

Radiant Energy



For Beyond the Light Rays Lies the
Secret of the Universe
The Evolution and Transmutation of
the Atom

Compiled for the Layman from Excerpts
of the Writings of
DR. T. HENRY MORAY

RESEARCH INSTITUTE, INC.
SALT LAKE CITY, UTAH

RADIANT ENERGY

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and the Atom

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The Words "Radiant Energy" and "Dr. Moray"
have been synonymous for the past twenty years.

The reader should bear in mind that most of the ideas as set forth in the following pages, as also later date, were first given to the world by Dr. Moray from 1911 to 1931, and therefore should be read with that thought in mind.

In the past we permitted ourselves to be put on the defensive in our attempts to prove our stand. This was a mistake, as TRUTH should never be put on the defensive. The system of instruction of the Far East rather than that of the Western World should be used in advancing new discoveries of truth. In the Far East the teacher does not stop to prove each theory or fact. The message is delivered whether his hearers agree with him or not. He does not care whether they all agree with him or not, for he feels sure those who are ready for the truth he teaches will recognize it, and for the others, if they are not prepared to receive the truth, no amount of argument will help matters. The Eastern teacher knows that much of his teaching is but the planting of seed which will grow and be recognized only after the lapse of time.

We do not mean that anyone should blindly accept everything presented to him, but history, repeating itself, does prove that mankind goes on from one generation to another blindly closing its mind to new lines of thought only because he does not or will not understand or grasp the situation and the laws involved. Just as those who should have known better rejected the telephone as impossible because, to quote, "It is impossible to transmit the human voice over a copper wire." That was true when the telephone was discovered by Josia Coppersmith, it is true today and it will always be true. It is impossible to transmit the human voice over

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a copper wire. Yet in spite of that, the telephone does work. One might even go so far as to state there is no such thing as a human voice, yet man transmits his thoughts to one another by what we commonly refer to as "speech" and "hearing" in spite of the fact that man's vocal chords are not transmitters of other than mechanical vibrations and all the so-called sound originates in the skull of the hearer and not in the vocal chords of the speaker.

As we asked the question over fifteen years ago, we repeat that question now: "Why should man waste his time and efforts in trying to split the atom when nature is doing it all the time for us out in space?" Why not use the energy offered us in place of worrying about why grass is green in the hope it will discover for us a new source of energy which has been sitting on our doorsteps since the World began?

The salt of the earth is energy and the evolution of matter and the evolution of forces in the process of the creation of all things. By the proper uses of these natural laws of energy and matter, matter is turned into energy. That is something we all agree can be done, but do we understand that man can by the proper use of these same laws take energy and reverse the process and change energy into matter.

It is not a question of finding new elements, but of being able to use energy and matter in whatever wave length one finds them and of changing them to any desired wave length or frequency by letting nature do our "atom splitting" for us. It is cheaper, faster, more sure, and the potential possibilities far exceed any puny efforts of man. I say puny, for, while man may discover new means of causing explosions and of creating explosives, he has not and cannot split the atom. It is merely a question of a change in form, no less matter and no less energy. We separate energy only to have it join elsewhere. If we can split the atom actually, we will have split the chain that holds the cycle of the Universe together and, like one drop of gasoline exploding all the other drops of gasoline near it, so will the chain of atoms, go right on splitting every other atom of the Universe, and that cannot be done any more than one can compress water.

In the laboratories of the Universe we find the uranium and radium series changing from uranium to radium, radium into radon and radium A, B, C, C', D (radio lead), radium E, F, and finally into lead, and if we follow the process, lead into gold and so on. In the laboratory we have changed lead into gold and by reversing the process changed lead into polonium or radium F. If this step can be taken either way, is there any reason why further steps cannot be taken?

This is not a case of splitting the atom, but merely of addition, multiplication, division and subtraction of the combinations of the atoms, but not the breaking into of the chain of the Universe. It is plain evolution of matter and evolution of forces and there is no need in highly overestimating the accomplishment under false interpretation of the facts.

As frequency or oscillations is the basis of the existence of all animal, vegetable and mineral matter, one could explode matter from any distance to which the proper oscillation could be transmitted. Our experiments have proven to our complete satisfaction that stores of ammunition on the land, in the air or on the sea can be thus destroyed.

Our experiments have also satisfied us that gravity is akin to, if not an electrical oscillation so well balanced that we might, for the lack of a better name, almost call it a "Wattless current" until some force is exerted to oppose its potential and then gravity opposes such force. This means gravity can be controlled and unlimited advancement made in air navigation, with the only concern left being air speed and momentum.

There is much of value to be developed in fields that have not even been touched and about which very little is known in research in the atomic nucleus. We have made some astounding discoveries in artificial radioactivity set up, not by the usual expensive method with the cyclotron, but by the Moray method. A new world is to be entered through ultra sonics, hyper and ultra high frequency currents created through the use of certain tube discoveries working in ionizations as well as electronic action.

Too little work has been done with rays or frequencies around 10^6 to 10^5 A. U., no doubt, because the mechanical means used in working in this field has been attempted with practically the same type of equipment used in the one-meter field. We might as well try to carry water in a sieve.

It is my belief that Television also will never be a complete commercial success until the method of approach is changed to a celestial wave rather than the present approach.

One should not enter these experimental fields in the gamma band without the proper protection, for one will be risking his life in this work without a proper absorber. Water, the common means of protection, has proven of little value as an absorber in most of our investigations. Neither has boric acid water or hydrogen gas proven too satisfactory as an absorber.

In September, 1943, a letter was written by us on transmutation of metals to some parties interested in mercury experiments, part of which letter follows:

In the reducing of colloids from a non-crystalline state to a crystalline state, the current and rays used must be such as to produce a synchronous action. It is well known that colloidal "solutions" do not obey the solution laws: the alterations of the boiling and freezing points are inappreciable and the osmotic pressures very small. A colloidal solution is, in reality, a disperse system, and in the case of attempting to "knock down" the suspended metallic colloid one must cause what might be called coagulation and precipitation of the metallic colloid found in metallic sulphides, chlorides or salts of a metal in a non-crystalline form to a coagulated and crystalline state.

Now, whatever frequency of current used and whatever ray or rays used, the frequency of the current and the wave length of the ray or rays used should harmonize so as to blend or synchronize with the natural frequency or wave length of the substance treated so as to produce the synchronous action that will set up a vibration for which we might "coin" an expression and call this action a "super-ultra sonic reaction" between the frequency of current, the wave length of the ray, and the vibratory rate of the substance treated to cause the desired metabolic or catalytic reaction which will result in, I am convinced, a complete change in the mode of mining. That the mining of the future will not be done in the crude ways of the past. Man's work with animals, vegetables, fruits, flowers, and all sorts of animal and vegetable life has shown that he can improve on the things that nature produced. Man must first go to nature to learn, but then he must learn to improve over nature's ways. I am positively convinced that man can improve nature's mineral deposits by making "colloids" "grow," if one does not object to such an expression. Or, in other words, speed up nature's action and obtain the same or better results in a fraction of the time taken by nature.

In the catalytic production of metals from "colloids," one must remember that like begets like, and one cannot obtain copper from the "salts" of some other metallic deposit.

In the catalytic production of metals from colloids one must not confuse this process with the evolution of forces and the evolution of matter, the former being the process of "growing" from colloids, the latter the actual phenomena of energy becoming matter and matter, energy. This still is not a process of splitting the atom, but changing the arrangements of them.

The real test of science in modern destruction lies not in the explosion of matter by matter or matter by energy; but energy by energy, "super" ultra sonics against the vibrations of matter.

GENERAL STATEMENT

Compiled in Los Angeles, California, January, 1939, from Moray notes and printed booklets written by Dr. Moray from 1913 to 1926. See "Beyond the Light Rays" and other publications. This account may lack continuity.

This account will endeavor to give a brief explanation of the Moray Radiant Energy device whereby it is possible to utilize the vast source of energy of the universe without a prime mover through the splitting of the atom by the action of the universe not man-made splitting of the atom.

The Moray device is not perpetual motion, but it utilizes energy that already exists and transforms it into useful forms. An electrical generator is in the true sense not a generator, as it creates nothing. Electricity is not made by the generator, it is merely pumped. From that standpoint, an electric generator might be referred to as an electric pump and the Moray Radiant Energy as a high-speed oscillating atom turbine.

On page seventeen of the "Nature of the World and of Man" (compiled by the technical staff, Chicago Institute of Technology), we find it states that our planet is receiving energy from the sun continuously at the rate of 160,000 horsepower per inhabitant of the earth at the present time.

The following is taken from "Experiments with Alternate Currents of High Potential and High Frequency," by Nikola Tesla, page fifty-eight, written in 1904:

"Ere many generations pass our machinery will be driven by power obtainable at any point in the universe—Is this energy Static or Kinetic? If Static, our hopes are in vain; if Kinetic, and this we know it is for certain, then it is a mere question of time when men will succeed in attaching their machinery to the very wheel work of nature."

The aurora borealis is considered to be very definitely an electrical phenomenon produced by the passage of electric charges through the rarefied gases of the higher atmosphere.

The conversion of matter to energy in the stars is now very generally accepted as demonstrated, and reasoning from what occurs in radioactive disintegration, during which energy waves are radiated, we may conclude that energy waves of very high frequency are sent out from the stars, one of which is our sun.

As in the reception of radio waves, so in this case the circuit is a tuned arrangement to respond to the particular wave frequency "oscillations" which it is desired to intercept. Dr. Moray uses a "valve" to prevent return of the energy to the outer circuit and force it to go through the power application circuit.

Experiments have been made at different places many miles away from all power lines, one experiment being given at a point more than 50 miles from all power lines, and 26 miles from even a farmer's telephone. The places for these experiments were selected by the members of the parties making the test and not by the inventor, and the places were not prearranged but selected by them as they drove along in their own car, not the car of the inventor, looking for a place to make the test.

The device on an endurance test was operated under standard R. R. seals for a total of 157 hours and 55 minutes, when the seals were broken and the device put under severe strain and tests made for about an hour longer and then shut off.

Close examination of the device disclosed that all parts were in perfect shape

and could have been run indefinitely. During the entire test the lights burned evenly and brightly without flickering and there was no change in the brilliancy from day to day.

The quantity of current passing through the secondary of the transformer is sufficient to burn up wire of that size if ordinary current were used, yet there is no heating of the transformer even though there is no circulation of air through it to cool it, as it is completely enclosed. All parts of the machine run absolutely cool, regardless of the length of time operated.

It makes no difference whether one fifty-watt lamp is used or whether fifty or more of them are connected to the machine, the draft of current is adapted to the load.

There is not a sound from the machine when in operation, there being no moving parts.

In 1931 an experimental demonstration was made in the presence of a nationally known physicist, a professor in one of the greatest universities of the country, at which time he noted and mentioned the following:

"That when the oscillators are connected in the circuit, the condensers fill slowly, and the longer the current is applied to charge them, the greater the charge they take, up to their maximum for the applied voltage, much as in filling a bucket by pouring the water into it, instead of taking the charge practically instantaneously, as is ordinarily the case with condensers.

"That the lights on one spot are much hotter than is ever the case with any current used at the present time, due to the incandescence of the gas in the globes under the influence of the very high frequency that the rest of the globe remained cool.

"That the size of wire in the transformer could not carry the amperage passing through it without burning up, if ordinary current were used, yet the wires remained absolutely cool no matter how long the machine operated."

"The above points show that there is developed something which is entirely out of the ordinary, and cannot be accounted for on the basis of induction from existing power lines or current from batteries."

In later experiments tests were made successfully while the device was set up in a moving automobile.

Beginning in 1925 many men of science have come from foreign countries and from the East and West and have witnessed experimental demonstrations and not one of them has been able to find any fault with what they have seen or heard. Names of these men of science will be furnished upon request. These men have had the device opened for their inspection and have pronounced the experiments wonderful, that the current is high frequency, the color of the light different, that the device carries many times as much current without even getting slightly warm than any other electrical device of like construction known to man today could do without bursting into flames. That the tubes used are far more powerful than anything known to science today. The drawings, circuits and theory have been pronounced by leading men of science as scientifically, electrically, mechanically sound and correct.

It is generally accepted now by science, and Dr. Moray's device proves, there is energy coming from somewhere, that the earth is surrounded by such a field of energy.

This energy, or as Dr. Moray explains it—these oscillations of Energy, are picked up by the device through the oscillators, or neutron bombardment. As stated, these

surging or oscillations of Energy coming and going as the waves of the sea are picked up by the Moray Device because the Moray Device is tuned to oscillate in harmony with the oscillations of the universe. Every oscillation, whether large or small, is completed during the same interval of time. The beat note of time, the heart beats of life, the oscillations of the Universe all prove the same great fact that oscillations are all governed by the same cycle of time, completed during the same interval of time, and as I stated before, these waves of energy have a regular beat note of time, coming and going as the waves of the sea, but in a very definite mathematical order of time, coming to the earth from every direction with a regular beat note that might be referred to as the Father of Time, the Sire of Gravitation.

This energy has a definite elastic rigidity and density, which is subject to displacement and strains. When the strain is removed, this medium will spring back to its old position and beyond, surging back and forth as the waves of the sea, and will continue to oscillate until the original pressure is used up. If the internal impedance is too great, there will be no oscillations, but it will merely slide back in a dead beat to its unrestrained state. Cutting down the resistance to the minimum and by synchronous actions of the device with the actions of the Universe, recovery will be quicker and quicker until inertia will assert itself and lengthen out the time of final recovery by carrying the recoil beyond the natural oscillation and thus prolonging the vibrations by oscillation. When the recovery is distinctly oscillatory and harmonics set in the oscillations will go on forever because of the oscillations of the Universe. As I said, these electric oscillations are not simple oscillations, but surging with a definite beat note of the evolution of matter and the evolution of energy.

It is not claimed that all of Dr. Moray's theories are proven, but it is claimed that the device works. The results are certain and that in the absence of better explanation as given in the 1931 edition of "Beyond the Light Rays," Dr. Moray's explanation is as good as any.

In explaining this theory in 1929 to a well-known and noted American Scientist, he remarked, "You go in your theory back of the law of gravitation."

We may readily take it for granted that a perpetual light, like perpetual motion, is an impossibility. I say that because I do not believe in perpetual light or motion, which, in a sense, is one and the same thing as getting something for nothing.

In this day and age it is not well to say anything is impossible, but getting something for nothing goes beyond my conception of thought. What I have done in Radiant Energy has been and is perhaps rightfully called "radical." Nevertheless, of the great number of learned men who have seen and heard of my work, not one has been able to disprove my claims, theories or discoveries. Among those in question have been some of America's foremost in Science, although they have spent from many hours to days on my theory and claims and test demonstrations. Hence this further explanation of the Moray theory, on which Moray has spent his time from boyhood.

The facts and theories herein contained are not contrary to ideas that science has now accepted. They are, however, original with me in application and when I first publicly advanced them in 1925 they were "killed" as it were by those who heard them before they got very far. Be that as it may, I have taken "Radiant Energy" and found a means of using it. Heat, light, etc., are not things in themselves, but sensations or effects produced by this "Radiant Energy" directly or indirectly from matter.

radiant energy is emitted at various wave lengths or frequencies which must be taken into account in laws of radiation. . . . Now the physicist uses quanta to account for the electrons and atoms and molecules. Bodies are built of molecules, the molecules of atoms, and the atoms of electrons (and protons). Here we see the scientific principle applied to "material" (matter) and then to electricity (the electron). Finally, a physical process—the radiation emitted by the electrons is divided into quanta. With such pictures of the universe being presented we may cease to be surprised at anything, but our interest and admiration will grow. Will we ever get to the final foundation?"

One of the most marvelous relationships that has ever been revealed in the entire science of physics is that between light and electricity. Knowing what we do at the present time in regard to the structure of atoms, this relationship is not quite so surprising. However, considering the total absence of knowledge a half century ago, pertaining to the existence of electrons in atoms of matter, the sudden revelation that light (and radiation in general) was an electrical phenomena was very startling and revolutionary. Even today these persons who are unfamiliar with fundamental physics find it difficult to believe that energy traveling from yonder star to the eyes is electromagnetic in nature. But that it is so has been amply proved. The atom in those distance stellar crucibles having moving electrons which are emitting electromagnetic waves of many wavelengths or frequencies. Here on Earth we have many 'receiving stations' which are tuned to certain ranges of wavelengths."

"RADIANT ENERGY" by Edgar Lucien Larkin, Director Lowe Observatory, Echo Mountain, California, printed in 1902, on page 17:

"Radiant here means proceeding from a center in straight lines in every direction. Energy is internal and inherent. Professor Barker, "Physics," page 4, says: 'Energy is defined as a condition of matter in virtue of which any definite portion may effect changes in any other definite portion.' This was written in 1892, and discoveries since confirm it. Energy then, is a state of matter, or, rather, the result of a particular state or condition in which matter may be when any observed phase of energy appears."

W W

The
SUN
PHOTO SERVICE
Salt Lake City, Utah

Feb. 26, 1940

Dr. T. H. Moray
2424 South 5th East St.
Salt Lake City, Utah.

Dear Sir:

We wish to thank you for the recent business you have given us, and hope we may have the pleasure of serving you again.

For your information we wish to state that in all cases where negatives included any of your prints we found them to be of greater intensity than ordinary Illumi-nation. They seem to burn in the negative to such a degree that we found it

necessary to cut special masks to hold back the immediate area of illumination in order to obtain any outline of the globes whatever. We found the average negative required about ten times the normal exposure in the areas where lights were used. This is especially interesting as in photographing ordinary lights when shining directly into the lens of camera the light outline can be plainly seen even though the negative is dense at point of illumination and in the case of your lights the only detail possible to obtain had to be brought out through holding back dense area as mentioned above.

Very truly yours,

THE SUN PHOTO SERVICE

By D. R. Silvers.

Have other letters from expert photographers which all show the activity of the rays by the way they burned into the photographic film.

One hears a great deal about the work being done by the cyclotron or atom-smasher, from the first one constructed by Dr. C. E. Lawrence at the University of California to the sixteenth American cyclotron now under construction at the University of Illinois. The University of Illinois already had a small one, the second one built in the world; but this new one, which will be ready about April or May of 1942, and which will have taken many months to construct, will have six huge iron castings weighing 60 tons. One section will have two miles of copper tubing wound into a dozen flat coils.

Hundreds of thousands of dollars are being spent for apparatus with which to effect transformations and many of the greatest scientists are giving their entire time to this work. All this time and money could be saved if we would but realize the fact that nature is splitting atoms all the time for us. That is the source of energy of the Universe being given to us free of charge.

The Carnegie Institution of Washington, D. C., has its Atomic Physics Laboratory. At Harvard University mercury has apparently been turned into gold by the cyclotron. This experiment was reported in Washington to the American Physical Society by Dr. Sherr and Professor Bainbridge.

The report shows, however, that the amount of gold obtained was so exceedingly minute that its presence was shown only by an indirect method. Further, it is in a form of gold that vanishes rapidly. It decays like radium. With one form detected, after 43 minutes half of a given amount was gone; after another 48 minutes half of what remained was gone and so on. Other forms lasted but a few days. Small amounts of platinum were also formed by transmutation of mercury.

A tiny amount of gold was mixed with about a pound of the bombarded mercury as a bait to draw the transmuted gold atoms together.

One can see, therefore, that transmutation of metals is an accomplished fact, something which twenty years ago would have been called impossible by the same institutions that are spending so much time and money today on this research.

So again it is with great satisfaction that the Research Institute and its predecessor, the Moray Scientific Laboratories, sees that the work it has been doing and for which it was called all sorts of kind (?) names is being followed by others.

We say followed by others advisedly, because as early as 1911 the personnel

which is now a part of the Research Institute, advanced as facts, discoveries of rays of the universe and of matter, which today are being substantiated in the greatest institutions of the world.

As early as 1925, by a method far less complicated and expensive, the Moray Scientific Laboratories, the fore-runner of the Research Institute, changed common lead so that it could be heated to a white hot heat before melting. Other treated lead which contained no precious metals before treatment assayed as follows: May 28, 1940, from one ounce of lead treated at Salt Lake City, Utah, and assayed at the Boaz Mine, Norris, Montana, assayed 35c in gold. Five ounces of untreated soil assayed blank while the same amount of treated soil assayed at the rate per ton of \$122.50 in gold.

July 25, 1940, an assay was made by the Union Assay Office of Salt Lake City, Utah, from about 50 c.c. of treated artesian water (untreated water had no precious mineral content) assayed at the rate per ton of \$10.50 in gold, \$2.63 silver. Sample serial No. 88193. Test serial No. 7209 made July 27, 1941, on another sample treated, assayed 70c in gold and 43c in silver.

It must not be understood that this was done on a commercial basis but in the laboratory just as the results given above that were obtained at Harvard. The only difference was that the gold, silver and platinum obtained at the Research Institute was not in such tiny amounts that their presence could only be detected by indirect methods, but that they were in great enough quantities that they could be assayed. They could be milled and separated from the other metals and could be weighed. Furthermore, none of these precious metals vanished, but still exist and can be examined by anyone.

In America and abroad, especially in Germany, scientists have devised the thermal diffusion method which has proven to be one of the most efficient methods of separating the different forms of isotopes of the elements. With this method scientists have separated not only the isotopes of chlorine, but those of neon, krypton and others, but again this is an expensive process.

By the methods used in the laboratories of the Research Institute very interesting results have been had with copper, lead, aluminum and magnesium. A cheap alloy which blends well with other metals has been experimented with, the commercial price will be much less than magnesium, yet the atomic weight is about the same after it is fused by special rays and frequencies of a Radiant Energy device developed in the Institute laboratories.

Successful experiments were also carried on in 1940 to greatly increase the radioactivity of carnotite, uranium and other radio-active substances. This method brings results heretofore not obtained by any other method.

Hollywood, Calif.,
May 20, 1942.

Dear Mr.

With reference to our recent conversations and as a means of clarifying my position, let me repeat some of the statements I have made to you.

At that time and other times I wrote you, among other things, the following, which I will again repeat:

"It is recognized that in addition to possessing kinetic energy, the atom is capable of absorbing energy internally. This internal energy would seem to be associated with the configuration of the particles of which the atom is composed. While under ordinary conditions an atom is in what is known as the normal state, or

the state in which we find matter apparently neither giving off, nor absorbing energy. The internal energy of the atom can be altered; for while under ordinary conditions an atom is in what is known as the normal state, when the internal energy of the atom exceeds that of its normal state it is said to be excited. Excitations may be caused in several ways, among which is the collision of the atom with rapidly moving positive or negative particles, or as in the breaking of the lines of force in the modern electromagnetic generator, which I prefer to call an electric pump, for the electric generator does not create the electrical energy any more than the water pump creates the water. Kinetic energy is given up, or, in other words, this excitation causes these rapidly moving particles to give up some or all of their kinetic energy to the atom during the collision. A limiting case of excitation is ionization, in which energy is absorbed by the atom sufficiently to allow a loosely bound electron to leave the atom against the electro-static force which tends to hold it within the atom. An atom which has given up one or more electrons is said to be ionized.

It is possible that ionization, or in other words excitation, may take place in successive steps through absorption of quanta energy, or, in other words, through the evolution of matter and the evolution of forces, matter is continuously changing into energy and energy continually changing into matter. The return of an ionized atom to a state of lower energy is associated with electromagnetic radiation. So also from the process of ionization which may result from a number of causes, and the one we are interested in is through cosmic radiation, electric energy becomes associated with the oscillation or sonic of the universe. The higher the frequency, the greater the ionization or excitation. Or, as I have stated before, matter is susceptible to motion; the universe continually changing into energy and energy into matter. All energy appertains either to matter or excitation of energy and continually passes from one to the other, or in other words, continually possessing kinetic energy. There, at its very foundation, matter consists of an electric charge which governs the very motion of the planets and suns. I consider gamma rays or radio activity an electrical action only of a different rate of vibration.

If one, therefore, sets up a sonic oscillation, a sonic oscillation existing in the realms beyond the light rays, one will be in harmony with the oscillations of the universe, the energy that is coming to this earth continuously, oscillating back and forth in a definite sonic. Some call it radio activity.

Relativity theory suggests that radiation of any large amount of energy is accompanied by a like loss of mass. This loss of mass is given up as the loss of energy. If in the formation of an amount of energy we have an accomplished loss of mass, as has been explained by astro-physicists to account for the radiant energy of the sun and the stars, it is equally reasonable to believe that energy in returning back to the source from whence it came, is capable of again creating mass, and through this process we have a lowering in the potential with no less mass and no less energy. The energy used to drive any of our great power systems has not been absorbed, it merely sinks back to the place from whence it came, as water over a wheel. There is nothing about this that suggests perpetual motion, but it is merely a case of the evolution of matter and the evolution of forces. This might be called the economy of the universe, for if it were not so, nature could be accused of squandering her resources of energy so prodigally that nature would eventually end up in bankruptcy, but doubtless in our present theories, we have a very imperfect account of the situation.

If we reverse our imagination on what the telescope has taught us of the

stellar universe, we will find that beyond the microscope we have the particles of which everything about us consists, obeying every law that is found everywhere from stellar space to atomic space. We find bodies in motion and when we think how small the proton and electron are, and yet obeying the same laws of the universe, we may see the economical uselessness of science trying to crack the atom, when nature, or call it what you will, is accomplishing the same thing for us in stellar and interstellar spaces. Why do something nature is already doing for us? Let's use what nature offers as I first suggested in 1926 and again in 1931. In the great laboratories of the universe we are having done for us something that far excels in its performance anything that we may hope to accomplish in our laboratories. Why try to do in our small way something which nature is already doing for us? From this conception we might see that Democritus came close to a great scientific truth in his bold statement, when he declared that all physical phenomena reduced itself to one single item—motion, or, as we might repeat, the sonic of the universe. Let me repeat, do not forget the atom is but a counterpart of the universe itself, and that light and other radiations exert a mechanical pressure upon every object they strike, and that all these radiations are essentially electrical in their character. There is a breaking down and a building up of the atom continuously, and it is the evolution of matter and forces which is producing, eternally, unlimited power.

May it not yet be shown that the dissipated energy which results from so much transformation of matter which has heretofore been unavailable—or we should say unused by us where it has only appeared to be unavailable—should now become available to us as an unlimited source of power through the Moray discoveries of application of these forces?

In the Gamma Rays we find potentials which are equivalent to as much as 2,000,000 volts, yet their wave lengths are not the shortest known to physicists. In octaves still higher lie rays which are known as Cosmic Rays. Who can draw a definite line and say how much higher other octaves exist than those of known Cosmic Rays? Our starting point for the discovery of these different rays was electrical conductivity of the air. It has been discovered that conductivity is just as strong by night as by day, so that radiations emitted by the sun can scarcely be the cause of this energy. May we not, then, accept the theory that the sun, in and of itself, has no energy, but is merely a rebroadcaster of the great generator—the sonic of the universe itself? That these two, then, matter and energy, are possibly one, is the sum total of all that has been found out during the centuries of constant research, to be judged by that small portion of the universe which is visible to man, who is only armed with his infinitesimal telescopes, or with the most powerful spectroscopes ever made by man.

It is the belief of the writer that all space is saturated with energies which are doubtless electrical in their ultimate energies or very closely allied to electrical action. The relation of matter to energy and energy to matter then becomes the potential of the universe, one continuous series of oscillations, oscillating to and fro like a great pendulum across the universe.

One might ask, "How can one get a steady source of energy from such surges?" Could not a steady flow of water be obtained from the surging of the sea?

The history of every major scientific discovery has proven that argumentation on the merits of a discovery, when judged by private interpretation of the scientific facts in question, has proven them all impossible and their discoverer a

charlatan.

The above, with all of the other data which has been furnished you in the past, such as my general statements on Transmutation of Metals; Electricity in Medicine; the Patent Situation; the Pictures; and the General Statement on Radiant Energy, Electromagnetic Radiation, written in Los Angeles in 1939, which contains some quotations from my pamphlet, "Beyond the Light Rays," which was written many years ago and printed in 1931, should be of sufficient help to you in forming a conception of the facts.

If you should need additional information, do not hesitate to request the same.

I would like to further clarify another point. I have not come to you, nor to anyone, trying to peddle Radiant Energy. You came to me in regard to Radiant Energy, and I have tried to help you to understand my conceptions and the facts surrounding the discoveries I have made. If the world wants what they have to offer in Radiant Energy, Transmutation of Metals, Ultra Sonics, and Electro-Therapy, and the other kindred discoveries that I have made, I am more than willing to help them to do so. If not, I can and will work out every problem by myself. With kindest regards.

Most sincerely yours,

T. Henry Moray,

* * *

May 20, 1942.

RESEARCH INSTITUTE, INC.
2484 South Fifth East Street
Laboratory: South Fourth East Street
Salt Lake City, Utah

April 17, 1942.

Dear Mr. _____

Your kind letter of April 14, special delivery, came last night.

Letter writing is such an unsatisfactory method of trying to put one's ideas over, that I hesitate in trying to express myself by letter, but this may serve to review some points in our minds, which, however, from the conversations we have had, I feel are fully understood by you.

As to an explanation of my theories of why the Moray discoveries of Radiant Energy have given the results demonstrated, I have in the past given many complete accounts to men of science and others. The data you have had from me goes into considerable detail proving the fact that the device does all that is claimed for it. Naturally no attempt has been made to give, nor will such information be given, as to why or how the results are obtained. I feel that you readily appreciate the fact that from a standpoint of law and public use patentability and a general safety standpoint, there is a definite disadvantage in disclosures up to the time when one has on file in the United States and desired Foreign Countries all applications which it is desired to file. However, the important thing is that the machine or device operates and therefore at this time theories of operation are unimportant. For instance, the explanation of the "back rush" effect of condensers should be sufficient to satisfy anyone as to the operation of the condensers in acting as reservoirs for the distribution of energy. This is equally true of the statements about the device oscillating in harmony with the oscillations of the universe, in face of the evidence of operation which is now in your possession, and the data you turned back to me.

The conversion of matter to energy in the stars is now very generally accepted as demonstrated, and reasoning from what occurs under radio active disintegration, during which energy waves are radiated, we may conclude that energy waves of very high frequency are sent out from the stars, one of which is our sun.

As in the reception of radio waves and radio active waves, so in this the circuit is tuned and by the right arrangement of our own type of special oscillators, frequencies are reduced so they may be made to respond to the right arrangements of inductances and capacities and of a special "valve" of our own construction, to prevent the return of the power to the outer circuit and force it to go through the power application circuit. Ordinarily when a potential is applied to the terminals of a condenser, a full charge is acquired almost instantaneously, but with the Moray oscillators filling up somewhat as when water is poured into a bucket, the longer the energy is applied, the greater the charge taken, up to the maximum capacity for the given potential and frequency. This was explained in the data you had, that these oscillations of energy are picked up by the Moray device and, as stated, these surgings or oscillations of energy are coming and going in a regular beat note of time. This energy has a definite elastic rigidity and density which is subject to displacement and strains. When the strain is removed, this energy will surge back and forth as the waves of the sea and will continue to oscillate as long as the internal impedance is kept within certain limitations and by synchronous actions of the device with the actions of the universe, recovery will be quicker and quicker until inertia asserts itself and the action will become distinctly oscillatory and harmonics set in. Then the oscillations of the device will continue with the oscillations of the universe. As stated, these oscillations are not simple oscillations, but surgings with a definite beat note, elastic rigidity and density.

The leaflets you requested are being sent you under separate cover.

Most sincerely yours,

T. Henry Moray,

* * *

QUOTING FROM "BEYOND THE LIGHT RAYS"

(First Written in 1928 from Notes of 1913 to 1918 and First Printed and Published in 1931)

In writing this very short account of the oscillating theory of the Moray "Radiant Energy" discoveries, one can only touch the high spots as many large books would have to be written to even in a small way cover the subject.

Another difficulty which has hindered man in forming a true picture of the objective world is that mixed blessing—egotism. In early centuries he could not escape from the false assumption of his own preeminent importance, and these same shackles are still prejudicing the observations of most persons.

In reference to electrons, neutrons, protons, and ions: It is my theory in using these terms that they are the energy of the universe, that by some unknown means have become disassociated here and there, and these innumerable infinitesimal particles of electrified particles constitute (by the forces they exert and the disturbances they originate) the substratum of what our senses term as matter, and by nature splitting matter the energy of the universe is born.

Matter is susceptible to motion. Ether is susceptible to stress. All atoms appertain either to matter or energy, and continually pass from one to the other, thus producing kinetic energy. There at its very foundation matter consists of electrical charges which govern the very motion of celestial bodies . . . i. e.,

radio active radiations of energy and matter. The evolution of matter and the evolution of forces (energy).

There are ample writings acknowledging that there is unlimited energy in the Universe, but to say one is able to tap this supply is another matter. If I tell you there is water, good cold water, in a glass on your table, but you cannot drink it for a million years, what would you think? You know how to get the water out of a glass. Well, it is as easy to tap this energy now out in space as it will be in a million years from now. If it can be done then, it can be done now.

For me to go into a technical account of how to harness this energy, would mean the writing of volumes. The whole thing might be said in the few words of Nikola Tesla. "Throughout space there is energy. Is this energy static or kinetic? If static our hopes are in vain; if kinetic and this we know it is for certain, then it is a mere question of time when men will succeed in attaching their machinery to the very wheelwork of nature."

This I have been able to do through the use of certain valves and oscillators that I have made and of which doctors of science have said are the most powerful devices known to science today. When an elastic substance is subjected to strain and then set free, one of two things happens. The substance may slowly recover from the strain and gradually attain its natural state, or the elastic recoil may carry it past its position of equilibrium and cause it to execute a series of oscillations. In ordinary language there may be a continuous flow of energy in one direction until the discharge is completed, or an oscillating discharge may occur. That is, the first flow may be succeeded by a back-rush, as if the first discharge had overrun itself and something like a recoil set in. The device thus becomes more or less charged again in the opposite sense, and a second discharge occurs accompanied by a second back-rush, the oscillations going on until the energy is either radiated or used up in the heating of the conductors. And if your device will oscillate in harmony with the oscillations of the Universe, or in other words, if the device is capable of synchronization with the vibrations of that energy through space, then the oscillations will go on forever. No one can call such an arrangement perpetual motion any more than one can call the motion of the earth perpetual motion. My device oscillates because of the oscillations of the Universe caused by the disintegration of matter.

Extracts from the notes made in 1918 follow, although they may in a way repeat what has already been given, but are repeated in order not to break the line of thought.

I fully realize that whatever the difficulties in discovering new truths, there are still greater difficulties in getting them recognized, for as Mark Twain said, "It takes twenty years to get a new idea fixed in the human mind," and I should be armed with scant philosophy if I remained for long surprised at the attacks of some, or the exasperation of a certain number of worthy people, and at the silence of the greater number of scholars, who have heard of my experiments.

Heat, light, etc., are not things in themselves, but sensations or effects produced by radiant energy directly or indirectly.

We speak of generating electricity: To be exact, we only transfer it from one place to another (pump it, if you please). We cannot generate it because we can neither create nor destroy it. After we have used it to light our homes or do other work, it is like water over the wheel—no less water, only the lowering of potential. The electricity has only sunk back from whence it came, ready and waiting for nature or man to raise its potential, when it again is ready to do man's bidding,

or in other words in the evolution of energy it sinks back from whence it came as it is naturally very slowly but steadily being liberated from the ether. Man may by proper means make the process of liberation rapid rather than the natural slow way of nature.

I fully realize elements maintain an equilibrium by rotations, attractions and repulsions, but this does not interfere with a transformation of equilibrium, which when the transformations of equilibrium are rapid enough become heat, light and electricity, or matter is turning into energy and energy into matter.

There can be no production of current electricity without an interruption of equilibrium. Whatever the quantity of electricity it will produce no energy if there is no disturbance of equilibrium, that is to say change of potential or electrical level.

When one thinks of the oxygen and nitrogen molecules of the air all about us moving with the speed of bullets and striking us and everything with this speed, one can form some idea of the agitation taking place in the Universe. The oscillations of the Universe are a part of this agitation, although some of them are from .06 to .01 Angstrom units and shorter, they may be made to do the bidding of man.

The oscillations of these electrons, protons, etc., out there in space are emitting electromagnetic waves of many wave lengths and frequencies. In the Moray device we have one frequency on the high voltage or primary side, and for commercial purposes, the device is so constructed that the frequency is very much lower on the secondary side.

I will now go on to the account promised above on the back-rush effect of condensers and electromagnetic radiation.

But first let me state that all radiant energy is now believed to possess mass or something equivalent to it. Mass and radiant energy are even considered to be interchangeable. I am convinced it is active radiations produced in nature's cyclotrons by the evolution of matter into energy and energy into matter.

Ether demanded by Electric Phenomena—an Electric Charge a Charge of Energy and an Electric Current a Flow of Energy: To account for the propagation of heat and light and other radiant energy—we have postulated the existence of a medium filling all space. But the transference of the energy of radiant heat and light is not the only evidence we have in favor of the existence of such a medium. Electric, magnetic, and electromagnetic phenomena (and gravitation itself) point in the same direction to gamma rays and the splitting of the atom by nature, the evolution of matter and the evolution of forces, or, in other words, matter turning into energy and energy into matter.

It is a matter of common observation that attractions and repulsions take place between electrified bodies, magnets, and circuits conveying electric currents. Large masses may be set in motion in this manner and acquire kinetic energy. If an electric current be started in any circuit, corresponding induced currents spring up in all neighboring conductors; yet there is no visible connection between the circuit and the conductors. To originate a current in any conductor requires the expenditure of energy. How then is the energy propagated from the circuit to the conductors? If we believe in the continuity of the propagation of energy—that is, if we believe that when it disappears at one place and reappears at another, it must have passed through the intervening space, and therefore have existed there somehow in the meantime—we are forced to postulate a Universe filled with matter and energy.

When a body is electrified, what we must first observe is that a certain amount of energy has been spent; work has been done, and the result is the electrified

state of the body. The process of electrifying a conductor is therefore the storing of energy in some way in, or around, the conductor in some medium. The work is spent in altering the state of the medium, and when the body is discharged the medium returns to its original state, and the store of energy is involved. Similarly a supply of energy is required to maintain an electric current, and the phenomena arising from the current are manifestations of the presence of this energy in the medium around the circuit. Formerly an electrified body was supposed to have something called electricity residing upon it which caused the electrical phenomena, and an electric current was regarded as a flow of electricity travelling along the wire, while the energy which appeared at any part of the circuit (if considered at all) was supposed to have been conveyed along the wire by the current. The existence of induction, however, and electromagnetic actions between bodies situated at a distance from each other, lead us to look upon the medium around the conductors as playing a very important part in the development of the phenomena. It is, in fact, the storehouse of the energy.

Upon this basis Maxwell founded his theory of electricity and magnetism, and determined the distribution of the energy in the various parts of the field in terms of the electric and magnetic forces. The ether around an electrified body is charged with energy, and the electrical phenomena are manifestations of this energy, and not of an imaginary electric fluid distributed over the conductor. When we speak of the charge of an electrified conductor we refer to the charge of energy in the ether around it, and when we talk of the electric flow or current in a circuit we refer to the only flow we know of, viz., the flow of energy through the electric field into the wire.

Now consider the case of a body changed alternately, positively and negatively, in rapid succession. The positive charge means a positive polarisation of the ether, which begins at the conductor and travels out through space. When the body is discharged the ether is once more set free and resumes its former condition. The negative charge now entails a modification of the ether or polarisation in the opposite sense. The result of alternate charges of opposite sign is that the ether at any point becomes polarised alternately in opposite directions while waves of opposite polarisations are propagated through space, each carrying energy derived from the source or agent supplying the electrification. Here, then, we have a periodic disturbance of some kind occurring at each point, accompanied by waves of energy travelling outwards from the conductor.

The phenomena of interference lead to the conclusion that light is the result of a periodic disturbance, or vibration, of the ether, but as to the nature of the vibration—that is, as to the exact nature of the periodic change—or what it is that changes, we possess no knowledge. From the foregoing we see that alternating electric charges are accompanied by corresponding changes of state, or vibrations, and if the charge be varied periodically and with sufficient rapidity, we have a vibration at each point analogous to, and perhaps identical with, that which occurs in propagation of light and of other vibrations higher than the gamma rays and beyond.

Research Institute, Inc.



Laboratories and Clinics from Coast to Coast
Intermountain Laboratory at Salt Lake City, Utah

★ ★ ★

DR. HENRY MORAY, D.S.c.
2484 South Fifth East Street
SALT LAKE CITY, UTAH

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The Scientists of the Research Institute are carrying on extensive investigations in ultra sonics, artificial radio active substances, transmutation of metals and the study of rays beyond the light rays.

The Research Institute, Inc. is a Utah Corporation organized on a non-profit basis to carry on Scientific Research. All of the stock is held in trust and the officers receive no salaries and no dividends are paid to stockholders. Another field of research is electric and photo therapy and the study of the behavior of individual cells of the human body and their action in various growths and tumors.

Malignancy has been investigated from many angles to try and find out if it could be caused from a virus, from an injury to the cells and tissue of the body or from bacteria.

Investigations were made to determine the extent the sun and other light rays might play in the injury or destruction of cells and tissue to form cancerous growths as also injury and poisons from coal tar products and other cancer producing substances.

Finally an electronic tube was developed which feeds into the body rays and electrical currents which retard cell growth. It has been found that by making the human body a part of a corona regulator or ozone generator that the body will produce ozone and in the generation of the ozone by the body the very marrow of the bones, tissues and cells of the body will be saturated with ozone to the extent that the body will give off ozone for hours after the treatment has been discontinued. Thus saturation of the cells, tissue and all parts of the body with ozone will curtail the fast growing cells and tissues of malignancy. This curtailment is accomplished because where there is an abundance of oxygen or ozone, cells seem to burn more sugars and starches and normal cell and tissue growth is the result. Lack of oxygen causes another type of sugar splitting that causes a very dangerous growth of cells.

Cancer cells and other malignant cells and tissues are young, fast growing cells but unlike embryo cells they consume less oxygen than normal adult cells although they have their own method of sugar consumption and dangerous growth. This discovery of the Research Institutes Scientists in 1938 lead

them to reason that by the feeding or saturation of malignant cells with a great deal of ozone or oxygen these fast growing, dangerous cells could be made to change over to normal cells and the tumor would disintegrate or dehydrate. Then by the stimulation of the body and increased circulation by the Moray method of electric therapy of certain rays and frequencies of current rays the dead or useless cells will pass off as waste material. The weakened surrounding cells which have not yet become malignant or afflicted, will by this stimulation and increased assimilation of more oxygen or ozone, in time revert back from slow breathing rapid dividing cells to more normal sugar consuming cells again.

Besides making a study of cancer the Research Institute has done successful work in many cases of tuberculosis and diseases of the lymph vessels. Some interesting results have also been had in the treatment of various forms of atrophy, including progressive muscular atrophy and atony of the stomach.

The Moray discoveries in therapy are based on the therapeutic value to living cells of photo ionization of the cells and tissue and the photo actinia oxygen treatment of the cells and tissues as also the marrow of the bones. The Moray devices also operate so as to create a diffusion in the electron avalanche which enters the subject under the corona discharge; a concentration of the space charge and photon production of this avalanche which is absorbed by the molecules or atoms of the subject.

In an unique way the Moray tubes and appliances feed oxygen (ozone) and various rays and frequencies of electric current into the living body in such a way that the body itself becomes an actual part of an oxygen generator and photo-ionization is set up through the avalanche of the streamer formation of electrons as they hit the cells of the body.

The result is the healthy cells are protected from the diseased cells and the diseased cells are given a chance to rebuild themselves or, if they cannot do that, they will pass off as waste material, making room for healthy cells to take their place.

A tube developed at the laboratory and to which the Trade Name "Cosray" has been given has proven of value in the treatment of bacterial and mycotic diseases and those due to certain forms of animal parasites, as well as fungi infections.

Experiments have shown that discharges from special oscillating tubes produces a superficial hyperesias, and may act as a very strong derivative, and does relieve pain on the same physiological basis without the painful irritation

of the skin and tissue. We may expect results also on all contractile organs such as the liver, the spleen and muscles.

Expressions such as infra-red, ultra-violet and so on in light therapy have lost their definite meaning. Science still employs them, but at the danger of jeopardizing a clear understanding of the idea which an attempt is being made to put over. It is our opinion that the word ultra-violet and kindred expressions have, as matter of fact, no useful meaning in therapy. The rays belonging to this group have, depending upon the wave length, such different physiological actions that their classification under the term ultra-violet, etc., becomes misleading. These terms signify a domination by words which had an entirely different meaning before the real facts were known, but which are still kept in use just the same. The situation could be greatly clarified if the use of such words as ultra-violet were discontinued in medicine, and other terms substituted in their stead; words and terms which would identify rays with a definite physiological action.

Other investigations being carried on by the Research Institute of Salt Lake City, Utah, and the results which are being obtained, are very promising. We find very valuable aid in the treatment of arthritis, sinus infections, varicose and epithelial cells. With certain specially constructed tubes there is a very specific biologic and bactericidal action.

Life and death are very closely connected with electrical activity is reported by Dr. Robert S. Schwab of the Brain Wave Laboratory of the Massachusetts General Hospital and the Harvard Medical School, as reported in June, 1941, to the American Institute of Electrical Engineers. Also see Moray's report on this subject printed in 1928-1930.

There are, according to this report, four types of body electrical currents. Moray devices help furnish all four body types.

Vision is of an electrical nature too, according to a report of W. R. Sicles of Columbia University, in which he states, "your eye works like a photoelectric cell," and that there is an electromagnetic "pull" in one's vision.

Some additional interesting characteristics and results have been noted of the action of rays and frequencies on the human body. The chemical constitution of the body seems to be definitely affected by the rays and frequencies of the Moray devices. It is known that the unit of both structure and function of the body is in a cell. The essential constituent of cells is protoplasm. Chemically protoplasm is a very complex aqueous mixture of

substances, containing carbon, oxygen, hydrogen, nitrogen, and small quantities of sulphur, phosphorus, calcium, sodium, chlorine, magnesium, potassium and iron.

The principal compounds of protoplasm are proteins, which furnish the main source of energy expended in functions. There are in addition carbohydrates, fats, water and inorganic salts. It is believed by some biologists that if we had the formula for the proper stereo-isomeric associations of the elements and compounds of protoplasm, life could be artificially produced; others assume an additional vital principle as a prerequisite of life. Be that as it may, many experiments have led us to give considerable credence to the thought that electrical rays and frequencies are the sonic of life and through this sonic, life has been maintained and prolonged for a time even after normal functions of life had naturally ceased.

Physically protoplasm is a granular semifluid gelatinous substance. It possesses properties characteristic of both solids and liquids. It is an aggregate of colloids and crystalloids. An organism is essentially an aqueous solution, holding in suspension colloidal substances of great complexity. Colloids exist in two states, a liquid or sol-state and a semi-solid or gel-state. There exists no short line of division between colloids and crystalloids; these terms designate phases or states rather than substances. Protoplasm is a sol; and since its fluidity is due to water, it is commonly classed as a pydrosol. It passes readily into a gel condition. In living protoplasm this metamorphosis is a reversible process. Agents which effect an irreversible gelatin of protoplasm tend to bring life to a standstill. Death is therefore a process of coagulation.

We have gone into the above to prove our point that the proper electrical action in the body has a chemical action upon the body; a direct metabolism. To accomplish this metabolism by electric action the frequency and rays must be of a sonic in harmony with the natural sonic of life and the electrical capacity of the body in micro farads.

If the frequency and ray applied to the body conveys the proper metabolism, that property of living protoplasm by virtue of which it can elaborate as is done from the food material, the complex chemical action of the rays and current will build up in the body these complex compounds which are necessary for the restoration of health and convert the same into kinetic energy for the performance of specific health functions that the body is in need of. Because the essence of reproduction is cell multiplication and living cell has the power of production of other cells like itself when properly fed, we need the application of the life-giving electrical metabolism which will feed the living cell so that they may reproduce other living cells and burn

out the dead cells which hinder the growth of healthy living cells. The Moray electro therapy devices produce enzymes in the body through electro chemistry, a catalytic and oxidizing action in the cells and tissues, under which production cancer cells cannot continue to grow.

In other words, one's body must effect its own cure. The electrical action acting only as a cultivator of the living cells giving them needed strength to produce other living cells which will crowd out the dead and useless cell which will pass off as waste material, especially through the action of the kidneys.

The experiments of the Research Institute cover a very wide field of study in animal, vegetable, mineral matter and energy.

The salt of the earth is energy and the evolution of matter and the evolution of forces in the process of the creation of all things. By the proper uses of these natural laws of energy and matter, matter is turned into energy. That is something we all agree can be done, but do we understand that man can by the proper use of these same laws take energy and reverse the process and change energy into matter, animal, vegetable and mineral.

It is not a question of finding new elements, but of being able to use energy and matter in whatever wave length one finds them and of changing them to any desired wave length or frequency by letting nature do our "atom splitting" for us in the human body construction or in the mineral kingdom. It is cheaper, faster, more sure, and the potential possibilities far exceed any puny efforts of man. I say puny, for, while man may discover new means of causing explosions and of creating explosives, he has not and cannot split the atom. It is merely a question of a change in form, no less matter and no less energy. We separate energy only to have it join elsewhere. If we can split the atom actually, we will have split the chain that holds the cycle of the Universe together, in life or in death.

In the laboratories of the Universe we find the uranium and radium series changing from uranium to radium, radium into radon and radium A, B, C, C', D (radio lead), radium E, F, and finally into lead, and if we follow the process, lead into gold and so on. In the laboratory we have changed lead into gold and by reversing the process changed lead into polonium or radium F. If this step can be taken either way, is there any reason why further steps cannot be taken?

This is not a case of splitting the atom, but merely of addition, multiplication, division and subtraction of the combinations of the atoms, but not the breaking into of the chain of the Universe. It is plain evolution of matter and evolution of forces and there is no need in highly overestimating the accomplishment under false interpretation of the facts.

As frequency or oscillations is the basis of the existence of all animal,

vegetable and mineral matter, one could "explode" matter from any distance to which the proper oscillation could be transmitted, even the so called atomic bombs.

Our experiments have also satisfied us that gravity is akin to, if not an electrical oscillation so well balanced that we might, for the lack of a better name, almost call it a "Wattless current" until some force is exerted to oppose its potential and then gravity opposes such force. This means gravity can be controlled and unlimited advancement made in air navigation, with the only concern left being air speed and momentum.

There is much of value to be developed in fields that have not even been touched and about which very little is known in research in the atomic nucleus. We have made some astounding discoveries in artificial radioactivity set up, not by the usual expensive method with the cyclotron, but by the Moray method. A new world is to be entered through ultra sonics, hyper and ultra high frequency currents created through the use of certain tube discoveries.

Too little work has been done with rays or frequencies around 10^8 to 10^{10} A. U., no doubt, because the mechanical means used in working in this field has been attempted with practically the same type of equipment used in the one-meter field. We might as well try to carry water in a sieve.

It is my belief that Television also will never be a complete commercial success until the method of approach is changed to a celestial wave rather than the present approach. Otherwise we will have very limited transmission.

One should not enter these experimental fields in the gamma band without the proper protection, for one will be risking his life in this work without a proper absorber. Water, the common means of protection, or even lead has proven of little value as an absorber in most of our investigations. Neither has boric acid water or hydrogen gas proven satisfactory as an absorber.

In September, 1943, a letter was written by us on transmutation of metals to some parties interested in mercury experiments, part of which letter follows:

In the reducing of colloids from a non-crystalline state to a crystalline state, the current and rays used must be such as to produce a synchronous action. It is well known that colloidal "solutions" do not obey the solution laws: the alterations of the boiling and freezing points are inappreciable and

the osmotic pressures very small. A colloidal solution is, in reality, a disperse system, and in the case of attempting to "knock down" the suspended metallic colloid one must cause what might be called coagulation and precipitation of the metallic colloid found in metallic sulphides, chlorides or salts of a metal in a non-crystalline form to a coagulated and crystalline state.

Now, whatever frequency of current used and whatever ray or rays used, the frequency of the current and the wave length of the ray or rays used should harmonize so as to blend or synchronize with the natural frequency or wave length of the substance treated so as to produce the synchronous action that will set up a vibration for which we might "coin" an expression and call this action a "super-ultra sonic reaction" between the frequency of current, the wave length of the ray, and the vibratory rate of the substance treated to cause the desired metabolic or catalytic reaction. Man's work with animals, vegetables, fruits, flowers, and all sorts of animal and vegetable life has shown that he can improve on the things that nature produced. Man must first go to nature to learn, but then he must learn to improve over nature's ways by making "colloids" "grow," if one does not object to such an expression. Or, in other words, speed up nature's action and obtain the same or better results in a fraction of the time taken by nature.

The real test of science in modern destruction or construction lies not in the explosion of matter by matter or matter by energy; but energy by energy, against the vibrations of matter. This is true in the healing of the human body or the changing of any matter.

One hears a great deal about the work being done by the cyclotron or atom-smasher, from the first one constructed by Dr. C. E. Lawrence at the University of California to the sixteenth American cyclotron now under construction at the University of Illinois. The University of Illinois already had a small one, the second one built in the world; but this new one, which will be ready about April or May of 1942, and which will have taken many many months to construct, will have six huge iron castings weighing 60 tons. One section will have two miles of copper tubing wound into a dozen flat coils.

Hundreds of thousands of dollars are being spent for apparatus with which to effect transformations and many of the greatest scientists are giving their entire time to this work. All this time and money could be saved if we would but realize the fact that nature is splitting atoms all the time for us. That is the source of energy of the Universe and the human body being given to us free of charge.

The Carnegie Institution of Washington, D. C., has its Atomic Physics Laboratory. At Harvard University mercury has apparently been turned into gold by the cyclotron. This experiment was reported in Washington to the American Physical Society by Dr. Sherr and Professor Bainbridge.

The report shows, however, that the amount of gold obtained was so exceedingly minute that its presence was shown only by an indirect method. Further, it is in a form of gold that vanishes rapidly. It decays like radium. With one form detected, after 48 minutes half of a given amount was gone; after another 48 minutes half of what remained was gone and so on. Other forms lasted but a few days. Small amounts of platinum were also formed by transmutation of mercury.

A tiny amount of gold was mixed with about a pound of the bombarded mercury as a bait to draw the transmuted gold atoms together.

One can see, therefore, that transmutation of metals is an accomplished fact, something which twenty years ago would have been called impossible by the same institutions that are spending so much time and money today on this research.

So again it is with great satisfaction that the Research Institute and its predecessor, the Moray Scientific Laboratories, sees that the work it has been doing and for which it was called all sorts of kind (?) names is being followed by others.

We say followed by others advisedly, because as early as 1911 the personnel which is now a part of the Research Institute, advanced as facts, discoveries of rays of the universe and of matter, which today are being substantiated in the greatest institutions of the world.

As early as 1925, by a method far less complicated and expensive, the Moray Scientific Laboratories, the fore-runner of the Research Institute, changed common lead so that it could be heated to a white hot heat before melting. Other treated lead which contained no precious metals before treatment assayed as follows: May 28, 1940, from one ounce of lead treated at Salt Lake City, Utah, and assayed at the Boaz Mine, Norris, Montana, assayed 35c in gold. Five ounces of untreated soil assayed blank while the same amount of treated soil assayed at the rate per tone of \$122.50 in gold.

July 25, 1940, an assay was made by the Union Assay Office of Salt Lake City, Utah, from about 50 c.c. of treated artesian water (untreated water had no precious mineral content) assayed at the rate per ton of \$10.50

in gold, \$2.63 silver. Sample serial No. 88193. Test serial No. 7209 made July 27, 1941, on another sample treated, assayed 70c in gold and 43c in silver.

It must not be understood that this was done on a commercial basis but in the laboratory just as the results given above that were obtained at Harvard. The only difference was that the gold, silver and platinum obtained at the Research Institute was not in such tiny amounts that their presence could only be detected by indirect methods, but that they were in great enough quantities that they could be assayed. They could be milled and separated from the other metals and could be weighed. Furthermore, none of these precious metals vanished, but still exist and can be examined by anyone.

In America and abroad, especially in Germany, scientists have devised the thermal diffusion method which has proven to be one of the most efficient methods of separating the different forms of isotopes of the elements. With this method scientists have separated not only the isotopes of chlorine, but those of neon, krypton and others, but again this is an expensive process.

By the methods used in the laboratories of the Research Institute very interesting results have been had with copper, lead, aluminum and magnesium. A cheap alloy which blends well with other metals has been experimented with, the commercial price will be much less than magnesium, yet the atomic weight is about the same after it is fused by special rays and frequencies of a Radiant Energy device developed in the Institute laboratories.

Successful experiments were also carried on in 1940 to greatly increase the radioactivity of carnotite, uranium and other radio-active substances, including a combination of lead and copper and other elements. This method brings results heretofore not obtained by an other method.

"It is recognized that in addition to possessing kinetic energy, the atom is capable of absorbing energy internally. This internal energy would seem to be associated with the configuration of the particles of which the atom is composed. While under ordinary conditions an atom is in what is known as the normal state, or the state in which we find matter apparently neither giving off, nor absorbing energy. The internal energy of the atom can be altered; for while under ordinary conditions an atom is in what is known as the normal state, when the internal energy of the atom exceeds that of its normal state it is said to be excited. Excitations may be caused in several ways, among which is the collision of the atom with rapidly moving positive or negative particles, or as in the breaking of the lines of force in the modern electromagnetic generator, which I prefer to call an electric pump, for the electric generator does not create the electrical energy any more than the

water pump creates the water. Kintic energy is given up, or in other words, this excitation causes these rapidly moving particles to give up some or all of their kinetic energy to the atom during the collision. A limiting case of excitation is ionization, in which energy is absorbed by the atom sufficiently to allow a loosely bound electron to leave the atom against the electro-static force which tends to hold it within the atom. An atom which has given up one or more electrons is said to be ionized.

It is possible that ionization, or in other words excitation, may take place in successive steps through absorption of quanta energy, or, in other words, through the evolution of matter and the evolution of forces, matter is continuously changing into energy and energy continually changing into matter. The return of an ionized atom to a state of lower energy is associated with electromagnetic radiation. So also from the process of ionization which may result from a number of causes, and the one we are interested in is through cosmic radiation, electric energy becomes associated with the oscillation or sonic of the universe. The higher the frequency, the greater the ionization or excitation. Or, as I have stated before, matter is susceptible to motion; the universe continually changing into energy and energy into matter. All energy appertains either to matter or excitation of energy and continually passes from one to the other, or in other words, continually possessing kinetic energy. There, at its very foundation, matter consists of an electric charge which governs the very motion of the planets and suns. I consider gamma rays or radio activity an electrical action only of a different rate of vibration.

If one, therefore, sets up a sonic oscillation, a sonic oscillation existing in the realms beyond the light rays, one will be in harmony with the oscillations of the universe, the energy that is coming to this earth continuously, oscillating back and forth in a definite sonic. Some call it radio activity.

Relativity theory suggests that radiation of any large amount of energy is accompanied by a like loss of mass. This loss of mass is given up as the loss of energy. If in the formation of an amount of energy we have an accompanying loss of mass, as has been explained by astro-physicists to account for the radiant energy of the sun and the stars, it is equally reasonable to believe that energy in returning back to the source from whence it came, is capable of again creating mass, and through this process we have a lowering in the potential with no less mass and no less energy. The energy used to drive any of our great power systems has not been absorbed, it merely sinks back to the place from whence it came, as water over a wheel. There is nothing about this that suggests perpetual motion, but it is merely a case of the evolution of matter and the evolution of forces. This might be called the economy of the universe, for if it were not so, nature could be accused of squandering her resources of energy so prodigally that nature would eventually end up in

bankruptcy, but doubtless in our present theories, we have a very imperfect account of the situation.

If we reverse our imagination on what the telescope has taught us of the stellar universe, we will find that beyond the microscope we have the particles of which everything about us consists, obeying every law that is found everywhere from stellar space to atomic space. We find bodies in motion and when we think how small the proton and electron are, and yet obeying the same laws of the universe, we may see the economical uselessness of science trying to crack the atom, when nature, or call it what you will, is accomplishing the same thing for us in stellar and interstellar spaces, and in our own bodies. From this conception we might see that Democritus came close to a great scientific truth in his bold statement, when he declared that all physical phenomena reduced itself to one single item—motion, or, as we might repeat, the sonic of the universe, animal, mineral and vegetable. Let me repeat, do not forget the atom is but a counterpart of the universe itself, and that light and other radiations exert a mechanical pressure upon every object they strike, and that all these radiations are essentially electrical in their character. There is a breaking down and a building up of the atom continuously, and it is the evolution of matter and forces which is producing, eternally, unlimited power and the sonic of life.

In the Gamma Rays we find potentials which are equivalent to as much as 2,000,000 volts, yet their wave lengths are not the shortest known to physicists. In octaves still higher lie rays which are known as Cosmic Rays. Who can draw a definite line and say how much higher other octaves exist than those known. Our starting point for the discovery of these different rays was electrical conductivity of the air. It has been discovered that conductivity is just as strong by night as by day, so that radiations emitted by the sun can scarcely be the cause of this energy. May we not, then, accept the theory that the sun, in and of itself, has no energy, but is merely a rebroadcaster of the great generator—the sonic of the universe itself? That these two, then, matter and energy, are possibly one, is the sum total of all that has been found out during the centuries of constant research, to be judged by that small portion of the universe which is visible to man, who is only armed with his infinitesimal telescopes, or with the most powerful spectroscopes ever made by man.

It is the belief of the writer that all space is saturated with energies which are doubtless electrical in their ultimate energies or very closely allied to electrical action. The relation of matter to energy and energy to matter then becomes the potential of the universe, one continuous series of oscillations, oscillating to and fro like a great pendulum across the universe as the creation goes on.