D.

In taking a broad view of this subject, we must admit that there are two worlds, near to and mutually dependent on each other,the world of mind, and the world of matter, causes, and the latter in that of effects. The human form consists first of the human shape, perfectly organized in all its parts, natural in its composition This structure is evidently a mere natural covering, subservient to a higher human organization of mind and spirit, which infits it in every part and renders it a fit instrument for mental The mere form of man manifestation. "from the dust of the ground," was void of life until his creator breathed into him the breath of a living will and understanding, or in other words a mind thoroughly organized to operate in every part, and endowed with a creative conception which gave birth to forms of use in nature, for the human hand to execute.

It would seem evident that the operation of "Mind in Nature," is strikingly manifest in the wide scope of human history. It is reasonable to admit that man's terrestrial body is dependent on his spiritual for vitality; for "there is a natural or material body and there is within this a spiritual body,"-the former may resign its vitality, and crumble back to earth, but the spiritual body must be immortal, because it is the essential of human existence, and wears the image of that which the Apostle called "heavenly" This view necessarily leads to the conclusion that man, in the world of nature as to his exterior, lives at the same time in the spiritual world in a perfect human form, endowed with all the faculties adapted to that world and to which all the faculties of man in the natural world or world of nature sustains a perpetual anal-This consideration relieves us from ogy. the embarrassment of speculation concerning the mind, body and soul, and brings us at once into the presence of man, while in the natural world, as the lord of this lower creation, his body is material, a mere signature of his spiritual body or inward self, composed of that assemblage of spiritual faculties called *mind*.

Let us therefore look on the body as a type of the mind or soul. Its anatomy and physiology, exhibit combinations and number and designs and arts and functions of which the analogies of human history are but shadows. "How many designs or separate scopes of ideas of art could be counted in the human arm alone, which has achieved the deeds of history?"

The splendor and number of all the artificial achievments sink into insignificance before that constellation of glorious divine arts which have been lavished on the human hand alone, not to mention the other parts of the body, yet these shadows of man's power first lead us to the bright exemplars of essential art;—we are led to admire the model from the success of the imitation. And in the actions of man the powers of the body are understood, and in both combined, the mind or soul is at last justly manifested.

"Let us then look at his history broadly," says Kinmont. "We are astonished at the number of his arts—the complication of his actions—the millions of designs that have been struck, — the millions of contrivances which have been adopted to accomplish them, and all this, too, within the compass of one age—within the limits of one nation—unroll the chart of human history until a second age appears — a third,—a fourth, the same complication of arts, designs, successful or abortive efforts still;— but each successive age is marked with new features."

This forth-going mind from man's natural or material body stands out conspicuously in visible fruits in the world of nature, and is it not evident that the finite human soul or mind is the immediate source of the handy works in nature, which give an ultimate expression of its ideas? The impossibility of marking the boundary of human thoughts, except in the ultimate expressions of art, must be conceded, and this extends to the outermost bounds of civilization, *hic et ubique*.

We commenced with the idea of two worlds in mutual dependence—the world of effect, and the world of causes, or in other words, the world of nature and the world of mind. The world of nature has its sun, whose heat and light are everywhere reflected, in the mineral, vegetable, animal, and human kingdoms, and the world of mind or spiritual world has its sun, in which dwells the "great first cause," Jehovah God Himself, from whose divine love and wisdom is the out-birth of the world of mind and thence the world of nature in which is the ultimate expression.

When we reflect on man as the highest perfection on earth and the footstool of Heaven, we need not wonder that his mental agency is so conspicuously seen in nature. The whole natural world is but a theater or representative of the world of mind, and creation itself is but an out-birth of the divine and infinite mind, which majestically flows into works of his hand; hence man, body and soul, must be a finite image endowed with rational faculties and powers of execution, as may be seen in the vast extent of human accomplishments in nature. Even the lower grades of animated nature are endowed with mind or instinct, limited, but unerring, because it must be in each a portion of that infinite wisdom, through which the laws of nature become subservient ministrations in the animal and vegetable kingdoms. All the inferior orders of nature must therefore present in man their prototypes in the infinite creator, for all institutions, governments, employments and uses sustain a perpetual analogy to what exists in the world of mind, above nature, under the heat and light of that spiritual sun in which dwells the supreme divinity or as Milton expresses it:

"What should earth be but the shadow of Heaven, And the things in each to the other like."

A COINCIDENCE.

JULY 16, 1884, Mr. E. E. Barnard, the astronomer of the Vanderbilt University, discovered a periodic comet; he had just got to the observatory that night, and turned the telescope into the field, when he heard a knock at the door; several ladies and gentlemen had come to see the stars. He could not admit them, having just found the comet, and unless he worked with it at once, it would set before he could get its position. They said they would come again. July 16, 1885, he discovered a new comet, and had just got his telescope in position, when a knock at the door was heard. The same party stood awaiting admission; they had not been back in the interim, nor had he found a comet since the same night of a year ago. Mr. Barnard writes that he has had similar coincidences.

Is not prayer also a study of truth,—a sally of the soul into the unfound infinite? no man ever prayed heartily without learning something.—*Nature*.



THE SUPERNATURAL IN LITE-RATURE.

PROF. JOHN FRASER.

Strange, is it not, that the literatures of the most ignorant and of the most intellectual nations are most supernatural? Nations are but collections of men, and men are children of a larger growth. In childhood we live in one vast wonderland, where causes are blindly guessed at, and everything which we can not understand is invested with a supernatural guise. Take the early literature of any nation-take Rome and Greece, with their childish belief in the intervention of the gods; or the early Celtish, where every thunder-cloud is interpreted as a frown of Deity, and the evening streaks of fire that flake the western sky, as locks of some divine maiden, hovering between heaven and earth. Read "Ossian," and mark how deeply every line is steeped in supernatural hues. Not a change takes place in heaven, earth, or air, that is not surcharged with supernatural meaning. Or shall we turn to the more familiar Iliad or Æneid; to the Jerusalem Delivered or Don Quixote? In the two former we have splendidly exemplified the credulity of the youth of the world, when Olympian deities took a visible part in earthly warfare, and constantly intervened to shield their favorites from danger, or snatch them from hostile eyes in mysterious clouds of darkness and obscurity. And even in modern literature, how many traces of the same belief give a romantic air to some of our noblest works, as the instances of divine intervention in the Faerie Queene, and the opportune arrival of help in more prosaic form in scores of novels when the hero's or heroine's position becomes most critical.

Nor is it in prose and epic, in the Divine Comedy, Jerusalem Delivered, or Paradise Lost, that we find the supernatural most suggestively prominent. Our best dramas are largely founded on the supernateral, chiefly because to the latter belong those essentials of highest drama, or epic, the elements of wonder, admiration and awe. In the Elizabethan drama, what plays are most commanding? In Shakespeare, what tragedy so perfect as Julius Cæsar; so thrilling, as Macbeth? and Vittoria Corombona, and the greatest efforts of Jonson, Beaumont and Fletcher, Massinger and Ford, are those whose pages are most deeply steeped in the lurid light of supernaturalism. As literature grows older and civilization increases, this supernaturalism takes on new forms. A scientific people, familiar with the wonders of the telegraph, lightning conductors, railway and telephone, is apt to lose interest and stock in Oberons and Pucks, presaging comets and other disasters dire. Supernaturalism loses its childishness and assumes a scientific dress. Literature becomes steeped with the supernaturalism of science. The "Castle of Otranto" and Scott's "Monastery" lose their terrors, and with them a large share of their interest. We no longer believe these old scare-crows. Give us the metaphysical subtleties of Goethe's "Affinities," the semi-scientific conundrums of "A Strange Story," the psychological problems of "A Scarlet Letter," and "The House of Seven Gables," the philosophical diablerie of a "Frankenstein" the weird mysticism of George Macdonald's "The Portent," 'or even the mathematical diablerie of Edgar Allan Poe, and we are satisfied. The unknown being largely the supernatural, and the realm of the unknown being constantly encroached on and enlightened by the searching lamp of advancing knowledge, the supernatural varies in character with every successive generation. But until civilization reach its climax, until man become the master of all knowledge, the supernatural will continue to exert a mighty, though occult, influence on civilization and literature.

Of the supernatural in fiction, perhaps the best known instance is Mrs. Shelley's terrible story of Frankenstein, the impression made by which is akin to the feeling inspired by a perusal of Poe's tale of a certain cat that was the sole living witness of a murder, and had by accident been walled up in an outhouse. But stories of this kind belong to an old and exploded kind of art. We of the nineteenth century are too wise-too full of knowledge-to be frightened by "bogies." The most timid school child can pass through a churchyard without whistling to keep its courage up, and we persist in reducing the marvellous to the commonplace by the aid of common sense and a little sceptical insight. To this spirit of sceptical inquisitiveness writers, like Jules Verne, address themselves. They are literary jugglers who, under a show of explaining the supernatural by the aid of science, strive to vulgarize all the problems of the universe. Perhaps the best example of this spirit in modern fiction is supplied by the late Lord Lytton's "A

Strange Story," the weird and thrilling plot of which turns on the phenomenon of personal magnetism. Scottish national literature again deals largely with the supernatural, and many of the weakest as well as the most dramatic incidents in Scott's novels and poems are inspired by it. But by your modern reader, as by Lord Byron, the ghostly paraphernalia and wire-pulling of Scott's Idylls and Lady Avenels are looked on with contempt. If a ghost is introduced into a modern poem, or fiction, the apparition has to be scientifically explained. Your modern playgoer would resolve Lady Macbeth's somnambulism into the natural result of too much lobster-supper after midnight, and the gigantic plumes and theatrical horrors of the "Castle of Otranto" excite contemptuous laughter rather than wondering awe. Thus the supernatural in literature undergoes many phases. First, we have the childish supernaturalism of the Iliad, where everything out of the way is attributed to some supernatural cause. Then it takes on a scientific aspect; thirdly, a sceptical, and lastly, a critical and philosophical; and it is through this last phase it is now passing. Faith-cures, second-sight, mind-cures must be subjected to scientific tests, and be explained as clearly and as distinctly as a problem in mathematics.

FREAKS OF A WATCH.

A lady school-teacher had a delicately made little Swiss watch set in a bracelet. The face of it is about the size of a dime. It sets right over the young lady's pulse, and is the wonder and admiration of all her friends. But the little watch did not keep time, though it cost five hundred francs. The jeweler to whom it was carried, told the lady that she ought not to expect a watch the size of a peanut to keep time. The young lady noticed, however, that whenever she loaned her bracelet to her sister, the watch kept much better time, and when she kept it locked up in her jewelcase it kept the time almost as well as any time-piece. Her physician explained to her that the springs and enginery of the watch were so delicate they were affected by change of temperature and feeling in the young lady's body. When she became excited the watch doubtless went fast, and in her calmer moments it went slower. Upon investigation this hypothesis was verified.

CAUSE OR EFFECT. By T. G.

There was a time when even the most profound thinker, when the wisest man among his people and of his time, was unable to comprehend, to measure, in other words, the dimensions of the planet on which we live. Now, science has reduced what once seemed boundless expanse to dimensions which can be so well demonstrated that we can wear miniature representations of this world of ours as charms on our watch chains; and so familiar have we become with the looks of the earth that we consider it part of a common school education to learn to mold in clay representations of continents. Belief had nothing to do with bringing the earth within the grasp of human comprehension. On the contrary, the knowledge of our earth derived from the foundation of that religion which is claimed to be the cause of modern civilization, namely, from the Bible, is the very opposite of that which science, that is, in this case, investigation and careful obserservation of ever-recurring phenomena, has established to be a fact and forced the defenders of belief to admit as such. The Bible made the sun, the moon, and the stars revolve around our earth; but science has shown us that our earth is far from being the center round which the world revolves, having to travel through space round the sun, and being one of the smallest of the countless firmaments which form systems far larger than our own solar system. The latter, insignificant as it appears to the modern scientist, could not be comprehended by the human mind less than five hundred years ago. Yet, to-day, we expect a high-school graduate to be able to so well comprehend the solar system, and its relations to the rest of the world, as to explain it by word of mouth and by diagrams. Would it have been possible to obtain this knowledge, to conquer the apparently boundless domain of the universe and to bring its dimensions within the pale of human comprehension, if the investigators had clung to the teachings of religious faith, and had made the declaration that this earth was the world and all else subordinate to it, the basis of investigation? Was it not only by studying the varying relations between the earth and the sun, that the former's dependence on the latter was ascertained? Was it not

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only by noting the varying views of the sun from different points of the globe, that the latter's form and dimensions were discovered? It was not speculation, based on what was represented to be divine revelation, but untiring, patient observation of very material and tangible facts which reduced boundless space to comprehensible dimensions.

Of late years, science has commenced to survey the realm of the human mind, of this wonderful something which has conquered boundless space, and which seems so unfathomable that the majority of socalled civilized humanity-which, by the way, is but a very small minority of all there is of the human race living on this globe—calls it blasphemous to look on the human mind as anything else, than as something of direct divine origin, as something entirely different and distinct from material existence. But investigation-and there is no science without investigation and observation, no scientific truth which is not based on material facts-can not always be considerate, and as the human mind is human and therefore thirsting for conquest, and having conquered the universe, as it were, is Christian enough to want to conquer itself, the horror and indignation of the majority must not stop the minority from carrying on its investigations on the same principles which were applied to investigate the world in which we live. Having become tolerably well acquainted with our surroundings, we are now bent upon learning something reliable about ourselves, about the why and wherefore of our existence. Can we get this information by believing the old traditions about the origin of our race, about the origin of sin, about the sacrifice offered up to redeem us and protect us from the wrath of that same power which created us and permitted us to be tainted with sin? Can we, in short, use as a basis for scientific investigation the firm belief and conviction that our mind, that the human race is of divine, that is of immaterial, of supernatural origin?

Belief, faith, trust, the implicit confidence in some higher, incomprehensible power has done much for humanity. They have inspired deeds of heroism, of unselfish sacrifice; they have aroused all there is noble and good in the human breast, but they are also responsible for untold misery; they have retarded the progress of the

world; they have enslaved whole nations and made them the chattels of designing mortals; they have estranged brothers and sisters, parents and children, husbands and wives; they have blessed on one side, damned on the other; they have done so for centuries; they are doing so to-day; and, for all that, they have not quieted a single doubt, have not answered a single question. In the ecstacy of faith, in the hysterical excitement of prayer, the answer seems to be forthcoming, but it is only a phantom and no answer will there be to anxious hearts; no reliable guide will there be for the direction of the human mind, until science has taught us what mind is. Belief will never do it, however plausible the arguments based upon its assumptions may appear.

Now, then, how are we to learn? In the same way in which we learned to know the principles on which this world with its countless suns does move. By patiently watching the phenomena recurring every day, by observing the cver-changing relations between the human mind and the rest of the world. No matter who made the mind-we don't know who made the world, but know fairly well that it does exist-first, let us know what the mind is, and then the rest of the search will be so Let us try to forget the much easier. teaching of religion, that the mind is something different from the rest of us; that it is equivalent to that divine breath which, according to the old book, gave life to the clay formed by Him in His own image, and let us profit by the experience of the investigators of the universe. Let us seek a natural, a material solution for all the phenomena which we ascribe to the action of the mind. In other words, let us, for a starting point, admit the possibility of this proposition that that which we call our mind is not the cause of our existence, is not something which came from some unknowable region, and which will go again to some unknowable region, but that it is simply the effect of our existence, subject to all the physical or material conditions which regulate the development of our physical bodies, growing wth the latter, striving with the latter, suffering with the latter, and finally ceasing to exist when the latter's conditions for existence are exhausted, and we remove the entire subject from the realm of speculative into the domain of experimental philosophy.

It is not the writer's intention to develop

at present his theory of the material origin of what we call mind, and to attempt, in doing so, an explanation of many of the phenomena with which psychology is wrestling, but what he has said may serve to prepare the reader's mind for a line of thought which may give satisfactory results to all earnest thinkers, however cruel it may seem to those who prefer the pleasure of emotional sensation to the hard work of sincere thinking and honest observation. But even the latter class will be ready to admit, after having given him a hearing, that the writer has been seeking honestly after truth and is anxious to help others who are doing the same.

INSPIRATION.

EMMA ETHERIDGE BARLOW.

It is admitted that great rulers, great discoverers, great authors, great philosophers, great orators, great preachers, and great poets, are, in rare and impassioned moments, inspired.

But what of the mass of humanity; are there no divine gleams for them? Shall we note the inspirations of the mighty, and leave untold the upliftings of hearts dwelling in by-places, and doing earnestly God's humblest work, grandly bearing the fruits of the light of love which lies deep within the recesses of every heart?

See the everywhere mother, when weary and in pain, and every nerve strained to the uttermost with care and suffering, and mayhap the heart bowed down by a loveless home, and the last hour of earthly existence looked forward to as a glad release. Thoughts of her God sweep over her soul, stirring the inspiration within. She sees and accepts the tuition of the Great Tutor, and, clasping the dimpled arms of her babe about her neck, and pressing its soft cheek to hers, she is enabled to again take up the inevitable for the child's sake; though she may only find rest for the weary body in the grave, and liberty of soul in the Great Hereafter.

Put the wrought inspirations of these mothers in the land, and also those of our thousands of noble farmers, mechanics and business men, side by side in value with those of the poet and the priest, and it will stir all civilization to believe in their own inspiration, and make the world healthier, stronger, better, happler.

MENTAL CONTAGION.

URSULA N. GESTEFELD.

Is there such a thing? is likely to be the first thought of the reader. That physical contagion is a reality, he is sure of; for others found that out long before he was born; and constant developments are taking place in that direction every day; witness the present propagation of germs. And there is the usual disagreement between equally learned and honest men as to the power and right use of those germs. On one point they are all agreed; that there is such a thing as contagion. No one has yet found a way to overcome it, for even the late experiments in inoculation have not settled the question.

If contagion is a physical action entirely, why does one person exposed to it become ill, and another under the same conditions, escape such consequences? "Because the system was not in proper condition to receive the contagion," it is said; "it was able to resist it and throw it off." Very well! what determines that same condition of the system, and what is the "system" anyway?

The material body, with its wonderful mechanism, and its various functions, carried on with the precision and regularity of the most cleverly constructed machinery, is what is generally meant by the word; is it not? But all machinery must have a builder, and it must have a motive power, or it is silent and motionless. This same wonderful machine, the human body, has its motive power; the mind, say we. And the union of mind and body is life.

Do we not commonly think of mind as in the body? It is full of life, we say. Did a surgeon in his earnest searchings throughout the body, ever find the minutest particle of mind or life? Has vivisection, with all its clamored-for beneficial results to the human race, ever revealed them? Were that operation to be performed on man instead of upon the inferior animals, would the operators be one whit nearer the discovery? Were a delicate and complicated piece of machinery to be taken carefully to pieces, bit by bit, would its builder be found in the process?

The motive power of the body is not, and never can be found within the body; that, is acted upon; it never acts from within, and no power within the body determines its susceptibility to contagion. If

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contagion lie in a living germ and it is developed when the latter is introduced into the body, the effect must be the same under all circumstances. If the condition of the body when the germ is introduced determine the result, sometimes one way and sometimes another, then the power does not lie in the germ, and whatever determines the condition of the body, must govern the result; and a long stride toward the mastery over contagion is gained, when man's mental authority over the body is recognized and used; when we cease to look upon the body as man, and consider ourselves at the mercy of disease, to be destroyed or allowed to live as it wills.

What is the result of continued researches into the nature and development of disease? Multiplications of its forms, which, when discovered, named and given to the world, appear with a rapidity which testifies to the fertility of the soil in which the seed is sown. How many men have spent their lives in making such discoveries, toiling for the good of the race as they supposed, sacrificing themselves and all they possessed, to that end, only to hand down to future generations new names for new complications, which bear fruit in their turn as if in answer to a command to increase and multiply.

Great advances have been made in medical science, we say, with each succeeding generation, and we point with pride to our magnificent hospitals, and our fine insane asylums, monuments to our philanthropy and benevolence as a nation and as citizens, and they are monuments also to what? —the effects of mental contagion.

Think of the years on years of laborious study and research into the causes of dis ease, and their remedies, all spent in the belief that cause and cure alike are found in material things only; and these investigations have produced but one sure result : constant increase of disease under new forms, with new names, a never-ending supply of new material for investigation.

Imagine for one moment a community of people nearly isolated from the rest of the world, a comparatively healthy people, living that life of quiet contentment which ignorance of any other brings. Let a person visit that community who brought information of a certain disease of which they had never heard, who expatiated largely upon its nature, its symptoms and its effects; who described them all with a vividness that made them real to his hearers, and what would be the effect of the information thus brought to them? The appearance of that same disease within a longer or a shorter time, to a dead certainty.

The present course of investigation of disease, tends but to increase the evil; for it starts with the assumption that evil is man's natural foe, and pretty sure, in the long run, to be the conqueror, and the balance of power will appear to be on that side till man attain to a sense of power over it; till he arrive at a realization of his divine birth-right; "dominion over all the earth." By yielding to the claims of material sense, that sense which tells us that pleasure and pain are in the body, that man lives or dies, according to his obedience to the material law and his good luck in escaping disease, we have sold our birth-right for a mess of pottage.

If flesh and blood, bones, brains and muscles are man, the loss of a leg or an arm lessens a man; and the loss of both legs and both arms, and a portion of the brain and lungs, can not leave enough of a man to entitle him to the rights of citizenship: nevertheless, a man enjoys those rights and all others recognized as belonging to a responsible being, so long as he — as we say — "has his mind." We instinctively recognize there, the survival of the thinking principle, as man, apart from his physical appearance. And even when no sign of that can be detected, when all action in the body has ceased, when every sign of life has apparently departed, when skilled physicians have pronounced it dead, instances have been known of a return of life to the body. So long as the vital spark is there, we say, we live. Ah ! but that vital spark ! what is it? Its effects alone are apprehended by our material senses; itself is beyond their knowledge.

We speak of being alive to-day, but perhaps not to-morrow, and in the same breath talk about eternity—of eternal life. If there were the lapse of a moment in life, it could not be eternal; we do not enter eternity through death; "the kingdom of heaven is at hand;" we haven't got to wait for death to transport us through boundless space to a locality where only happiness and peace are to be found. We can enter into the kingdom and find them here. Immortality for man is the *now*.

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Man's material sense of things is all that dies, and we need not necessarily realize that, through a fever or consumption only. We can attain to that realization through the understanding of mind and its powers, and so work out our own salvation alike from sin, sickness and death.

SPIRITUAL-FORCE. Romaine C, Cole.

Much of the phenomena which are classified under the head of Physical Science has within recent years been deduced to the basis of molecular-action, and according to Professors Thomson, Tait, Helmholtz and others of our foremost physicists, we have every reason to believe that the ultimatum of Natural Philosophy will be the resolution of all material phenomena into Molecular Dynamics. Strictly speaking, however, the term Force is more applicable than that of molecular-action, for the molecule has given way to the vortex-ring, which makes up that inelastic, homogeneous fluid that permeates all space, the demonstration of which is regarded as the crowning effort of those most subtle of mathematical minds-Helmholtz and Thomson.

Judging, then, from the scientific tendency of the day, we are fast approaching the time when the definition of Physics will be changed from the "phenomena of matter," to the "phenomena of force;" for if all matter as perceived by us be but the result—nothing more or less—than variable forces, how can it be otherwise?

The questions naturally arise, therefore, "what is this force; whence does it come; what is its modus operandi in the production of the infinite variety of things which make up the mineral, vegetable and animal kingdoms, together with all the other phenomena that man is cognizant of ; finally, has its existence always been, and hence ever will be, or are its genesis and government due to Divine Power?" To all these questions Science is absolutely silent. When we ask what a gas is, there is vouchsafed to us just enough of an explanation of some of the properties of a gas, that will serve to establish the theory of vortex-rings. But as to how this force acts in order to make one gas appear so different from another, as to what variations or combination of forces are necessary for the production of the solid, liquid and gaseous states, organic life, consciousness and the infinite phenomena of the human soul-there is this same, dead silence. It is all force and there it ends.

The utter helplessness of science at this stage of her progress was well illustrated by Professor Tyndall not long since. At a London dinner-party, which was shared by the professor and a prominent New York divine, the latter referred to a recent lecture of the former, in which he stated that Science had at last come upon a great gulf, over whose immensity they could see no signs of crossing. "I should like to ask," said the minister, "how you feel, professor, when you stand upon the brink of that gulf?" "Well, sir," answered Mr. Tyndall, "the fact of it is, I tremble."

Man is not satisfied in being told that one kind of force combination will produce the leaf of an oak, while another kind evolves the petal of a rose, for if left here he is no better off than he was before. He possesses a thirst and capacity for a thorough understanding of how this force acts in all its variations, but whether this thirst will be ever gratified, is a question that a future life alone can solve. Science has at last reached the region of the great unknown, and in so far as the real essence of things are concerned, she can tell us no more than what was known a thousand years ago. What we do know is, that by putting this and that together we get certain results; further than this we know nothing; and in so far as propogation of the arts needful for man's worldly wants is concerned, the science of the future will find her legitimate field on earth.

From present indications, Novalis may not have been so very far from the truth after all in doubting the real existence of a tree, as a tree, when he beheld it; for if all is force, what is a tree but the resultant of certain force impressions in some mysterious way upon the sensorium that give rise in our minds to the image of a tree, and an image only. "Ah, but we can see it as it stands there and can further prove its actual existence by touching it !" "Verv good, but how do you know you see or touch it? Do you mean to tell me that you can see force? We are only cognizant of the results of force, never of force itself. Life may be much more of a dream than you think." So far as science can prove to the contrary, transcendentalism is nearer the truth than any other known philosophy. In fact, her course has been headed in this direction for some time past.

What, then, do the scientific revelations of the nineteenth century teach? Do they not clearly show that the tendency has grown more and more toward the etherial? for is not force rather of a subtle agency. to say the least? and if the etherial, why not the spiritual? Would not the term Spiritual-force be far more intelligible than simply force alone? All that we see about us shows a high degree of intelligence in structure, function and maintenance, and who would attribute intelligence to force, when force to intelligence sounds so much better?

In thus suggesting the term Spiritualforce as forming the basis of all phenomena, physical as well as mental, in contradistinction to that of mere dynamics, I do not attempt to affirm thereby that science will be enabled to read her graduation marks more closely, or determine with greater accuracy the How or Why of things. Their true inwardness or actual workings, will ever continue to remain the great mystery that always has been, and the sooner science makes this inevitable acknowledgment, the better for the integrity of science and the progress of the human race upwards. That she is gradually but surely being brought to a realizing sense of this view is fully attested, I think, by what has already been said. That all is force, no one can doubt, but the recognition and adoption by science of the word Spiritual, before it, would at once give philosophy a more substantial basis to stand upon and, freed from the shackles which have hitherto bound her so closely to earth, she might rise to far greater heights than were ever attained before. Conclusive as the fact remains, regarding the limits of mortal intelligence, there is, nevertheless, a certain moral corroboration, as well as poetic exultation, in thus viewing the whole realm of nature as the production of Spiritual-force, which can not be derived from any other basis. What a greater value the meaning of the old term force takes upon itself, and how different the aspect of everything becomes! The thousand and one beauties which we daily see in the floral and insect world, together with the wonderful adaptation of their parts to the performance of the functions for which they are designed, at once become natural and in accordance with reason Blind force alone is not reasonable, but Spiritual force implies reason behind it, and in this lies the satisfaction which the adoption of the latter term by | long continued efforts to acquire this power

science would give to man, even though his earthly investigations and knowledge ended with it. Then, too, would that question which is of the greatest concern to manthe immortality of the soul-become a scientific question, which can not strictly be said of it now. The premises of the argument rest on an entirely new foundation and a surer one; a foundation which has the sanction of Science as a fact and is recognized by her as accounting for the great all.

If an object be altogether different from the state which the senses make it known to us, then we have every reason to think that there may be worlds without the scope of these senses, and that the senses themselves should not be trusted as to the degrees of reality of things. If the phenomena of mind and matter be but the manifestations of force, the step to the immortal part of man becomes a short one. Its demonstration is as consistent as anything that we think we actually see or feel. But if this force is spiritual, then the moral probability of the fact of the soul's immortality is greatly increased and the step referred to becomes an imperative one.

Cleveland, Ohio.

IS MAN DEVELOPING A SIXTH SEN SET

HELEN EKEN STARRETT.

Some friends were discussing the statement of evolutionists, that new organs had been developed by the necessities of the environment in the animal creation; as for instance, feet on reptiles by their efforts to progress on the land. One who was skeptical as to such assertions asked: "If reptiles and the lower forms of animal life have had the power to develop new organs to meet new conditions, why is it that man, the highest animal of all, has no such Why can be not, for instance, power? develop wings by efforts and desire to fly?

This question was met with silence on the part of the evolutionists, but one who listened said: "It has always seemed to me that if man were to develop any new faculties or powers in the world, that development would be in the direction of power to cognize or perceive the spiritual or unseen. Moreover I give it as my opinion that man is developing and gaining this new power. The evolutionists tell us that new organs and powers were developed in the lower stages of animal life because of strong and

or these organs. In the same way man is developing the power of spiritual perception through a mighty desire to know something of spirit, of life beyond this life; and I believe he is gaining the power to perceive and know facts and truths heretofore unrecognizable by any of the senses or organs possessed by him."

The idea was new to those who heard, but certainly there is a reason for entertaining it. We all know that as man advances in refinement and knowledge he becomes more and more sensitive to the subtler influences of mind and spirit, People are attracted to or repelled from one another by an entirely invisible, indescribable power. Many of us realize the fact of this attraction or repulsion, and know it to be a fact, to whom it is an invisible mystery. If, then, a fellow-being whom we know to be truthful, tells us that he can perceive an aura surrounding every human being, which attracts or repels, harmonizes or antagonizes with the aura of other human beings, why should we scout at him as a fanatic or lunatic? May it not be that he is only developing a new power, a new faculty, a new sense?

Again, there are thousands of men and women, and their number is constantly increasing, who tell us they can perceive spiritual existences. They tell us they hold converse with and even see and feel the disembodied spirits of those who have passed out of this life. This much is certainly to be said of those who claim to be possessed of this new power. They experience a happiness in their belief, a freedom from the fear of death, which all other human beings may well envy them. To all who are thus assured by facts in their own experience of the reality of the continuance of life and personal identity beyond the grave, of the spiritual body and possibility of intercourse with those who have gone before, death has lost its sting. The grave is only a covered bridge leading to the life beyond. Shall those who can not see or feel or hear such manifestations deny their reality? Often, perhaps in a large majority of cases, such power seems to be gained in response to the deepest and most earnest yearnings of the sorrowing human heart, agonizing towards the dark unknown of death. If, in response to such yearning and eager longing, the spiritual vision is quickened so that it perceives what lies beyond the realm of the

bodily senses, would it not be more reasonable to attribute such enlightenment to the pitying beneficence of the Father of spirits, rather than to self deception and delusion?

Nothing is more clearly recognized by the scripture than the fact of spiritual existences; nay it is taken for granted throughout the entire old and new testaments. Christ met and talked with Moses and Elias. Paul heard a voice out of Heaven, and saw the risen Christ. Peter was led through the locked doors of the prison by an angel of the Lord. Paul declares that we are compassed about with a great cloud of heavenly witnesses, spirits of just men made perfect. He declares that these are ministering spirits sent forth to minister to those who shall be heirs of salvation. Why, then, do Christians fear to acknowledge the possibility of realizing in their own experience the truth of spiritual companionship and communication?

Among modern writers, two have done much to prepare humanity for the acceptance of any new revelation that may be in store for it in this direction. These are Mrs. Oliphant, of England, author of "The Little Pilgrim " and "Old Lady Mary," and Elizabeth Stuart Phelps, of this country, author of "Gates Ajar," and "Beyond the Gates." However these books may be regarded by those skeptical of the possibility of spiritual phenomena, this much is to be said of them; they have given an entirely new turn to the imagination in its endeavors to picture the life beyond the grave. Heaven is no longer a vague, sepulchral, cold, awful place; the human spirit dwelling there is no longer "several feet of mist" as Oliver Wendell Holmes once facetiously expressed it. Heaven is a real locality, with mansions and employments, and human loves and solid realities. The easiest part of death, the separation of the soul from the body, in all probability is entirely painless. The soul does not shoot off into cold, cheerless, dreadful space; it is tenderly received by ministering spirits. How sorrow and anguish would be comforted by the belief that the departed one still hovers lovingly near, longing to see the tears dried and the grief soothed.

In all of which teaching there are warnings and encouragement even to those who have never for themselves seen or heard or felt, or who cannot believe in the possibility of the development of this new sense in man.

INTIMATIONS, LIMITATIONS, PRECOG-NITIONS.*

BISHOP CLEVELAND COXE.

To me there are great intimations in what are called the properties of matter. There is a dull, inert mass, to all appearance; but no ! it has the property of attraction in a very exceptional degree, and with marked elective affinities. Passed over a floor, sprinkled with the dust and dirt of mechanic toil, it lifts up particles, and even bits of iron, secreting them from other fragmentary material with an unerring elective force. "Oh ! yes," you say, " it is a magnetic stone; we are familiar with its properties." Precisely so; and, if you were not familiar with its properties, you would say, "A miracle;" or, more philosophically, you would say: "Here's something You give it a name; you call the preternatural." stone a "magnet," and you cheat yourself boasting of your familiarity with its "properties," as if these made it any less mysterious. All "properties" are mysterious till we become familiar with them; nor, to a thinking brain, are they any less mysterious even then. All Nature being a mystery unfathomable, how can we deceive ourselves, as we always do, when we rest in the superficial knowledge of properties and phenomena. Science itself is empiricism till it goes further and assigns or, at least, seeks a cause.

We rub amber and find it, in certain conditions, magnetic; its property gets the name of electricity, and we leave off marveling when we have given it a name. In other matters we talk about "elective affinities," and are equally learned and empirical. The whole mystery of secretion, in plants and animals, gets a name. We detect certain properties in glands and vessels of organized matter, and again we look learned and are scientifically empirical, and are contented to be so.

These things intimate a world of powers and forces, and of possible powers and forces, which are not limited by our immensity of ignorance. But they prove to me that the realm of the preternatural is unfathomable. There exists-that is to say-an infinite store of forces, powers, capabilities, or what you please, all about and beyond those which we recognize as natural, which are not less real and operative, and which may, at any time, be called to work in with and through what we agree to recognize as nature, only because we are familiar with it. How profoundly does a great thinker object to this empiricism about Nature, of which he demands the cause, and asserts it to be mind anterior and superior to matter; mind, not necessarily an Infinite Mind to begin with. There may be mind, in Nature, so he supposed, to account for all these properties. At any rate, thus he talks, sub-* Copyrighted.

lime creature that he is, against his will, empirical, often, but always struggling into light and truth.

He asks—" This word *Nature*, is it wrong? Why?" Answer ; " Because those who use the term mean to say that *Nature* is the first creative power."

So pronounces the majestic soul of Plato, who profoundly feit that inert matter can have no properties, and can exert no forces without preëxistent mind, somewhere. Thus he advanced beyond the sophists, who cheat themselves with words, and recognize nothing as before and beyond matter, and who affirm that the argument, from design or art, in nature, proves nothing or proves too much. He replies, as common sense exacts, that when we speak of Nature we talk nonsense unless we mean mind somewhere, behind or above matter, energizing and enlivening it. It is not all one to stop with matter, or to stop with mind, when we search for cause. Matter harmonized, organized, and reduced to law and order, absolutely demands and exhibits mind, somewhere.

Arguing with the sublime Plato, who is but a child of Nature, prepossessed with no Christian ideas, we must regard those as sciolists and sophists in philosophy, however admirable they may be in their material investigations who have no philosophy of the cause, and who fail to perceive what their own intellectual powers imply; who reduce the power of thought itself, to the operation of matter, arranging no *rationalc* of this operation, and whose investigations carry them only as far as their five senses permit them to explore.

Once I lived near Laura Bridgeman, and was able to visit her, as I did not infrequently. What thoughts that interesting creature inspired me with concerning the soul. Blind, deaf and dumb, and almost destitute of taste, she might have lost the faculty of smelling, also, as many, otherwise healthy persons, have done. Glory to God ! and praise be to Dr. Howe, his servant, for his work, in drawing out that imprisoned spirit, and sowing it with ideas derived through the senses of others, to which she was otherwise an utter stranger. But now it is conceivable that all mankind exist in just that state, without any ideas derived from external auxiliaries. Let us suppose a race of persons otherwise like us, but destitute of the power of smell, taste, sight, and hearing, unable to speak, and with only the sense of touch. Still that race would be human, and the soul within would be engaged, by that alone, in feeling after external Nature and Nature's God.

Two reflections occur to me in view of this conception. One is that we are all prisoners of matter, in this present state of human existence; prisoners somewhat enlarged, as compared with Laura, it is true, but still cooped, cabined, confined to a very dark house, with little power of looking out or of getting light into our essential nature, whatever that may be. The other reflection is, that, Dr. Howe was a supernatural being to Laura's first impressions, no doubt, though we know that, with respect to her he was only a preternatural being, nothing supernatural about him. I am inclined to think much which the ignorant would call supernatural is, in like manner, with respect to ourselves, only preternatural in fact, and that, if we had ten or twenty more faculties added to our ordinary ones, we should find them preternatural no more. Imagine Laura endowed, first of all, with a healthy faculty of taste, then with hearing, then with sight; what worlds would open to her with each of these successive gifts How much more "Nature" would signify with each additional endowment. Ilow the marvelous and supernatural would roll away, like mists and clouds, before the dawn of rising intelligence. Now I suppose that the soul, emancipated from matter, may come at once into such daylight, and that here we see "through a glass darkly," even with the educated use of all our faculties and powers.

For we have many hints of what we shall be when we get out of this chrysalis state; hints, too, of the worlds that lie beyond. Our fashionable scientists are, at best, a parliament of chrysalis minds, determined to know nothing apart from their chrysalis nature, although if they would give heed to it, their worm estate is ever intimating wings that are coming, like the tardy efflorescence of the Agave, and even the earth, in which they delight to grub, is always intimating to them that there is an ethereal atmosphere in which they are destined to soar. Who shall deliver them from the body of death in which they so delight to grovel and to grub?

Let us look at some of these intimations, and that not with the vague curiosity which stares and wonders and forgets. Let us never cease to experiment and to inquire. I am persuaded that the day of these modern sophists will deepen into the night which is destined to envelope their stupid theories, just so soon as nobler men than your Huxleys and Tyndalls begin to investigate mind, as Plato's instincts presented it to him, using the same patience of research and honorable diligence of investigation which have dignified their devotion to matter. Note, I honor their facts, and have called them sophists only with reference to their theories, and with reference to their willful indifference to the human soul and the possibility of souls not imprisoned by matter nor enslaved by sense. For matter is a prison, and sense limits the perceptions of its tenant to just five loopholes for observation. And, again, these loopholes are narrow. They might be vastly magnified, or, again, reduced.

Let me illustrate this last remark by one of Tyndall's reports as to the limits of sense. "I once crossed a Swiss mountain," he says, "in company with a friend. A donkey was in advance of us." Alas! that he failed to perceive that a mere donkey might be in "advance" of many men, whose eyes he has put out : poor Laura Bridgeman sees much more than they. "A donkey was in advance of us, and the dull tramp of the animal was plainly heard by my companion, but to me this sound was almost masked by the shrill chirruping of innumerable insects, which thronged the adjacent grass—my friend hearing nothing of this. It lay quite beyond the range of his hearing."

The first reflection upon this is, the limitation of our perceptions thus indicated. The second is, that, were all men (with only few exceptions) like the traveler who could hear the donkey, but not the cricket, then the exceptional man, who could say, without seeing them, "Yonder field is full of crickets," would seem to exercise preternatural powers : the ignorant would call them supernatural powers. Professor Cook, of Harvard University, in his Lectures on Chemistry and Religion (unabridged edition), has a sublime statement of outlying facts that may be just beyond our *scale* of powers to recognize them.

The eye and the ears have thus alike their scale of sensibility, graduated to vibrations more or less numerous. What falls below the scale is invisible or inaudible, and what surpasses it is equally imperceptible. Some men are color-blind ; others purblind, Sir Francis Palgrave makes a pretty use of the purblind estate, as it must have been viewed in days of unscientific darkness. "Our young prince," said an Anglo-Saxon courtier of those ages, "is almost blind, poor youth; but there came a palmer out of the Levantine countries with a magic stone. The prince puts it to his eye and he sees all things clearly." It was, of course, a crystal, which the Saracens had made into a double concave lens. It appeared to be something preternaturally endowed to those who knew no better. As to mind itself, take Zerah Colburn, or others, not altogether rare, who have possessed similar faculties. Pascal, splendid creature of intellect that he was, made a calculating machine; but Zerah had such a machine in his mind. What it was, and how it worked, he could not tell. It was an intimation of the mind's inhe-of prison. How much food for thought there is in all such instances. They have not been investigated as Darwin investigated atoms; and yet they are as much more worthy of close investigation, as mind is superior to matter-though the sophists degrade it to matter, "secreting thought as the liver secrets

MIND IN NATURE.

bile." I offer no excuse for considering the man (Vogt) who said that a sophist and a very gross one, Plato being his judge, not I. And now another class of exceptional creatures : take such a man as Swedenborg. I think he was an impostor, but probably an honest one, who first imposed upon himself. He was no vulgar enthusiast, like the table turners and rappers. But, as truths often lie at the root of "popular superstitions," so I think they are to be found at the root of religious delusions, and even of fanaticisms in general. Swedenborg seems to have had that sensitive organization which responds to invisible influences in a manner confounding all past speculation, until the electric wire, in our days, has shown us that a man in New York or San Francisco may be in London, at the same moment, for some purposes, practical in the highest degree. That Swedenborg, in Gothenburg, was able to describe, with details, a conflagration raging at the time in Stockholm, and, also, to announce when it had ceased (ieste Immanuel Kant) seems to be historic fact. Other anecdotes of his personal history, of similar character, seem to be authenticated. Alleged visions and ecstacies, also, are in some cases not of suspicious character, though they are so generally. Take the case of Colonel Gardiner, which seems to be well accredited, as an example. The trance of Wm. Tennant is authenticated by evidence not to be refuted, I suppose. Dean Stanley told me the strange story, afterward published in Macmillan's Magazine, touching " Ticonderoga and Inverawe," and he appeared to be-lieve it indisputable fact. And so I come to Scottish second-sight, and have dashed into the strangest part of it, that which I venture to call precognition, as differing from mere recognition, or the Swedenborgian faculty of perceiving events in distant scenes at the moment of their occurrence. That comparatively numerous instances of this sort are known to be facts, is, I suppose, indisputable; no need to dwell upon them. But there is something much more mysterious in the case of asserted and well attested precognitions, like that of Lochawe; or like that in the fiction of "Lochiel," so strikingly depicted in the poetry of Campbell. That such detailed ideals of coming events have been given in memorable cases I think proved. Why have they not been scientifically investigated ? I suppose, because men flinch from the stigma of imputed superstition. And so such things are classed among "old wives' fables," and what is true about them is given over to superstition and encourages it, when it might minister to scientific truth. I should be as much ashamed of cowardice in declining the work of serious inquiry, for fear of such a stigma, as of superstition itself, which I take to be a weak persuasion

that certain phenomena have no rational explanation. We all know stories about presentiments, and I think they are generally of no account at all; but these detailed precognitions are a very different thing. Taine more than half dismisses as a fiction that story of La Harpe about Cozotte's minute foreshewing of some of the catastrophes of the Reign of Terror, in Paris. Yet it is accepted as history by others, and apparently by Dr. Kahnis, for example, in his animated historic sketch of German Protestantism * I can not say that I have any opinion on the subject. I believe less interesting precognitions of the same sort are well attested. They belong to the cloudland of the Preternatural; to the debatable ground between the known and the unknown-the familiar and the unfathomably mysterious.

• It is told, dramatically, in Scribner's Magazine, page 338, 1885.

UNCONSCIOUSNESS OF DYING PERSONS.

"A dying man may be burned with a red-hot iron and not feel pain," said Dr. Crawford to a reporter of the Stockton Mail. "Consciousness may remain to the dying almost to the dissolution, but generally they lose the power of thought long before actual death. In cases of death in which there seems to be suffering, the writhing and spasms are due to reflex muscular action. Fear weakens the nervous system, and, consequently, hastens death; and the reverse of fear may prolong life." The doctor cited a medical report concerning a Methodist minister. He lay on the verge of death, cold and pulseless, and friends around his bed sang his favorite hymn. As they ceased, and while the physicians stood timing the death, the minister's hands moved, and he whispered, "Glory!" Restoratives were administered and an hour later the man had recovered. He lived many years after that. He said he understood every word spoken at his Under the nervous excitement bedside. and enthusiasm wrought by the hymn, he had exerted his muscular (or mental?) strength, and lived.

It is of no use to vote down gravitation or morals. What is useful will last, whilst that which is hurtful to the world will sink beneath all the opposing forces which it must exasperate. The terror which the Marseillaise struck into oppression it thunders again to-day.—*Emerson*.

THE SPECTROSCOPE.

ANDREW J. PARK, M.D.

There is no scientific instrument since the days of Galileo, who invented the telescope, which has revealed so many wonders, and so amazed and startled the world by its revelations, as the spectroscope.

The discovery which led to the invention of the spectroscope was made by Fraunhofer, in Munich, in 1826. The most celebrated optician of modern times, he devoted his tireless energies to the fabrication of a telescope which would avoid chromatic aberration. The object to be achieved was to form the lenses so as to escape the dispersion of the rays of light. This Fraunhofer did by bringing together two prisms of different kinds of glass, with equal powers of dispersion, but with unequal refractive qualities.

It has been ascertained by a series of experiments that the dispersive powers of dense flint glass are about double that of crown glass, while their refractive powers are nearly the same. Hence it was found that two prisms, having two opposite dispersions, neutralized each other, and the rays passed through unbroken and without meeting the eye decomposed. Fraunhofer discovered while conducting his experiments that different substances, reduced to a gaseous condition, threw different colored lines upon a screen, each line representing an individual element. Thus the light of iron at a white heat gave a dark line; potassa a violet line; sodium a yellow line, etc. In honor of him these lines are called "Fraunhofer's lines." But the great genius who made this wonderful discovery died young, without ever dreaming of his invaluable gift to science.

Kirchoff, Bessel, and Bunsen at once saw the immense value of the discovery, and the spectroscope was the speedy result, and is now a common instrument in the laboratory of the scientist. To give an idea of the refinement of the powers of the spectroscope and its accuracy in investigation: take 1lb of salt, divide it into 500,000 parts; each part is a millegramme, which any chemist can detect by reagents and analysis. But divide the millegramme into 3,000,000 parts, there is probably no chemical test which would show the presence of chloride of sodium in that infinitesimal subdivision of the salt; yet, take any part of this mixture, however small, and

convert it into a gas and the spectroscope will promptly detect the presence of sodium (common salt being the chloride of sodium).

The spectroscope is now brought into requisition by astronomers in daily observations. It has revealed the constitution of the photosphere and chromosphere of the sun, in part demonstrating the presence of hydrogen in a glowing condition, and also other elements equally clear and satisfactorily.

These discoveries produced a complete revolution in solar physics. Lockyer of England and Jannsen of India made these discoveries in 1868. The spectroscope was then directed to the star Sirius, and to other bright stars, with marvelous and amazing results. Sirius is at least 200,000 times as far away from us as the sun, which is 93,000,000 of miles away, yet the spectroscope has shown that it possesses the same elements that have been found in the chromosphere of the sun. What a wonderful achievement of the human mind! When Leverrier discovered the planet Neptune, in 1846, it was universally regarded as the proudest and the most brilliant discovery in science, and it crowned him with imperishable laurels. But here is an instrument which reaches far out into boundless space, hundreds of millions of miles away, and with unerring fidelity places upon the screen before you the lines that tell of the elements entering into the composition of the distant orb. The sun is 850,000 miles in diameter, and the star Sirius is fourteen times larger, and is supposed to be the center of another system similar to our own. It is impossible for any one to form the remotest conception of the distance to the sun, yet Sirius is 200,000 times as distant. Thus the spectroscope revels in the labyrinth and azure depths of the star-gemmed heavens, jeweled with a thousand worlds, blazing with suns belonging to other systems, set in diamond dust nebulæ of mysterious light, studded with luminous points and hung with pearls, dim and gleaming, still more remote, which baffles the intrusive scrutiny of the most powerful telescope. Every star that twinkles in its calm and sparkling beauty is legitimately within the domain of spectroscopic research, and every subject in na-ture, resolvable into a gas, is compelled to yield the secrets of its composition to the searching inquiry of the spectroscope.

PROFESSOR PIPER ON EVOLU-TION.

When Professor Cope noticed Professor Piper's remarks upon evolution, and penned the brief editorial upon the same, in the August number of the American Naturalist, I wonder if he did not have in his mind at the time some of the closing sentences of an address given in New York by Professor Huxley, in September, 1876, wherein this great philosopher, after having most cogently defined the evidence upon which the law of evolution rested, said in conclusion: "But I shall rejoice-I shall consider that I have done you the greatest service which it was in my power to do-if I have thus convinced you that the great question which we have been discussing is not one to be dealt with by rhetorical flourishes or by loose and superficial talk; but that it requires the keen attention of the trained intellect and the patience of the accurate observer." The words that appear to be particularly applicable to the case I have taken the liberty to put in italics.

No doubt Professor Piper has read the series of lectures I refer to, so he will pardon my curiosity when I further wonder whether he has ever answered to his own mind's satisfaction, the question,— so far as the evidence goes, what is the difference in kind, between that upon which the physical law of gravitation and the biological law of organic evolution, are vested ? Of course, in recording this question I am in the dark as to the fact, whether or no, Professor Piper accepts the proof of the physicial law of gravitation.

Ft. Wingate, N. M.

R. W. SHUFELDT

THEY WERE ALL SHOCKED.

The other night after the thunder shower Jones dropped in on a neighbor and found about a dozen people assembled.

"Well, well, you look cheerful after such a close call," growled Jones, as he removed his hat.

"What close call ?"

"Why, lightning struck the barn in the alley not a hundred feet away."

"O, dear !" said one of the women, "but I knew it all the time. One of my arms has been numb ever since."

"And it affected my foot," said another.

"And it set my heart to palpitating."

"And my elbow has felt queer ever since."

Every one in the room remembered to have been shocked, and every one was thankful over the narrow escape.

By and by a boy, who had been thinking deeply, gushed out :

"Why, there is no barn in the alley!"

Amidst the deepest silence everybody remembered this fact, and the boy clinched it with:

"And how could there be, when there is no alley."

BOOK NOTICE.

" PSYCHOMETRY,"

We have received a copy of "Psychometry; the dawn of a New Civilization," by Dr. Joseph Rodes Buchanan, of Boston. The work is an exhaustive manual of the so-called science of psychometry, or soulmeasuring, and abounds with curious instances in support of its truth and its value in all the relations and walks of life. The psychometer, according to Dr. Buchanan, is a supersensitive person, who can tell the characteristics of individuals, by simply taking hold of their autographs; he can absorb much of the knowledge of lawyers, medical men, and scientists by being placed en rapport with them through autograph letters or photographs. Psychometry is a wonderful science with untold possibilities. It has some resemblance to clairvoyance, phrenology and mesmerism, but surpasses those occult professions in the multiplicity of its results, and the apparent simplicity of methods. As a science and philosophy, says our author, it shows the nature, the scope and the *modus operandi* of the divine powers in man and the anatomical mechanism through which they are manifested; while as an art it shows the method of utilizing these psychic faculties in the investigation of character, disease, physiology, biography, history, paleontology, philosophy, anthropology, medicine, geology, astronomy, theology and supernal life and destiny. It is furthermore the dawn of a new era in science, philosophy and social progress, more important as to human enlightenment and elevation, than all the arts and sciences heretofore known to the skillful and learned. If one-twentieth part of what is claimed by Dr. Buchanan be true, no well-regulated family can afford to be without a first-class psychometer.

PUBLICATIONS RECEIVED.

At no time do we so much regret our limited space, as when we gather up our exchanges at the end of the month, finding them so numerous and valuable; read the many favorable and kindly things said of MIND IN NATURE—realize that so early in our venture we have established a reputation for candor and fairness in the treatment of subjects which heretofore it has been considered an evidence of crankness to discuss at all. We would gladly mention all of them, from "*The Morning Star.*" of New England to the little *Baptist Beacon*, on the Pacific slope in Oregon.

The North American Review for September, had an article of special interest to our readers, entitled "The Great Psychical Opportunity," by Elizabeth Stuart Phelps.

Medical journals are very numerous, and most of them very good; there is no excuse for physicians not keeping up with the onward movement of the times—among them we have the New York Medical Journal, Louisville Medical News, also Numberone. Vol one, of the Quarterly Bulletin of the Clinical Society of the N. Y. Post Graduate Medical School and Hospital, if it prove to be as good as it is handsome, it ought to be a success;—next comes the Atlanta Medical & Surgical Journal, whose thirty years' experience should have shown it the impropriety of admitting advertisements into the body of the book; they are valuable both to the publisher and readers, but it is not judicious to suggest a suspicion that the advertiser can dictate to the manager. The St. Louis Courier of Medicine, an able journal, well edited. We have also received the St. Louis Periscope, The Medical Herald, of Louisville, Ky., The Medical Advance, of Ann Arbor, Mich., The Chicago Medical Journe, The Chicago Medical Jourmal & Examiner, The Herald of Health, with its admirable motto, "A higher type of manhood, physical, intellectual and moral," The Laws of Life, which has for "Io these many years," been what its name implies to its many readers.

The Natural History of Kissing, in the *Phrenological Magazine* of London, will interest all young and some older readers. (We shall reprint it in our November number.)—The *Christian Science Journal* of Boston, the only official organ of the Church of Christ (Scientist) and Christian Scientists' Association, of the Massachusetts Metaphysical College—has caused, and will continue to cause discussion on this latest "Boston Notion." Those interested in the subject will here find the official exposition of it by Mrs. Eddy herself.

From Boston, also, we have "*Facts*." devoted to the Statements of Mental and Spiritual Phenomena. If we could only accept them as *Facts*, the problems of Psychical research would be solved at once.

Good-Housekceping, published by Clark W. Bryan & Co., Holyoke, Mass, is, of course a success everyone wants good-housekeeping. The Day Star, an independent liberal family journal of New York, shows a disposition to be fair, as well as liberal, which we regret can not be said of *The Liberal* of Liberal Mo., a most illiberal and bigoted paper; we hope some day to find it grow up to its motto— "grow wiser and better through experience."

The Light, of London is clear and bright; "long may it shine." The Pulpit Treasury, E. B. Treat, publisher, New York, and Christian Thought, edited by Dr. Chas. F. Deems, are full of valuable thoughts, both for laymen and clergy.

WHAT IS SAID ABOUT US.

MIND IN NATURE, a Chicago "popular journal of Psychical, Medical and Scientific Information." has passed the magic number seven in its early issues, and bids fair to win a future. Its work is on the fascinating border-land of hypnotism, "thoughtreading," and the like; but it is happily in the hands of thorough scientists and sound thinkers, who are pursuing their researches in the safest religious and scientific spirit. It will surely make invaluable contributions to the remoter knowledge of human nature, and what has so far been furnished is of exceeding interest.—*Michigan Christian Herald.*

MIND IN NATURE for September, contains an unusually interesting collection of clear-cut articles on psychical topics, which are worthy of careful consideration.—*Mining Review*.

The title of MIND IN NATURE to a periodical published by the "Cosmic Publishing Co.," suggested an organ of some of our modern psychical *isms*; but we have been pleasantly mistaken. It is edited and sustained by some of our best writers, ministerial and medical, and discusses calmly and sensibly the various physiological, morbid mental, psychical and scientific questions of the hour. It is published monthly in Chicago, III.—Zion's Herald.

MIND IN NATURE received. On examination I find it to be pre-eminent over anything that has yet appeared in this line. It is indeed excellent in its plan and execution, and every candid mind must acknowledge that the study of its contents is of great benefit to every inquiring mind. Both pastors and laymen should give it a trial.—*Rev. H. W. Becker, Mt. Pleasant, lowa.*

Of all snobbery, scientific snobbishness is the most pitiable. A unique, and, we hope, a very rare specimen of this class, who has solved the Problem of Nature, writes, "A perusal of our columns will, in our opinion, satisfy you that a work of popular science is of no value as an explanation of nature." He further informs us that a clear conception of any work of creation is possible only to one who understands his theory of it. That our Journal is without any suggestion of such knowledge, and therefore valueless ; our readers will please remember hereafter that MIND IN NATURE is not a Scientific Journal. The societies for Psychical Research will also take notice that their researches are worse than useless. This savant knows all about creation and Nature; and all they have to do is to take his paper.

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FROM MANY THE FOLLOWING NOTICES ARE SELECTED.

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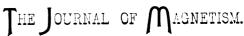
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PUBLISHER'S DEPARTMENT.

TO OUR READERS.

" Let another man praise thee." This is what we desire We wish our readers to bring MIND IN NATURE to the notice of those who are or ought to be interested in the subject. The need of this is more imperative now than formerly; when minds as well as bodies moved more slowly, the chances for accretion were much better than in this hurrying, pushing age, when every one seems to be going at a rate wonderfully suggestive of the "Waters at Lodore." So that he who thinks to wait until others stop to examine his merits, test his mettle, and proclaim him to the world, will find that the "whirl of the eddy" has merely scoured and polished him, relieved him of all his accumulations, and left him stranded on its rocky shores. We desire to get into the current of the time and bravely face its rapids, hoping to be found well ballasted and seaworthy; that our pilot with steady hand and quick eye will steer clear of breakers and float his bark fairly into an ocean of popularity. Of the result we have no fear, if only our readers will help us to obtain sufficient ballast. We should like each reader to send us \$1 and have MIND IN NATURE sent the balance of the year to two friends, or to one for a year, or ask each of his neighbors to send us 50 cents (in stamps), and we shall send it to him for the balance of the year.

This will be an easy task if all our readers will speak as well of us as S. Sias does, who, in the *Schoharie Republican*, says :

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