

Laws of Mediumship
Astral Substance

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Issued under the auspices of the Brotherhood of Light.
Serial No. 40. Course 1, -B
Box 1525, Los Angeles, Calif. Feb. 1919, Feb 1921, Jan. 1926
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THE foundation upon which any science, whether physical or occult, must rest is, as I have tried to make plain, experimental evidence. Further, as I have also shown, trust, the value of any science depends upon the correct interpretation of evidence as ground for future action. This interpretation of evidence, after having been tested sufficiently by men of scientific standing, is called a fact. Until thus accepted, it is called a theory or hypothesis. Therefore, we find the theories of yesterday becoming the facts of today, while some of the so-called facts of yesterday become the exploded theories of today. Yet though many theories never become facts, or rise to that level only to fall therefrom, for the advancement of any science theories are absolutely essential.

Take, for example, the theory of the ether. Material science first posited its existence in order to account for certain phenomena which it was unable to explain by reference solely to the known properties of atomic matter. It reasoned that motion can be transmitted only where there is something to move, and consequently that the transmission of energy requires a medium. Energy, however, as we all know, is transmitted from the sun to the earth across a vast region unoccupied by matter. From this the idea was deduced that some unknown and non-atomic medium must transmit light and heat from the sun. Therefore was the theory advanced that all space and atomic substance was filled with ether. Acting upon this hypothesis much knowledge has since been gained concerning the properties of this ether, and much remains yet to be discovered; but the existence of the universal ether has risen from its place as a theory to the status of scientific fact.

In a precisely similar way occult science observes a multitude of phenomena which it is unable to explain upon the known or probable properties of atomic substance or of the ether. For instance, there are authentic records of events happening thousands of miles away having been clairvoyantly seen and clairaudiently heard. Now, it is known that ether conveys images to the physical sense of sight, and that atomic substance conveys sound to the physical sense of hearing. Some medium, likewise, must convey the impressions received by the soul senses. From what is known of the ether, it is highly improbable that it can be this medium, because, while the physical senses of all normal persons respond to those vibrations of the ether known as light, only the senses of persons of a peculiar nature respond to those vibrations which ultimate as clairaudience and clairvoyance. If, for instance, nearly everyone in the world were blind, and only a few had the sense of sight, any reasoning blind man might deduce the fact that there were other motions than those that awakened response in his organism; something other than the motions that registered themselves as sound in his brain; and thus he would logically arrive at an intelligent recognition of the facts of light and color. Although he would still be blind and unable to see them, he would be reasonably sure they existed. In the same way we can argue that, since

some persons undoubtedly have an inner experience which we are here calling soul sight and soul hearing, and since it has been frequently proved that things thus seen and heard at a distance were in accordance with objective fact, there must be other motions in the ether, or in some finer inter-etheric substance, which motions give rise to these comparatively rare states of consciousness. Ether, as at present conceived by science, has not the properties necessary to produce these effects, and other manifestations of occult force operating at a distance. Therefore occult scientists, using the same reasoning that led physical scientists first to posit the ether as an hypothesis and then to confirm it by experiment, have posited an inter-etheric substance called Astral Substance, and by many experiments have proved it to be a fact.

That we may understand how this astral substance interpenetrates all physical substance and the ether, let us now examine the structure of matter. This structure has lately passed from the region of 'hypothesis to the domain of fact. As a first step toward explaining it I can do no better than to quote from Sir Oliver Lodge:

"Matter consists of atoms, or molecules; for present purposes there is no need to discriminate. Chemically it is convenient to attribute slightly different meaning to the two terms, but the distinction is of the easiest and most elementary character. A molecule is the smallest complete and normal unit of any substance; it consists usually of two or more atoms, though it may consist of one; and what we have to say here relates essentially to the atom."

These atoms, or groups of atoms called molecules, are not packed closely together like sardines in a box, but have plenty of room to move about. In fact, they are always so moving, continually ricochet-ting against one another; and not only has the distance one of them moves between collisions with its neighbor been measured, but science has ascertained also the average diameter of the atom itself.

The structure of such an atom is even more interesting, and explains why the molecules do not lie closely packed together. It consists of one or more positive charges of electricity, called protons, as a nucleus about which one or more negative charges of electricity, called electrons, revolve in orbital paths. In other words, an atom is a solar-system in miniature, the positive protons massed in the center taking the part of the sun, while about this central mass of positive electricity the negative electrons swing in planet-like orbits. The number of the planetary, or negative, electrons revolving about the solar nucleus has been determined, and is found in each atomic element to be slightly less than half the atomic weight. Thus, in the case of the lightest composite atom, helium, with an atomic weight of four, there are two electrons or miniature planets revolving about it; while in the heaviest known element, uranium, with an atomic weight of 238.5 there are 92 electrons revolving in its outer region. This strongly indicates that the only difference between one element and another is the number of electrons it contains. Or, as Professor Millikan states it:

"It is the positive charge on this nucleus which obviously determines the number of negative electrons which are distributed around the nucleus in the outer region of the atom, and there is just now an increasing weight of evidence that this number determines the chemical affinity of the atom, and, indeed, all its chemical and physical properties except its weight."

As Professor Millikan is widely recognized as the most competent scientist at present in this particular field I find it advantageous to quote him also in regard to the orbital motion of the negative electron:

'In the hydrogen atom, however, which contains, according to the foregoing evidence, but one negative electron, there is no known way of preventing the latter from falling into the

positive nucleus unless centrifugal forces are called upon to balance attractions, as they do in the case of the earth and the moon."

As an atom is thus seen to be a system with negative electrons in the outer region, it becomes plain why molecules rebound from each other. For when the negative electrons of these different systems approach each other closely the repulsion always exhibited by similarly charged bodies begins to manifest, and they are driven apart, to approach another system, and in turn to be driven away from that.

But discoveries even more astounding have been experimentally verified. It has been found, for instance, that in no case is the comparatively impenetrable portion larger than one-ten-thousandth of the diameter of the atom.

"Indeed, when we reflect that we can shoot helium atoms by the billion through a thin-walled, highly evacuated glass tube without leaving any holes behind, i.e., without impairing in the slightest degree the vacuum, or perceptibly weakening the glass, we see from this alone that the atom itself must consist mostly of 'hole'; in other words, that an atom, like a solar system, must be an exceedingly loose structure whose impenetrable portions must be extraordinarily minute in comparison with the penetrable portions. The notion that an atom can appropriate to itself all the space within its boundaries to the exclusion of all others is then altogether exploded by these experiments. A particular atom can certainly occupy the same space at the same time as any other atom if it is only endowed with sufficient kinetic energy."

"From the standpoint, then, of the electro-magnetic theory of the origin of mass, the dimensions of the negative and positive constituents of atoms in comparison with the dimensions of the atoms themselves are like the dimensions of the planets and asteroids in comparison with the size of the solar system."

Professor Millikan then sums up the evidence that an atom is such a minute solar system in these words :

"For the present at least it is truth, and no other theory of atomic structure need be considered until it has shown itself able to approach it in fertility. I know of no competitor which is as yet in sight."

The next step in our investigation leads us to inquire what it is that occupies the comparatively enormous space between the electrons comprising an atomic system, and of what the electrons themselves are composed. To the first of these questions science answers quite positively that it is the ether. The composition of the electron is less definitely known. $i_c^{1/2}$ But it is held by certain scientists, such as Sir Oliver Lodge, that positive and negative electricity, or electrons and protons together make up the ether; "or rather, that the ether may be sheared by electromotive forces into what would become positive and negative electricity if they were really separated." According to this view a non-material substance called ether under certain conditions becomes decidedly material, for electricity is now known to possess physical properties. This latter fact is stated by Professor Millikan thus:

"Further, when we combine the discovery that an electric charge possesses the distinguishing property of matter, namely, inertia, with the discovery that all electric charges are built up out of electrical specks all alike in charge, we have made it entirely legitimate to consider an electric current as the passage of a definite, material, granular substance along the conductor."

But whatever the structure of an electron, or of the ether, both electron and ether are

composed of something. That this something is not composed of parts is unthinkable. That its particles or parts are ultimate particles, so small that they in turn are not composed of parts is likewise unthinkable. In fact, without entirely revising our knowledge of natural law, we cannot conceive of ultimate particles at all. For the law of the Conservation of Energy, upon which all science largely rests, denies such a possibility. Because two such ultimate particles meeting head-on in space could not get rid of their energy. Unless they possessed elasticity their rates of motion would be reduced without being imparted to anything else. And elasticity implies movable parts. Further, it is quite as absurd to try to imagine anything so small that it is indivisible as to try to think of the boundary of the universe. For the infinitely great implies the infinitely small. And while up to the present time there have been no laboratory experiments that have succeeded in isolating the sub-electron, yet it has been suspected and searched for by several eminent scientists. We may, therefore, confidently expect that, even as the atom for so long was thought to be indivisible, and has now been reduced to its electrical components, the electron and the ether itself will ultimately yield to research and be found to be built up of some still finer substance.

Summing up these conclusions, we find the atom and the universe built on a similar plan. The solar system, like the atom, is composed of a central positive mass around which the planets move in orbital paths, there being great spaces between the planets and the sun. And we are further informed by astronomers that our sun is but one of a myriad of suns all of which possibly have planets revolving about them that apparently form a more or less definite ring of stellar bodies called the Milky Way. Indeed, our sun is known to be a very small one Betelgeuse, in the constellation Orion, not a very imposing star to look at, being, as recently measured by Professor Michelson, twenty-seven million times as large as our sun. And it is supposed, by those who are at present measuring the size and distance of certain spiral nebulae, that the Milky Way, observed from that distance, must itself appear but a small nebulous ring. Although material science has not yet told us about what center, still it is certain that this circle of stars, of which our sun forms a part, is also steadily moving. It is not too much to conclude that it is also circling, through the vast depths of space, about a central positive charge, following, with all its solar-system parts, the pattern of the primordial dance within the atom of hydrogen.

Turning from the incomprehensibly great to the incomprehensibly small, we find the atoms of which the earth is composed are themselves miniature solar-systems with comparatively great stretches of space between the various parts. This space between the electrons composing an atom is filled with a finer, nonatomic substance called ether. And while material science has not yet succeeded in isolating and photographing the particles that compose an electron though it has photographed both the atom and the electron yet as a working hypothesis, and one which will be found to fit in with all the known facts of psychic phenomena, we may conclude that the electron itself is a still smaller solar system, or Milky Way, whose impenetrable portions are composed of a still finer and more active substance which we call astral. Thus it seems that astral substance interpenetrates the ether and the electron in precisely the same manner as the ether interpenetrates all space and the atoms of matter. Further, should necessity arise as it does not, in explaining psychic phenomena for postulating a still finer substance from which the astral is built, a substance which interpenetrates the astral substance, there is, undeniably, logic at least in support of such a contention. For as we can not conceive of the infinitely great, beyond which there is no greater, so neither can we conceive of the infinitely small, beyond which there is no smaller.

Of fully as great importance as the above considerations to the explanation of psychic phenomena, is the occultist's conclusion that energy is imparted from astral substance to the ether, and from the ether to matter. As to the transference of energy to matter from ether, Sir

Oliver Lodge says:

"All energy appertains either to matter or to ether, and is continually passing from one to the other. When possessed by matter the energy is called kinetic; when possessed by ether the energy is called potential. All activity of the material universe is due to, or represented by, or displayed in, the continual interchanges of energy from matter to ether and back again; accompanied by its transformation from the kinetic to the potential form and vice versa."

Light, radiant heat, and electro-magnetism are all examples of this communication of motion from ether to matter. For light in photography imparts movements to matter, and the radiant heat from the sun constantly transmits its energy to the molecules of matter, this molecular motion being felt by us as heat. Also, electro-magnetic waves, which are movements of the ether, can be received by a device in such a manner as to produce a longitudinal wave motion in the air, as witnessed in wireless telegraphy. This longitudinal wave-motion we call sound. Carefully conducted psychic experiments, as well as the now rather common cases of disease cured instantly through absent treatment, and various familiar examples of the power of the subconscious mind to affect changes in the physical functions, and even in the form of the body itself, all show that astral substance in a similar manner transmits energy to the ether, which in turn reacts upon the physical. In fact, the simplest laws of biology seem inexplicable apart from such communication of energy between astral and ether, while, on the other hand, when this relation is understood, the whole field of biology and that of psychology, too, becomes instantly clear.

For example, it seems quite certain that the moulding force that causes a seed to grow into an organism of a certain form and with certain functions does not lie merely in its chemical properties. Nor does it appear to lie in any particular arrangement of its cells; for two vegetable seeds of the same size and apparently of the same chemical and molecular composition, when planted in the same soil may produce plants whose forms and properties are totally dissimilar. Likewise, there is very little observable difference in the chemical composition and molecular structure of the sperms and germs that generate animals of entirely different species. Though as yet beyond the view of physical science, this formative power that moulds every living thing to its proper shape and structure must lie somewhere.

But if we assume for the moment what I expect fully to prove in the course of this and subsequent lessons, that the formative power of all external life lies within the astral substance associated with the physical body, the mystery is solved. Let us, then, think of the physical world not as the sole region of reality, but as a very loosely organized aggregation of coarse particles, by whose arrangements the much denser and far more active astral substance expresses its shape, and functions on the plane of matter. In fact, if we accept the steadily rising mass of evidence of the survival of human personality beyond the dissolution of the physical form; as set forth in the writings of Dr. John King, Sir Oliver Lodge, Sir Arthur Conan Doyle, the Rev. G. Vale Owen, J. Arthur Hill, Horace Leaf, Ella Wheeler Wilcox, W. T. Stead, Dr. A. D. Watson, and a score of other reputable students of the subject; we are forced to accept some such explanation, at least until a better offers itself. A careful and unprejudiced analysis of all the evidence set forth in scientific studies of psychic phenomena makes the existence of some such finer body, endowed with full mental powers, quite as much an established fact as any truth of material science.

Let us see, next, how this view accounts for memory, that everyday experience which physical science has as yet been unable to explain. Every theory based upon a material foundation that has so far been advanced to account for it has been found inadequate. But let us assume that accompanying and interpenetrating the physical brain is another brain of a finer substance, an astral brain, and the whole mechanism becomes explainable.

Now, we know something of the way physical sensations are transmitted to the physical brain, namely, by nerve-currents that follow the nerves much as electricity follows a wire. These nerve currents are motions in the ether, and they communicate movements to the brain that result in setting up a state of consciousness. But such motions in time die away; yet memory shows that in some manner they are preserved. What preserves them, and how? The sensations thus recorded on the physical brain may be entirely forgotten for years;½showing that the motions in the physical brain have ceased;½and then be suddenly recalled. How does this happen? Or the sensations may be completely forgotten by the objective consciousness, and be entirely beyond recall by any objective event, yet be recovered when the person is in a state of hypnotic trance. It is by experiments with subjects under such hypnotic influence that we know nothing once felt or known is ever forgotten. What substance is fine and strong enough to preserve the most delicate impressions for an indefinite period? Scarcely the nerve-currents, which are constantly changing, rippling along the fine wires of the nerves and hurrying one sensation on top of another as a telephone wire carries the sound of voices. The telephone does not remember; the phonograph, in a way, does. Connect the telephone to a phonographic blank disk and the impressions made are comparatively permanent. What is the phonographic disk attached to the human brain? It is evident that the motions transmitted through the nerves to the brain are retained permanently in some substance which is capable under the proper conditions of again imparting them to the brain in something closely resembling their original form and intensity.

Whatever this substance may be, it certainly is something not subject to chemical change. It is, then, not the physical cells of the brain, for they are distinctly subject to such changes and by chemical action are continually destroyed and removed from the system. Neither can it reside in the structure or arrangement of the electrons, for they are removed from the brain along with the cells of which they form a part. Nor can it be a scar on the tissue of the brain, for no such scar or indentation has ever been discovered in dissecting a brain. In some such manner, every attempt to account for memory on a purely material basis has failed.

But if we embrace the findings of occult science we encounter no such difficulty. We then recognize that a physical brain necessarily implies an astral brain associated with it, just as physical matter implies ether associated with it. And as material science informs us that the ether which fills all space and interpenetrates all matter is, by virtue of the fineness of its particles, practically frictionless, we are quite justified in concluding that astral substance, composed of still finer particles, is still less subject to retardation by friction. This being true, we instantly perceive that any motion imparted to astral substance is retained indefinitely; that every sensation which imparts motion to the astral brain is registered in a comparatively ineffaceable manner. It is not retained by the physical brain, because the physical substance is constantly removed and replenished, and any movement in its parts is retarded by friction, even its molecular motion, which expresses as heat, being subject to retardation through cooling. But even as the ether offers imperceptible resistance to rays of light, or to the planetary bodies passing through it, so astral substance retains permanently, or practically so, all motions imparted to it. Under proper conditions these motions residing in the astral brain can be focused on the ether accompanying the physical brain, and impart motions to it in such a manner that it is recognized objectively; and the resultant consciousness is then called memory.

The astral brain in which, as I maintain, this memory resides is spoken of commonly in current works on psychology as the Subjective Mind, the Unconscious Mind, or, better still, I think, as the Subliminal Mind. Subliminal means below the threshold, and, as I conceive it, the Subliminal Mind is constituted of those motions derived from experience that reside in the astral brain and do not commonly transmit their motions to the physical brain, remaining below the threshold of objective consciousness; while the Objective Mind, on the other hand, is constituted of those motions derived from experience, that reside in the astral brain,

and customarily do transmit their motions to the physical brain, thus frequently rising above the threshold. Now, as all psychologists know, comparatively few of the actions of man or of other forms of life result from the direction of the Objective Mind; and many of the physiological processes are carried on while the physical brain is asleep. For instance, assimilation, secretion, and circulation are wholly directed by the Subliminal Mind, or as I prefer to call it, the Astral Brain.

This astral brain is a reservoir for experience. But even though, as I indicated in the preceding lesson, all knowledge is derived from experience, we should not conclude that either experience or knowledge is confined to results obtained from contact with matter. For associated with the physical body of man is an astral body, complete in all its parts, and this astral body possesses seven senses corresponding in their functions to the physical senses, only instead of recording physical sensations they register impressions received from the astral environment. Also, even as the objective mind is capable of comparing sensations, thus gaining a new experience which we call reason; so likewise I am forced both by analogy and experiment to believe that the astral brain is capable of comparing experiences and drawing conclusions. Commonly, however, these sensations and conclusions of the astral counterpart are not raised above the threshold of objective consciousness.

Now, what is the nature of this astral counterpart I have just mentioned? To give some idea of its characteristics I must draw attention to the fact long recognized by occult scientists of all lands, that man and all objects have ethereal counterparts. This is no longer an occult theory, but an accepted scientific fact. It has been discovered that the ether in matter has a different density than the ether not so associated, and that this so-called bound ether which belongs to matter and travels about with it is concentrated to an extent dependent upon the density of the matter with which it is associated. That is, a portion of the ether inside matter is bound to it, and travels with it; but that the remainder "is free and blows freely through the pores, is fairly well-established and confirmed by direct experiment." It is this bound ether which explains the refraction of light when it is passed through a prism. This bound ether of material science is none other than the etheric double of the occult scientist.

And if, as every subsequent lesson and course will make more certain, there is an astral substance which interpenetrates the etheric double even as the latter interpenetrates the physical, we may feel confident there is bound astral substance as well as free astral substance; that the astral substance associated with matter and its etheric counterpart is in some manner different from the astral substance that "blows freely through the pores." Further, if we are to arrive at a scientific foundation for the belief in the survival of the personality beyond the dissolution of the physical body, we are compelled to assume that the astral substance once organized through being bound in a human physical form retains a density or other properties which differentiate it from free astral substance not so organized. It is due to this fact that the practical occultist through rigid discipline and persistent effort often reaches a state of unfoldment in which he leaves the physical body and travels in his astral form while quite conscious. Upon his return to the physical body, the experiences recorded in the astral brain may be imparted as modes of motion through the etheric double to the physical brain, and thus he objectively remembers the full details of his astral journey.

But it should be noticed that, in all such cases of astral travel, a portion of the bound astral substance remains still associated with the physical body and its etheric counterpart, and the portion in which the journey is made is always connected by an organized line of astral substance with the portion bound in the physical body. When this astral thread is once broken, death ensues; and for this reason it is dangerous to awaken violently a person in a trance or deep sleep who may be out of the physical body; or to grab a materialized form which usually is built around the extension of the medium's astral body in a seance room; for the nervous shock may sever the astral thread.

And let us not think of the astral plane;½the universe of astral substance as being vague and unreal. Most people even think of the ether as very flimsy and tenuous. But Sir Oliver Lodge, after explaining the nature of electricity, says: "This view, it should be said, requires the density of the ether to be immensely greater than that of any known substance." And as we have already shown, the particles of ordinary matter are composed mostly of hole, but by reason of their peculiar organization are able to move but slowly in comparison to the speed with which an electric charge, built up of smaller specks of granular substance, commonly moves. We must also recognize the fact that the reality of life depends, not upon the immobility of the environment, but upon consciousness. That is, we measure the fullness of any particular life neither by its mass nor its inactivity, but by its experiences. It must be seen, then, that in an environment where motion is greatly limited, experiences also are much restricted. But in an environment where movement is comparatively limitless, as is shown to be the case in astral substance, there is greater possibility of those perceptions of relations that go to make up conscious life. Further, the emotional intensity of some dreams, the ease with which the Subliminal Mind gains information, and the reports of those who claim to have traveled in the astral volitionally, and those of others who have been thought dead and have returned to life to relate their experiences, all go to indicate that the astral plane is a plane of greater reality than the physical plane, a plane where there is far more opportunity for the expression of life in its fullness.

We are now in a position to examine more closely that moulding power which we discerned in seeds. We know that there is a constant interchange of energy between ethereal and physical substance when in association, and there is every reason to believe that a similar interchange of energy takes place between astral and ethereal substances. Let us then widen somewhat our view of evolution, so that it may embrace the functions of the astral form. Man's personality is, as we know, largely the result of his experiences during life. And the evidence that this personality survives the dissolution of his physical body, now that science is at last seriously investigating the subject, grows stronger every day. The reports of seers, and other evidence that lack of space will not permit us here to adduce, go to show that the astral forms of other kinds of life, besides the human, likewise persist after the dissolution of their physical organisms. This astral form has had imparted to it, during physical existence, a certain complex set of motions. The astral form so organized, whether of plant or animal, undergoes other experiences after being separated from the physical form, and a still further organization of its astral substance takes place as a consequence. Obeying that urge which we see in all forms of life, to express itself in a still more complex form, it arrives at a perfection of astral organization which enables it to be attracted and attached to the fertilized seed of some physical form of life that is a step higher in the scale of evolution. Occult science asserts that this is true, and that the moulding power of a seed is due to the previous experiences it has had in moulding less complex organisms, these experiences having been stored as modes of motion in the astral form.

I can here merely touch upon the part astral substance plays in evolution; for we must now examine briefly some of the commonest phases of psychic ability, and show their dependence upon the properties of astral substance. Telepathy, or thought-transference, for instance, has been thoroughly investigated by men of scientific standing, and found to be a fact. The leading members of the London Society for Psychical Research, by their numerous and painstaking experiments, opened the way for this recognition. And while thought is capable of imparting motion to the ether, as witnessed by the photographs of thought-forms made by Dr. Braduc of Paris, and others made by Commandant Darget, yet there is reason to believe that thought images as transmitted from one mind to another are not conveyed by motions of the ether. Ether waves as high as thirty billion-billion frequencies per second have been detected and studied by scientists, but these men as yet have been unable to detect the vibrations that, carry thought. If, however, we think of thought as a motion in the astral

brain, it will be seen that such a motion would radiate vibrations through the practically frictionless astral substance by which it is surrounded; these waves might in turn be intercepted by any synchronous or sympathetic mind at any distance, just as the wireless intercepts ether vibrations. Being thus received by some other astral brain, under proper conditions their energy would be imparted to the physical brain, resulting in objective consciousness.

Clairvoyance, the seeing of an object by some other faculty than the physical sense of sight, often at a vast distance and through intervening walls of matter, is also well authenticated. Some of these visions are perhaps explicable by telepathic communication of the image from some mind that actually sees or knows about the scene witnessed; but there are other cases in which things unknown to any person are seen and their surroundings detailed, or in which events yet to happen, and which are, therefore, necessarily unknown to any person, are seen and accurately and minutely described.

It is much less difficult to account for these visions, even for those in which actual events are seen taking place at a great distance, as in the well authenticated case of Swedenborg witnessing a fire that threatened his property in a distant city by accepting the view of occult scientists than in any other way; the view, that is, that the astral body is equipped with an astral organ of sight, even as the physical body is equipped with a physical eye, and that astral vibrations, which flow freely through both matter and ether, convey the astral image to the astral sense of sight and register it on the astral brain. Thence, under proper conditions, it is imparted to the physical brain, and thus reaches the objective consciousness.

Take, again, the case of prevision. Prevision, the viewing of things yet to happen, things which no one has cause to believe will take place" certainly is not to be accounted for by telepathy. But if we assume the astral part of man to be provided with an astral organ of sight whose range is vastly superior to the range of the physical sense of sight, it is not difficult to account for it. We may suppose, for instance, that the astral brain, perceiving various events taking place, can anticipate with considerable accuracy those yet to happen. It is like a man perched on a high hill observing the approach of trains from opposite directions. Observing their direction and speed he is able to calculate approximately the time they will come into collision and form a vivid picture of the probable result. But to a man down in the valley who could see neither of the trains such a prevision would seem miraculous. And in a similar way prevision, the natural outcome of the great range of the astral sense-perceptions seems unaccountable to material science, but is explained by occult science.

Another astral sense organ is that concerned in the exercise of the psychometric faculty. Psychometry, the description of the history of any object by touching it, was first, I believe, given detailed description in a book entitled "The Soul of Things," by Denton. The faculty has since been investigated thoroughly, and it has been found that apparently every object retains the impressions of everything that takes place in its vicinity, and that a properly trained psychic, by touching the object, can describe these happenings in detail, and give information about it unknown to any living person, but subsequently verified. If the astral form accompanying every object retains all vibrations imparted to it, this phenomenon of psychometry is easily explained. For the astral body of the psychic, coming in contact with the astral form of the object, is able to feel these vibrations and interpret them; and this feeling and interpretation when transmitted to the physical brain is objectively recognized.

Let us now take another step and consider the powers said to be possessed by Fakirs and Saints of various lands and times. The whirling Dervish, Hindu Yogi, African Voodoo, Christian Saint, and Indian Medicine Man, all sometimes possess wonderful powers, but, having different conceptions of the Universe, attribute them to very dissimilar causes. They

have developed their psychic faculties under the shadow of some particular religious tenet, and usually not possessing scientific discrimination, ascribe their powers to some supernatural agency, angel, god, or devil, as their religion inclines them.

There are a few, however, the mental and moral efflorescence of each age, who attain Practical Occultism. These are satisfied to accept neither the prejudiced opinions of material science nor the dogmas of religion; but, sustained by an unfaltering faith in individual effort, seek deep below the surface appearances for the underlying reality. They discard no fact of science, but insist on interpreting all phenomena in the light of their own broad experience.

The student who sets himself seriously to the task of becoming one of these enlightened brethren must diligently cultivate his astral senses. In time his clairvoyant vision will open, and he will perceive colors of an intensity never beheld on earth. He will hear conversations not to be heard by the physical ear. He will smell odors and feel presences quite apart from those of ordinary life. He may see a distant friend write him a letter, and see or feel what is being written. Each such experience should be carefully recorded and an effort made to establish its accuracy. For example, if he receives in the course of time the letter seen clairvoyantly, and its contents coincide with what he has recorded; or if events which he is impressed are about to occur, do actually transpire as he foretold, he is then as much justified in placing some confidence in the reports of his psychic senses as an ordinary man is in believing the reports of his physical senses.

When seeing such visions or hearing sounds at a distance that precludes the possibility of their being of a physical nature, the student should bear in mind, however, that even as certain ether vibrations are known to pass almost unhindered through material substance, so astral vibrations also pass freely through ether and matter. And for this reason it is probable that all clairvoyant vision and all clairaudient hearing is the perception by the astral senses, not of the physical objects or sounds themselves, but of their astral counterparts.

Visions of this sort and their verification are far more frequent in the lives of ordinary people than the public imagines, because fear of ridicule keeps back the acknowledgment of the experience. They are everyday occurrences in the lives of practical occultists. I find, in fact, the greatest danger to those who cultivate such faculties persistently is that after a few such verifications they are apt to place too much reliance upon the psychic senses. Great care should always be taken to check and verify all these experiences, for either in physical or in spiritual things it is indeed easy to err, while to perceive the truth is a most difficult accomplishment. Yet by constant scrutiny, by eternal vigilance, and unceasing labor, we may more and more closely approach the goal of ultimate truth.

That there are unknown forces of tremendous power in the universe was brought home by the announcement on November 9, 1925, of the discovery of the Millikan Ray. This ray pelts the earth night and day with the same intensity from all directions. It has a frequency 1,000 times the mean frequency of the X-Ray, the frequency being as high above the X-Ray as the frequency of the latter is above that of ordinary light. It comes from the "depths of outer space," and has a penetrating power 100 times that of the X-Ray. The energy value involved in its production is perhaps 50 times as great as that in observed radio active processes, and is that computed to be involved in the simple capture of an electron by a positive nucleus.

This means that a hitherto undiscovered force has been pelting the earth with terrific power and with the ability to penetrate 68 feet of water or 6 feet of lead. This force apparently is generated by the formation throughout space of atomic matter from electrical components. Thus, while not demonstrating that there is a still finer, or astral, substance, it tends further to demonstrate that matter is built up of etheric substance. It also clearly indicates that still

finer vibrations, such as the vibrations of astral substance which so well account for a multitude of psychic phenomena and for the influence of the planets on human life, may very well exist and yet be beyond detection by the means commonly employed by material science.

In conclusion, this much is certain. Fakirs, Saints, Seers, Prophets, and so-called witches and wizards have in the past exhibited powers which are as yet unexplained by any theory of material science. In these modern times, also, we have Christian Scientists, Mental Scientists, New Thought practitioners, Mediums, Psychics, and others, who, without doubt, sometimes accomplish results that are not explicable by any of the known properties of the ether or of matter. For all these phenomena, that seem so puzzling to material science, the student will find a clear and easy explanation when he adopts the view of occult science that, interpenetrating both ether and matter, is a finer substance, more potent than coarser forms, called Astral Substance.