

**THE RIDDLE OF THE
UNIVERSE**



CHARLES LUDVIGSON

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A MEMORANDUM OF PSYCHOMETRIC
OBSERVATIONS OF SPACE

CHARLES LUDVIGSON



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INTRODUCTION

It is proposed in this book to submit an impartial examination of space, and of different theories aiming to explain phenomenas in nature.

If the reading of this book adds to the general information of the ordinary reader without time for exhaustive study, I shall feel that it has served the purpose of its inspiration.

CHARLES LUDVIGSON.

CONTENTS

CHAPTER	PAGE
I. The Riddle of the Material Universe and its Phenomena	9
II. The Psychic Ether and its Relation to Time and Space in Contemporary Psychophysics	42
III. A Psychometric Study of the Relativity Theory	51

THE RIDDLE OF THE UNIVERSE

CHAPTER I.

THE RIDDLE OF THE MATERIAL UNIVERSE AND ITS PHENOMENA.

The object of science is to co-ordinate our experience and bring them into a logical system. The function of material science is to study all that the terrestrial senses are capable of perceiving; and the function of philosophy is to form a synthesis of all determined ideas and facts and to develop the sphere of thought. Scientific theories are an evolution of ideas and express in short compass the statements of a large number of individual observations. They find a justification for their existence in that they correlate a large number of single observations in the form of empirical laws, from which the general laws can be ascertained by comparison or by a continuous process of induction. Keeping in mind that this is purely an empirical enterprise, the investigator proceeds to develop a system of thought which in general is built up logically from a small number of fundamental assumptions. We call such a system of thought a theory, but as regards the deductions from the theories which are capable of being tested, the agreements between the theories may be so complete that it becomes difficult to find such deductions, in which two theories differ from each other.

On the other hand the deductions might be so numerous that they render the theory worthless.

Since the discovery of the laws of planetary motion by Kepler in 1619, the establishment of the law of universal gravitation by Newton in 1687 and the velocity of light by the Danish astronomer Roemer in 1675, it has been generally believed that the greatest physical laws operate uniformly throughout the sidereal universe, and since the efforts for laying a secure foundation for the science of cosmogony have been only partially successful, many investigators have been less hopeful of obtaining a general solution of the problem, while not a few have given up the expectation of discovering any really fixed and definite laws.

We shall in this chapter employ a quite different method of surveying cosmic space to that which the physicists and astronomers use. We shall employ the psychophysical method. It is the general desire to include in our expressions for physical laws only what we physically observe, and we have no desire to carry problems beyond the boundaries of scientific materialism, but experience teaches us that this will be absolutely necessary as the race advances in the path of progressive evolution in order to carry world's problems to a correct and intelligent solution and penetrate into the province of the inner structure of the universe. I look forward with intense interest to the world's many problems the psychophysicists will be confronting in the near future. May they be able to extend the application of the principles of dynamics of mind into any specific field for a general scientific advancement of the race.

We shall turn our attention to a hasty survey of the material sun. I am giving below for the sake of handy reference in our investigations a few facts about the sun established by physicists and astronomers.

The distance of the sun from the earth is 92,885,000 miles. The variation of the sun from the earth between January and June is 3,100,000 miles, or 4,950,000 kilometres. The linear value of one second on the sun's surface is 450.3 miles or 724.7 kilometres. The sun's linear diameter is 866,400 miles, or about 1,394,300 kilometres,—of this value they allow a variation to the extent of several hundred miles. The mean angular semidiameter of the sun is $16'02.0'' \pm 1.0''$. Ratio of the sun's diameter to the earth is 109.5. The surface of the sun compared with the earth's is 11,940. The volume or cubic contents of the sun compared with the earth is 1,305,000. Mass or quantity of matter of the sun compared with the earth is $331,000 \pm 1,000$. Mean density of the sun compared with water is 1.406. Mean density compared with the earth 0.253. The linear velocity of the sun's rotation at its equator is 12.61 miles per. sec. The total quantity of sunlight is 1,575,000,000,000,000,000,000,000 candle flames. Intensity of sunlight at the surface of the sun is 190,000 times that of a candle flame; 3.4 times that of an electric arc. Brightness of a point on the sun's limb compared with that of a point near the centre of the disk is 25 per cent. The solar constant per square metre is 30 engineer's calories. Heat radiation at the surface of the sun per square metre per-minute is 1,340,000 engineer's calories. Mechanical equivalent of solar radiation continuously acting at the sun's surface is 131,000 H. P. per square metre. Effective

temperature of the solar surface about 10,000 C degrees or 18,000 F degrees (according to Rosetti); about 8,000 C degrees or 14,000 F degrees (according to Wilson and Gray).

A number of Swedish text books have been consulted for the above data about the sun and translated into the English language. The sun is only one of a multitude—a single star among millions—thousands of which exceed it in brightness and magnitude and power. To it we can trace directly all the energy involved in all phenomena, mechanical, electrical and vital. To show, for instance, how the power of waterfalls is only a transformation of the sun's energy radiations in the case of electricity, and the same thing is true, a little more remotely, but just as certain, of the power of steam. The idea is now so familiar that it is hardly necessary to dwell upon it in this writing. The material supremacy of the sun has always been recognized by thoughtful minds. It is the universal symbol in the constellation of our solar system of the Creator, who is Life, Love, Immortality and Wisdom. The energy radiations are the symbols of Life and Immortality, and the heat radiations the symbol of Love; light radiations a symbol of wisdom reflected tangible to the material sense perception of man. There has been much speculation in regard to the possibility of the sun being inhabited, but I ask: How could a race of humanity exist, or have existed on something that is only symbolic? The sun is inhabited by electrons and ions and is their natural home. Its radiating heat in a psychic sense for Love in a psychic sense is heat; but it radiates a cold light in a material sense. This statement is in direct contrast to the results arrived at above by

Rosetti, Wilson and Gray. Their opinion is that the effective temperature on the solar surface is anything from 14,000 to 18,000 F degrees. As we mentioned above, several physicists have estimated the sun's heat radiations to about 1,340,000 engineer's calories per minute for each square metre of its surface. The physicists tell us that the intensity of heat radiation from a given source, first, varies as the temperature of the source; second, varies inversely as the square of the distance from the source; third, the intensity grows less as the angular inclination of the rays to the surface grow less. I ask, do the first and second statements above hold true regarding the solar radiations? To the third statement, why does the intensity of the solar radiations decrease as the angular inclinations grow less? Let us analyse these two factors, light and heat, in order to be more acquainted with their nature.

What is physical heat? Physical heat is electronic commotions or vibrations. Physical light is cycles of solar electrons or cycles of solar energy. The principal difference is that cycles of solar electrons can be transmitted for indefinite distances through space in vacuum and absolute zero. In the case of heat commotions this is only possible to a very limited extent. No person whose mode of thought is logical can rest satisfied with this condition of things. He asks, if the sun is radiating material heat, how is such a heat maintained? How long has it lasted? How long will it continue? Are there any signs of either increase or diminution? What is the temperature on the planets Mars, Jupiter, Neptune and Uranus? How is it possible for the planet Mercury to exist in a solid state? How is it possible for the sun to

transmit a material heat through a space of 92,000,000 miles of absolute zero? A close psychometric study of the sun's surface proves that the sun is not radiating material heat to any extent, that the sun's temperature does not exceed the equatorial regions of the earth, and this heat is due to the atmosphere's high velocity in passing around the sun. We are now confronting the question: What causes the heat near the earth's surface if the sun does not directly radiate material heat? The causes of the heat near the earth's surface are entirely due to the particular state of atmospheric energy caused by the solar radiations. The reason for the variable heat in winter in northern latitudes is due to the annual inclination of the sun's rays to the earth's surface, and this variable inclination of the sun's rays sets up a variable strain of atmospheric energy, which in turn causes increase or decrease in temperature in proportion to the sharpness of the annual inclination. There are other causes that must be taken into consideration when we study the cause of heat in the earth's atmosphere. We have heat-preserving gases in the atmosphere which of course are variable in particular localities. Carbon-dioxide is a heat-preserving gas; moisture is a heat-preserver. We have still other factors that have something to do with the amount of heat we receive on the earth. For instance, meteoric dust in interstellar space absorbs the solar energy carried in the light. Moisture in the upper strata of the atmosphere in the form of clouds to a great extent prevent the solar energy in the light from reaching the earth; and we have terrestrial heat. There are other causes of the variation of heat on the earth, but the details are of little importance and will not be dealt with in this writing. We have thus seen that light is

the universal vehicle for transmission of solar electrons through interstellar space.

At this point we may state that the energy carried in the light is not tangible to the mind of man. The physicists have designed a wave theory for light, or that light travels in waves through space; but a close psychometric study of the phenomena reveals to us that light does not travel in waves in vacuum. It travels in cycles in one continuous spinning round, similar to the cycles around electrical conductors, and this curvilinear motion starts from the sun. The physicists nearly stumbled on this fact in the design of the celebrated quantum theory, or that light travels in bundles of energy. A close study of these bundles of energy proves that they have a very high curvilinear velocity. The wave motion of the light the physicists have reference to is due to magnetic rivers in space, and do not extend very far beyond the line of absolute vacuum. The name "magnetic rivers" needs a more detailed explanation, for to my knowledge the term has never been used in this sense in any writing before. What are magnetic rivers? When the planets revolve through space the atmosphere vacillates with a continuous track of ether mixed with solar electrons from the light in vibrations or oscillations, and behave in a manner similar to the water behind a steamboat at high speed in mid-ocean. We are now in a position to draw the following conclusions regarding the behaviour of light. The light from the sun travels in cycles through space. We will be in a better position to give a broader definition to this statement in Chapter 3, when we come to analyse the Relativity Theory. The above statement about the ether is in the sharpest conflict with the Rela-

tivity Theory, which points out that there can be no ether drift, nor any experiment with which to demonstrate it. Our conception is that there is an ether in all parts of the boundless universe, and this ether mixed with the solar electrons carried in the light take on the appearance of a drift around the planets due to their velocity through space. (I challenge any physicist, including any Relativity disciple, to disprove the objective existence of an ether). We shall go into a detailed exposition of the function of ether in the next chapter. I am sure that the physicists in the near future will be able to verify this statement by more tangible material means, and I do not believe that a fairer destiny could be allotted to any physical statement or theories than to leave the doors wide open for the most critical investigation. Light measured in a medium of average atmospheric density decreases inversely as the square of the distance from its source; but the variability in the light from the stars is to be found in the resisting medium, such as the presence of nebulosity and periodicity of light fluctuations. Light appears to have the extreme velocity in the material universe 3×10^{10} cm. per second, or 300,000 km. or approximately 186,324 English statute miles per second.

We shall now turn our attention to the study of the grandest phenomena in the whole sidereal creation—the sun spots. We are confronting the most attractive problem to the solution of the origin of the worlds and their contents. The question naturally arises: What is the cause of sun spots? The sun spots are caused by the sun's electrons, mixed with meteoric dust, coming in contact with the solar energy. This causes friction,

which in turn sets up an electro-magnetic field of force, and electro-magnetic energy lines extend sometimes up to 3,000,000 miles into space. The electrified area appears dark, for the electro-magnetic waves are not illuminous; but there is a close correlation or identity between the illuminous and electro-magnetic waves, as we shall see later. The physicists have several explanations for sun spots. One of these sun spot theories is that the sun spots are due to eruptions on the sun. I ask: How can eruptions of such gigantic dimensions go on forever? Another theory is that the phenomena of sun spots is conditioned by the position of the various planets, and especially of Jupiter and Saturn. This theory is not admissible to any form of intelligent reasoning. The solar spots arise from the most insensible points, so that the exact moment of their origin cannot be stated. They very seldom appear at the same point, for they are not subject to any specific law of uniformity. They grow very rapidly in the beginning, they are stationary from a few hours up to 50 or 60 days, depending on the size of the meteor penetrating the atmosphere to the solar surface. The exact dimensions cannot be given. They are sometimes enormous and take on any shape. They are not stationary. They are always moving. They travel across the surface of the sun in the direction of the atmosphere's curvilinear velocity around the sun, generally from east to west; but they have no uniform speed. They are similar to the phenomena one sees in a cyclone when the wind is whirling around near the ground, and picks up dirt and holds it in suspension; but on the sun's surface this phenomena sometimes takes on the dimensions of many thousand square miles. These whirls are not sand and dirt. They are cycles of solar

electrons and ions mixed with meteoric dust and electro-magnetic cycles. There are many thousand sun spots on the sun every day, but they are too small and of too short duration to be seen on the earth. The central area for the larger sun spots seems to be between 10° and 40° of latitude on each side of the sun's equator; but they are not distributed uniformly. This peculiar travel of the sun spots causes the whole solar surface to take on the appearance of a drift. Sometimes the spots divide up into two or more parts. They separate with considerable velocity, due to the electrical repulsion between the parts.

We shall now follow the illuminous cycles as they leave the sun. They are equipped with two velocities—curvilinear and rectilinear. Suppose these cycles of solar electrons have to pass through dense packets of heat formations, due to moisture, near the earth's surface; they penetrate these packets with a rectilinear velocity of 186,324 miles per second. They have travelled through a cosmic vacuum and absolute zero, and are contracted; but they expand very rapidly when they reach the heat formation. This quick expansion causes friction among the cycles, and part of the illuminous cycles are transformed into electro-magnetic cycles, and we experience the phenomenon we call lightning. The expansion of the cycles during the process in the heat formation forces them to seek other fields for release and we see them flash back and forth in the sky. For a certain heat generated in the packet renders the electro-magnetic cycles illuminous. The light beams in the lightning have sometimes a little higher velocity than the illuminous cycles when they leave the sun. This is be-

cause they leave the heat formations under a slight pressure. It is this phenomena that physicists call statical electricity. Let us see if the word "statical" can be used in connection with electrical phenomena. A statical condition means a state of rest or a condition of equilibrium. Let us establish a rigid mechanical definition for "electrical phenomena," in order to be a little more acquainted with this so-called mysterious force.

Electricity is cycles of electrons, and it is quite interesting to study the behaviour of these cycles of electrons exhibit in transmission over electrical conductors. They are circular, or like rings. They are magnetic in nature. They have two velocities—curvilinear and rectilinear. They expand from the heat caused by their high velocities, and this quick expansion causes a friction among themselves and the surrounding medium of electrons in the atmosphere. They are not affected by storm and they maintain their curvilinear velocity for a long time in proper conditions of confinement. We have a practical working example of this quality in the electrical storage battery. It is true that the generally accepted scientific conception of this phenomena is that electrical pressure in the storage battery is caused by chemical action, or that electrical pressure is generated in the cell; but a close study of the phenomena proves that the cycles maintain one continuous spinning around in the electrolyte and on the electrodes, and they are consequently an example of the law of conservation of energy. (Strictly speaking, the law of conservation of energy has not existed for some time; for the telephone, the telegraph and the radio have let energy into space, and so have many other things too numerous to mention.)

The cycles of electrons are colorless and their high curvilinear velocity and high rate of vibration renders them invisible to physical sight perception. We are acquainted with the method we use for generating electrical energy in our generating plants, where we start the curvilinear spinning round of the electrons by generators. By this method for generating electricity we see that an absolutely necessary condition for any form of electrical phenomena is electronic friction, either mechanical, chemical, or thermal action.

The second absolutely necessary condition for establishing any form of electrical phenomena is an atmosphere. The earth's moon has no atmosphere, and there is no sign of any electrical phenomena on the moon's surface. The illuminous cycles in light do not meet any atmospheric resistance to transform them into electro-magnetic cycles. We are now fairly well grounded in the fundamental principles of electrical phenomena, and are in a position to realize the fallacy in the theory of statical electricity. The word "statical" has no tangible meaning whatever in connection with electricity. It is a term invented by the physicists and explains only ignorance of the phenomena. In the foregoing we have seen the similarity between illuminous cycles and electro-magnetic cycles, and have thus established the identity between the illuminous waves and electro-magnetic waves. It is evident that the kinetic energy in the electro-magnetic cycles must be greater than the potential energy; but should the potential energy become greater than the kinetic energy the cycles would gradually come to rest and we would have the phenomena which physicists call "statical electricity." A psycho-

metric investigation of the phenomena proves that these conditions cannot exist, for the cycles lose their magnetic nature in proportion to the decrease in curvilinear velocity, till they gradually come to rest, when there is no sign of electrical qualities. I suggest that we use the name "inversive electricity" instead of the word "statical," in order to distinguish electricity in a free state in nature from electricity in confinement, or current electricity. The word "statical" in connection with electrical phenomena is an insult to our intelligence, and will not be used in this writing any more. The words "inversive electricity" will be used instead of "statical" electricity; and "current electricity" for any form of electrical phenomena under confinement, inversive electricity exhibiting the most inconceivable manner in nature.

We are familiar with the phenomena called "fire balls." Naturally the question arises: What are fire balls? They are cycles of electrons spontaneously confined to spin around a centre in mass, and are natural examples of the law of conservation of energy. They are an everyday's occurrence on the sun. We have a fair idea of the potential energy stored in the fire balls when we consider the smallness of an electron, and that it takes billions of electrons to make up a fire ball. But how is it possible for such a freak phenomena to start? Let us study the phenomena from a psychometric perspective. Suppose we have dense heat formations in the atmosphere due to moisture, let us move from the earth out into space till we reach a temperature of absolute zero and vacuum. If we study the illumious cycles in the light in this locality we find the size is about one-third larger than they are

after reaching the earth's atmosphere; but the individual electrons in the cycle are smaller, due to the terrific low physical temperature in the particular region in space we select for a study of the phenomena. As soon as the cycles reach the upper strata of the earth's atmosphere we find that the size decreases, which decrease in the size is due to resistance in penetrating the atmosphere; but the compressed cycles have not yet enough resistance to generate any heat, on account of the low atmospheric density, for we are still studying the phenomena as it takes place in space from 100 to 500 miles from the earth. As the cycles approach the earth they meet more resistance and commence to generate heat, which in turn causes the electrons in the cycles to expand. Let us follow the cycles till they reach the heat formation below us. It is there the formation of fire balls takes place. Suppose that the heat formation is too dense for the cycles to penetrate, which is nearly always the case, this will obstruct the rectilinear velocity of the cycles. They keep on spinning around in this packet till they are sometimes tangled up in a curvilinear shape, like a ball. The friction in this process has transformed the illuminous cycles into electro-magnetic cycles. This condition in the packet cannot exist very long, for the heat generated in the process causes the cycles to expand very rapidly and there are positive and negative charges. The charges of unequal polarity cause most of the explosions of the fire balls right in the heat formations where they are formed, with a terrific force, and we experience thunder. It is very seldom that these balls are able to leave the heat formations without being exploded right where they are formed. If they happen to get away, as we know is a fact, they may roll round in the atmosphere for miles

in any direction; sometimes near the ground. Then they may ascend again several hundred feet in the air. They travel with any velocity, but very seldom with a high speed. They are very dangerous aimless wanderers if they happen to get out of the packet where they are formed, for they will explode sooner or later and may cause terrible damage to life and property. The safest way is for them to explode right in the packet where they are formed, which nearly always happens.

It is evident from the foregoing discussions that the magnetic oscillations in the atmosphere are considerably lower in the winter than during the summer months on account of the lack of heat formations in the atmosphere. There are daily variations in these oscillations, and these daily variations of electro-magnetic oscillations seem to have a peculiar effect in the shifting of the magnetic needle. It is clear from this exposition regarding the nature and origin of thunder bolts that their potential is in proportion to the density of the packet of heat formation where they are formed. Half comic and half tragic are the many explanations the physicists have invented for this simple phenomena. I had a big stack of what are called "scientific theories" on file up till a year ago. They were written in the Swedish, German and English languages, and represented scientific observations of the phenomena from all over Scandinavia, Canada, Australia, England, the United States and Germany. I had kept these records for years, only out of curiosity, in order to see the progress science had made along these lines in discovering the truth of the phenomena; but none of these theories have stood the test. When I checked these statements by psychometric observations it would

take many hundred pages to reproduce all these worthless so-called scientific theories; but I will for the sake of general interest translate a few into the English language; and they are as follows:

“Besides statical electricity in the atmosphere, the earth itself emits a certain quantity of electricity, and it is from the attraction exerted by these two fluids upon each other that thunder comes into existence. To put it in other words, thunder is a sudden striking of balance between two different masses of electricity.”

This statement was written by a German scientist in Leipzig, Germany. The fact is that the earth does not directly emit electricity. The earth draws electricity from the atmosphere, and this electricity is generated right in the atmosphere itself by the transformation of the solar electrons in the light into magnetic cycles. This transformation is the result of the atmospheric friction from the illuminous cycles in passing through the earth's atmosphere. The earth is a receiver and conductor of electricity, but not a giver.

Another of these scientific theories is that light waves are composed of electro-magnetic waves. This statement was made by a Relativity disciple and professor of philosophy at Rostock University in Germany. The fact in this case is as we have seen in this chapter, that light waves are not composed of electro-magnetic waves but are transformed into electro-magnetic waves by friction. This is proved in the phenomena we call sun spots, which are caused by a transformation of the illuminous cycles

into electro-magnetic cycles, as we have explained above. We see according to the light that is within us, and one cannot give a pen picture of phenomena he does not understand. I shall translate a comment by a Swedish physicist in Stockholm, Sweden:

“What a mysterious world is that of atmospheric electricity. It is truly the new world for the scientific mind—a mine fruitful in unknown and even unsurpassed marvels which it is perpetually disclosing for our admiration.”

I admit that electricity must be wonderful indeed when we fail to understand the phenomena. Other theories are that heat waves are electricity. The trouble with this theory is that any psychometric investigation proves it absolutely worthless. Heat waves are electronic commotions, or to explain the phenomena in other words, it is streams of electrons caused by the high molecular vibration; but these streams of electrons and ions have no electrical qualities whatever, but are very easily transformed into electro-magnetic cycles. We must in order to avoid confusion draw a definite line between these three so closely allied phenomena,—heat waves, illuminous cycles and electro-magnetic cycles. Only one of these phenomena have a magnetic nature, and that is the electro-magnetic cycles which we call electricity; and that an absolutely necessary condition for this phenomena is friction and not heat. Heat is electronic commotions or vibrations. Each one of these phenomena has a definite natural dividing line from the others. For instance, we know from experience that we can send electricity over wires for long distances; but in the case of heat

commotions these experiments are very limited, if any. In the case of light, we are absolutely without success if we try to confine it to conductors. The illuminous cycles travel through interstellar space of absolute zero and vacuum. If we glance toward the past we find that superstition and ignorance have regarded thunder and lightning as a terrible agent of the will of the powers above.

We shall now turn our attention to the study of another ingenious and wonderful process of nature—the formation of planets and satellites. A bewildering mass of theories have been brought forward by the physicists and astronomers in regard to the mode of origin of the planets and satellites, Ninety-nine per cent of these theories are not admissible to intelligent reasoning, and will not be considered in this writing. We shall in an analytical way consider a few of the most logical of these theories. One of these hypotheses established by the astronomers is as follows:

“The planets and satellites were formed right where they now revolve by the agglomeration of scattered particles of cosmical dust.”

This theory takes us to the point where we are obliged to ask for the origin of the cosmical dust, and where did it come from? The astronomers must have an inexhaustible supply of dust hidden somewhere in some far-off corner of the universe. Let us close in on this particular point with reasoning and throw the problem within the range of a psychometric perspective. Very little reasoning suggests to us that these small particles of dust must

have an origin. We are now confronting the question: Where is the origin to be found? We have already in the first part of this chapter hinted of the phenomena we call sun spots having something to do with the origin of the worlds and their contents. Let us go to the sun to study the process that actually takes place in the sun spots. We are already acquainted with their physical behaviour. We have seen that sun spots are caused by a contact with the solar energy of the sun's electrons and celestial dust, and it is in this process that the transmutation of matter takes place. The constituents of the dust have been transformed to solar electrons carried in the light. As we have said before, this process embodies friction which sets up an electro-magnetic field of force, and this in turn causes the particular regions where the phenomena takes place to appear dark. The particles of dust are now released from the physical law of attraction (contrary to the Relativity Theory) free to go back into space in the form of illuminous cycles, and equipped with two velocities—curvilinear and rectilinear. These illuminous cycles or physical light carries the nebulous seed.

We shall in order to study the phenomena at close range select a position in the Milky Way, and so situated that we are able to see the light from our yellow star, the sun, besides one or two neighboring stars outside of our solar system; and suppose that we are able to see a large space expanse outside of the magnetic rivers in this position, we have now the whole process of planetary formation within the range of a psychometric perspective.

I shall in what follows endeavour to reflect a true panoramic pen picture of the phenomena

into the mind of the readers as the process is actually seen to take place from our selected position. Let us follow the light as it travels through space from our sun and the stars we selected outside of our solar system till it reaches the point of intersection of the two rays. We have said that light travels in cycles through space, and when these illuminous cycles from our sun meet the illuminous cycles from another sun at an angle, or in other words, when the two rays of light are trying to cross each other's path in cosmic vacuum undisturbed by any of the magnetic rivers in space, it seems to meet a slight resistance, and the rectilineal velocity is forced into curvilineal velocity similar to a whirlpool. This is the beginning of a nebula. When the nebula has been in formation for some time the solar electrons in the light will be more easily arrested in the whirlpool of gray gaseous looking masses, but the cycles in the light keep on spinning around in the gaseous masses, and receiving light from all sides the nebula slowly but gradually becomes denser from the accumulation of solar electrons. Sometimes the nebular formations start right in the path of the magnetic rivers, and when the planets approach the formation is broken up in the sweeping due to their velocity through space, and a large part of the gray gaseous looking masses are forced towards the earth's poles. This process causes friction in the masses of accumulated solar electrons and they are very easily transformed into inversive electro-magnetic cycles, due to friction in close contact with the magnetic poles of the earth, and a large part of the earth's atmosphere becomes highly electrified for a few minutes. This electrification of the atmosphere is in proportion to the density of the nebular formation, but it is very seldom

that these formations have time enough to become very dense before the earth in rolling round breaks up the process in order to clear its own right of way through space. We experience in this phenomena what the English-speaking world calls Aurora Borealis, when seen in the northern latitudes, and Aurora Australis when in the southern hemisphere.

The Scandinavians call this phenomena *Norrskjen*, on account of its exhibiting most visibly in the polar regions. These *Norrskens* or *Aurora Borealis* exhibit dazzling splendour in the northern part of the Scandinavian peninsula, around Spitzbergen and the northern part of Greenland. The rolling of the earth has put a sorrowful and merciless end to the nebular formation in the whole neighborhood and some of the masses of solar electrons remain in the earth's atmosphere and the main part is left behind in an aimless spinning around, to be spread in all directions in space till the cycles become crystallized and take on the form of celestial dust. A part of this dust is picked up by the planets in their rolling round through space and mixed with the atmosphere, where it serves as a nucleus in the building up of raindrops when it falls to the earth's surface. The remaining part of the dust gradually drifts back to the sun, where it undergoes the process of transformation to kinetic energy in the form of illuminous cycles, prepared to go back into space again.

Our *Aurora Borealis* and *Aurora Australis* are phenomena common to all planets, satellites and asteroids. When the nebular formation, which is undisturbed by magnetic rivers, has reached a certain density, it starts to take on in the spinning around a definite form of the archimedean spiral, till it gradually takes on a solid form of a planet

or satellite, and becomes rigidly subject to the laws of celestial mechanics. The spiral or whirlpool form of a nebula is entirely due to the high curvilinear velocity of the cycles of solar electrons and not to gravitation, for the formation is yet in the form of a lumpy or globular mass, and has not yet become subject to the laws of gravitation. The eccentricity of the nebula decreases with the increase in density. Sometimes the nebula breaks up in the formation before it becomes solid, and the substance is scattered out in space and takes on the form of cosmic dust and meteorites, for the solar electrons have already lost their curvilinear velocity, and in this state they take on the form of matter and become subject to the physical law of attraction. As we have said, this dust gradually drifts back to the sun, where it undergoes the process of transformation to kinetic energy prepared to go back into space in the form of illuminous cycles.

In all these investigations we have seen that all motion in nature is curvilinear or bent. It is evident that it takes countless eons of time for a nebula to become a planet. It is a peculiar fact to notice that the nebula nearly always breaks up in formation into two or more smaller parts, and in the spinning round drift a considerable distance away from the main part, and when these parts become solid and subject to the law of gravitation they spontaneously adjust themselves to the laws of celestial mechanics, and take their places as satellites. We might conclude from the results of our investigations that the planets and satellites were formed from the nebulous seed in the light in the approximate neighborhood where they now revolve, and that there is no end

to the universe. It seems to be an infinite universe in a boundless space, for light expands itself to infinite infinity, and wherever light reaches space we find nebulous formations.

This is contrary to the Relativity Theory. The Relativity Formula for determining space expanse of the universe and the average density of matter in it is as follows:

“For the radius R of the universe we obtain the equation $R^2 = 2/KP$. The use of the C. G. S. system in this equation gives $2/K = 1.08.10^{27}$ P is the average density of matter.”

This formula for determining the space expanse of the universe has no meaning in our investigations. We shall deal with this particular point in Chapter 3. The first spiral nebula noticed in the telescope was disclosed in April, 1845, by the great reflector of Lord Rosse, who gave considerable attention to these objects and sketched a number of them with great care. We have seen throughout our investigations that matter cannot be destroyed. It can be made subject to all imaginable transformations down to the illuminous cycles we physically call light; but it is indestructible; it is like mind, beginningless and endless. Chamberlin furnished us with the humble information that planets were largely built up of meteorites. I ask: Where is the origin of these meteorites? And what constitutes the driving force in the spiral motion of the nebula if the nebulae and planets were built up of meteorites and cosmical dust? We have seen that the origin of meteorites and cosmical dust is from the

solar electrons in light and are the remains from broken up nebulae. The driving force in the spiral motion of the nebula is due to the curvilinear motion of the illuminous cycles. Mr. Chamberlin's position is very weak, and his statements do not stand the test in the actual field of action in the process of creation. Some physicists have formed the theory that nebulae are formed by the collision between two suns. I ask: Why is there no sign in space, at the present time, of such a horrible catastrophe? If this is the case we should be able to find at least two dead solar systems in space, robbed of their suns; but there is no sign in space of such a thing, although we are able in psychometric observations of space to penetrate into inconceivable depths beyond the range of the most powerful telescope of the present time. The theory reflects only a very small calibre mind as far as reasoning is concerned, and is in contrast to rigid and specific laws in nature.

Some physicists have brought forward the theory that the sun expels masses of dust into space. The fact is that the suns do not directly expel any dust. The sun expels in time all meteoric dust that reaches the solar surface, after it has been reduced to solar electrons in the form of illuminous cycles. In order to avoid confusion in this statement I find it necessary to go into a little more detailed explanation regarding the dust from the sun the physicists and astronomers have reference to. There are always masses of cosmical dust entering into the gravitational field of the sun. Part of this dust is expelled into space again before it reaches the inner field of the sun's corona, especially during the more intensified sun spots, for the solar radiation pressure and

the electro-magnetic force overtake the gravitational attraction. The same thing happens when the tail of a comet happens to come too close to the sun. It is repelled. But no dust is ever expelled from the sun after it enters into and takes part in the curvilinear velocity of the sun's atmosphere.

Other theories are to the effect that dust reaching the earth from the sun is electrically charged and that this dust is due to eruptive activities in the sun. If the sun did expel dust, this dust could not retain any inversive electrical charges while travelling 92 million miles through space to the earth, so this statement implies only ignorance of the fundamental principles of electrical phenomena. It is true that we experience a somewhat intensified formation of dust clouds in the highest strata of the atmosphere when sun spots are frequent, but this is due to the intensified solar radiation forcing down dust suspended in interstellar space to the upper strata of the atmosphere. Passing through vacuum this dust meets with little or no resistance before it reaches the earth's atmosphere, where it comes to rest due to increased resistance. The physicists have invented the name "cirrus clouds" for this phenomena. The cirrus clouds rob the earth of a large percentage of the solar radiation which in turn causes a reduction in heat near the earth's surface. We might mention that the formation of matter from the nebulous seed in the light is best studied in cosmic vacuum where the light is undisturbed by magnetic rivers, near the earth, with the vacillation of the atmosphere as a disturbing agent. The formation of matter from the sunlight cannot be started except through the channels of vegetation, when the plants draw the solar electrons from the light.

Some American physicists have recently advanced the theory that nothing exists in the universe except electricity and that they have good reason to believe that electrons are composed entirely of electricity and that electricity turns into matter in outed space. This theory has boldly robbed the material universe of the physical light we receive from the sun; in the same way that the Einstein relativity theory has robbed the universe of the universal ether. Our conception is that all forms of matter, including electricity, has its origin in the light from the sun, and that electricity is cycles of electrons transformed into an electro-magnetic nature of the illuminous cycles by friction. The phenomena called sun spots proves that the electro-magnetic cycles are not illuminous, and we can verify this statement if we observe the electrical conductors in a dark room. If the electro-magnetic cycles were illuminous they would illuminate the room in passing over the conductors. The electro-magnetic cycles are not illuminous unless they are rendered illuminous by the heat caused by friction, as in the case of lightning. If nothing existed except electricity the whole material universe would be in physical darkness. Electrons in the light are in the form of kinetic solar energy. Some physicists have overworked their brains in trying to calculate the life of the solar system from its birth to its death, and reached the conclusion that it would be in some such space of time as 30 million years.

We find planets in space in all imaginable stages of development. There are planets where plantman exists —I mean where all intelligent manifestations are in the form of plants. This is the vegetable stage of their development. We find planets with inhabitants that are

endowed with what I would call electrical senses, whereby they perceive knowledge unknown to us on earth. Jupiter is one of these worlds; and it is quite amusing to come in contact with the gentlemen from Jupiter in these investigations. They are small fellows, and homely, with a large bluish horn-like projection on the nose, where (to us) the unknown sense is located. We might state that all the planets, including several of the moons and asteroids in this solar system are inhabited by human beings, but the earth's moon is a dead one. It is a mass of inanimate matter, with no atmosphere, and no sign of electro-magnetic vibrations. We find planets that are highly self-illuminating. These are among the older set of worlds and the inhabitants are on the extreme heights of a civilization. We must not draw the conclusion that self-illuminating planets are made of different material than our earth. All heavenly bodies are made of the same material—the solar electrons in the light. Self-illuminating planets have become chemicalized by a number of invisible rays of high penetrating power. These rays are colorless and invisible so far as physical sight perception is concerned. We perceive of these rays in psychometric observations of space. When these rays reach the planets they penetrate to a considerable depth below the surface and they seem to have the peculiar capacity of chemicalizing the planets, satellites and asteroids so that they in time become self-illuminating.

A number of physicists advance the theory that the sun is gradually losing its heat and will in time turn black and show the wrinkles of old age. I am obliged to ask: Why is there no sign of any dead stars in space

at the present time? The fact is, as I have said before, the sun does not radiate a material heat to any extent, for the sun's temperature does not exceed that of the equatorial regions of the earth; and this heat is due to the atmosphere's velocity in passing around the sun. If the sun should lose its energy-radiating qualities, that would mean a material annihilation of all organic life in the solar system; but there are no signs of such a thing in the whole sidereal universe. It is true that we find a countless number of planets in space that do not reflect the light. They are in an attitude of night, but these planets never did reflect the light. They are in a process of transformation from a nebulous state to crystallized solid matter; but they have reached the stage in their development where they are rigidly subject to the laws of celestial mechanics and will continue in their development for countless eons to come, till they gradually are prepared to receive their full share of light from the sun and become illuminated by the mind of man.

The question arises: How can we know these things to come? Our answer to this question is that there are a countless number of these planets in all imaginable stages of development. Some are from a physical point of view totally black. Some of the more advanced are able to reflect light very faintly. Others still further advanced reflect more light, and so on, till they take on the appearance of the earth, and will continue in their development till they become self-illuminating. The planet Mars is a self-illuminating planet, and its inhabitants are on the extreme heights of a civilization. The Martians are quite different looking gentlemen to the inhabitants of Jupiter. They are twice their height or

more. They are a stately looking race of people and their keen intellect is a striking feature. The planet Mars represents to the eye of the mind the most beautiful and peaceful expression in nature, with a mild bluish light covering the planet after sunset, for the light radiating from the planet is not as striking when mixed with sunlight. Mars is eons older than the earth. I will give a few examples of how we know this by observations from a purely material point of view. The water in the Martian oceans has a much higher density than on earth, and it takes much colder weather to freeze ocean water on Mars than on the earth, due to the large quantity of salt in the water. Another way to judge the age of the planet is by the terribly deep canyons all over the surface. Wherever there is a stream of water running we find these deep cuts in the ground. Another, but little more reliable, method by which to judge the age is from the etheric records of the planet. We shall deal with the details of this phenomena in the next chapter. Telephones and telegraphs are things of the past on Mars. They are replaced by mental telepathy. Steamboats and railroads are things of the past. They are replaced by an aeroplane of a quite different construction to ours, and all travel and transportation is done in the air. The Martians have a perfect working knowledge of transmutation of matter. There are several methods used in this process, but the one mostly resorted to is vibration in combination with certain artificial rays. The Martians have a quite different method of generating electricity from that which we use. Our method is very crude compared to their's. The details of this method are somewhat complicated, and a complete description is beyond the scope of this writing. The Martians have a perfect

command of all laws of vibration and atomic disintegration, and this is the principal source of their motive power.

Another very important point for their existence is the preparation of food products. Their food is prepared directly from the solar electrons in the light. Chemistry, mechanics, astronomy, micro-biology, medicine and all branches of engineering are on extreme heights. There is nothing in sight on Mars that we call physical labor. The Martians are endowed with television; I mean that they know how to entirely eliminate space distance as far as sight is concerned. This is not because they are different creatures to what we are—not by any means; but their knowledge of the laws of vibration has bestowed upon them the faculty of television and mental telepathy. We on earth will reach the same stage of development some 150 billion years from now. The Martians have a perfectly detailed understanding of the whole mechanism of material creation.

There is only one religion on Mars, and that is their science, that is supreme. Their general conception of life seems to be that there is a continuous adjustment of internal and external relations and that its object is development, growth and unfoldment. They realize an infinite principle in nature and that there is no end to progress. An interesting fact to notice is that we are using phrases which have no meaning in the Martian's sphere of thought. For instance, the word "believe" has no meaning to them. The negative conception reflected in the word has been transformed into positive knowledge. The word "absolute" covers more ground in the Martian sense. We sometimes give a narrow application to these far-reaching expressions, and I could in a similar man-

ner tabulate hundreds of words from any language. These advanced conceptions reflected in thought are very confusing to us when we establish connections with their thought currents. Radio is used on Mars, but it has a much broader application, and the apparatus they use is almost unrecognizable on account of its highly developed stage.

The Martians have special means for communicating with a large number of worlds in space, which are in the same stage of a civilization, and have been trying for centuries to signal the earth; but have not yet succeeded in establishing any earthly contact. This is entirely due to the long span of evolutionary progress between the two races of humanity, with a resulting equal distance in their civilizations and consequent material developments. Their methods for interplanetary communication is by means of a definite system of high frequency light signals. In this way they reflect photographs of all new inventions to other worlds capable of receiving them. The light rays used for this purpose have a much higher frequency than the light from the sun and consequently have a velocity several times that of sunlight. The photographs in these rays are received on specially constructed screens. We perceive of these signals in psychometric observations of space.

There are no separate nationalities on Mars, for this savage conception of separating humanity died of old age on that planet billions of years ago. Moral conceptions are of the highest standard, for they realize that man needs for true intellectual advancement the balancing effect of the highest moral state. They use the universal ether for references of all happenings within the sphere of their own world. This sort of paradise has not

always existed on Mars. The Martians have emerged from a savage state of barbarism like ours at the present time, with their separate nationalities and political squabbles and wars. We know this to be a fact by examining the etheric records of the planet. We must not draw the conclusion that the Martians have led their lives down on Easy Street, and never do any more for progress since physical labor, politics and warfare have been eliminated. Not by any means. They are engaged in a world conquest; but the battle grounds have been transformed to other fields. It is an intellectual conquest, and they have succeeded in this way in penetrating into inconceivable depth into the (to us) mysterious unknown. We in a primitive stage are only able to conceive a material creation as the only thing existing, and that the rest of creation remains to be explored by hazy and foggy religions which have not been able to produce a positive fact in a single instance.

The canals on Mars are made by nature and are evidence of the old age of the planet. The water and wind have washed the material into the oceans. They look straight in a general direction from a distance; but a close view reveals a zig-zag form. Sometimes landslides prevent the water from running and back it up for hundreds of miles when these cuts run over level ground. Landslides in these canyons are very frequent on account of the terrible depth. We might mention that all the planets, moons and asteroids in this solar system are very slowly but gradually drawing nearer the sun. This can be seen in the etheric perihelion, but the cause for this slow shifting cannot be seen by psychometric observation, so we leave this question for the time being to the physicists and

astronomers to work on. It is likely the cause of the shifting is to be found in the slight resistance to the planets in their orbits and increased density. It will be admitted that these arguments and descriptions of the phenomena present us with a faithful smile, even of the details of the observed course of events; but we must admit that the vast domain of creation is yet totally unexplored and that our sphere of exact knowledge is small compared with the possibilities of creation. We have in this chapter made a hasty survey of the universal cosmical evolution, with some of the more important phenomena; and we shall in the next chapter consider another department in nature—the ether and its relation to time, space and objects.

CHAPTER II.

THE PSYCHIC ETHER AND ITS RELATION TO
TIME AND SPACE IN CONTEMPORARY
PSYCHOPHYSICS.

Ether is from a purely physical point of view not a tangible reality, and it is not possible to chemically analyze the universal ether by any physical method at the present time. It is a psychic organism and must be analyzed by reason. The physicists make use of it in explaining rectilinear propagation, reflection, refraction and interferences. They compare it to a fluid, of negligible mass, since it offers no appreciable resistance to the motion of the planets. The Russian chemist, Professor Mendeleef, has given reason for thinking that ether is an inert gas with an atomic weight a million times less than that of hydrogen and a velocity of 2200 kilometres per second. Fresnel's idea of the ether was that its coefficient of elasticity is variable. The physicists tell us that ether exists in several densities or veils, but this statement is in conflict with the law of use. What use would it be for the worlds to revolve in several densities of ether if one would do? The so-called electrical scientists have advanced the theory that electricity sets up a strain in the ether, but this theory evidences lack of understanding of electrical phenomena, and besides is in

contrast to a very rigid law of nature. Electricity is a material phenomenon, and ether is a psychic organism; and right here we see that electricity has nothing to do with the ether, for a material phenomenon is not tangible to a psychic organism. The ether is omnipresent and is not subject to the laws of material mechanics; so that the physicists have therefore not yet succeeded in answering the question often put to them by the philosophers: "Has the ether really an objective existence?"

Ether has a function of its own. It carries the universal history of the worlds, exhaustless in its true details. All physical happenings in nature are reflected in the ether and remain there till eternity. Camille Flammarion, a French scientist of world-wide fame, suggests the possibility that light carries the universal history of the worlds; but this suggestion we can neither accept nor reject, for the chain of evolution has not stretched itself out enough yet to tell by any introspective psychology investigations at the present time if light carries the universal history of the worlds or not. This is true so far as the development of this race of humanity is concerned, for we cannot see beyond the sphere of evolutionary progress of this race; but I do state that we have arrived at a stage where we have a fairly good opportunity to study the whole mechanism of material creation, provided that we use the right methods. I do not wish to impress on anybody's mind that the material creation is the only thing existing in nature. On the contrary it is only one act of the drama, and the simplest one, for there are universes interblending in one mass in space, all subject to laws of vibration within their own sphere.

We shall now analyse the relation of time, space and objects to the psychic ether. Let us suppose, for in-

stance, that we know the time-space course for any natural process whatsoever as regards the manner in which it takes place in the galilean domain relative to any galilean body of reference, and let us suppose that we wish to refer back to this phenomenon in etheric records, we find the whole process in its true details regarding the manner in which it took place in the material space. But we find that we are not able to connect up the phenomena of the time-space domains which behave in a galilean fashion. The reproduction of the event in the ether has no reference to Euclidian three-dimensional space. The etheric reproduction of the phenomena proves that simultaneity of physical events is spontaneously established in an absolute sense, and for every descriptive physical event in space there is a reproduction of phenomenon in the ether. Simultaneity is a conception relative to physical realities, and for every description of event in space involves the use of a rigid body to which such events have to be referred; but the resulting relationship has no reference to the laws of Euclidian geometry. We have thus seen that we are robbed of the sense of time and space, or in other words, we are robbed of all means of describing the event with reference to time and space measurements. We are thus confronting the fact that time and space do not exist in an absolute sense, and we might extend our time-space postulate still further, and transplant our conception on purely physical ground, and say that time and space are lacking physical reality. They have no meaning. We have thus extended our time-space conception between its two extreme points from the absolute domains to the tangible physical. We know by experience that the physical description of an event is complete only if time and space are specified. The

question arises: How are we able to rob both time and space of its physical reality?

Let us investigate this specific point. I ask: What is reality? The physicist is in the happy position of being able to satisfy himself with a definition which fixes the limit of his realm of thought, and tells us that whatever is measurable is real, or any physical objectivity. To this definition of reality I am obliged to ask if Mr. Physicist includes space and time in his definition. If he does, he has endowed space and time with the absolute properties of geometrical forms. Our definition of reality is that the combination or oneness of time, space, ether and objects constitute reality. Newton's conception of time and space was that absolutely true and mathematical time flows, in virtue of its own nature, uniformly without reference to any external object; and absolute space, by virtue of its own nature and without reference to any external object, always remains the same and is immovable.

Our conception is that space, time and ether have no meaning if used without reference to an object. Space becomes a reality if material bodies exist, for the things in space give it a form; and likewise time becomes real if events take place. In a similar manner ether can be assigned a function only if material bodies exist and changes take place. We know by experience that space and time are not objects of measurement in themselves—only conjointly do they constitute a physical fourth dimension in the description of events, and the ether functions conjointly with any events in material space. According to classical mechanics time is absolute. It is

independent of the process and the conditions of motion; but a pure space distance of two events results in time distance, so by this reasoning time is robbed of its independence, and in its most essential formal properties shows a pronounced relationship to the three-dimensional Euclidian space; and in a similar manner ether shows a pronounced relationship to time, space and three-dimensional Euclidian objects. The question arises: "If the ether has any practical value in regard to the material progress of our race, our answer is, that the ether supplies us with a means for glimpses into the province of the inner structure of the universe. This new problem in connection with the world's progress is very attractive, and it is the general desire to explore this new field. We get these new conceptions of time, space and ether without any effort by merely expelling from the traditional notion of space, time and ether all ambiguities and unnecessary thought elements. It will be admitted that many will be repelled by the external form of this conception in forming the new view of the universe; but we believe that all difficulties can be overcome, for the principles are as simple as they are profound. We are compelled to use time-space references in our daily life, and can thus proceed, step by step, to exclude all arbitrary assumption, and crystallize the fundamental ideas of time, space and ether into the simple form in which they play their parts in psychophysics. We get our idea of time, space and ether by subjecting them to critical examination, and we on earth are exactly in a position to study phenomena as they take place in the ether relative to their behaviour in the galileian space. Time-space determination and the objective function of ether are inseparably connected with matter, and will have a mean-

ing only when referred to it. The question arises: If there is a meaning in the phrase "absolute motion" in physics, in our ether theory, all motions in the material universe are relative to their reproduction in the ether. We have said that ether is a psychic organism, and consequently not reducible to the laws of material mechanics. This seems to give material support to the celebrated Relativity Theory; but let us be cautious and take this delicate question a step further in order to get down to the underlying principle of this truth.

I ask: Does not the whole sidereal universe with its contents originate from an organism of a purely psychic nature, the nebulous seed in the light from the sun, which is part of the kinetic energy in the illuminous cycles: and this energy is directly not reducible to the laws of material mechanics? We know by simple reasoning that organic life in the material universe would be a physical impossibility if these psychic energy vibrations should be wiped out of existence. We see from this reasoning that there is a close correlation between the psychic organism and the material phenomena, and this is true in regard to the ether, and all motion in the material Universe. All descriptions of motion in the physical universe are relative to the etheric reproduction, and the word "absolute" cannot be applied in its broadest sense to anything of a material nature. The ether has a perfect definite uniform functional relation to the objective space and all physical events. We must free ourselves from the primitive method of place-specification, which deals only with places on the earth's surface, and is dependent on the existence of points on this surface. Let us illustrate the function of ether by some tangible example,

and let us imagine that we are observing a railroad train travelling between two stations, A and B; and we located at a distance, D, in such a position that we are able to see the train and record the exact time this train is leaving A and arrives at B. We have thus established the exact time it took our train to describe the distance from A to B, and we can find the exact distance between these two stations by actual measurements. We have now, besides the three-dimensional geometrical description of the train itself, incorporated the event in a fourth physical dimension or a time-space measurement; and the fact of its being a physical four-dimensional manifold follows from experiences in the application of the method of describing the event. Suppose that after some time we wish to refer back to the etheric records of this event, we find it there in its true details, and we are able to describe every form of the phenomena exactly as it took place in material space; but we are not able to connect up the event with any physical time space measurement. We have lost the physical time-space dimension, but this dimension has been compensated for by a fourth dimension of quite a different nature. Suppose there are several passengers on our train, and besides, a department for different articles enclosed in boxes, so that a physical description of these articles will be absolutely impossible without opening each box, in the etheric inspection of our train we are able to describe each individual passenger in the train besides being able to describe each article enclosed in the boxes. This is the fourth dimension in an absolute sense the occults have reference to. This fourth dimension is not tangible to any purely physical observation at the present time; but is only tangible to the eye of the mind when temporarily released from the

bonds of physical garment and free to exhibit in cosmic space under the direction of the will, and there is nothing that is hidden from the eye of the mind within the realm of evolutionary progress of this race of humanity. We are only limited to our ability to find physical expressions to accurately describe the phenomena we study. The ether has still a broader mission. It is the universal medium for the transmission of telekinetic force in thought waves which is instantaneous regardless of any distance, and it is the understanding of this principle that will introduce this race to a universal mental telepathy.

We all have had more or less experience with etheric reflections, although not well understood. We are familiar with the phenomenon we call mirage, when we see landscapes and objects suspended in the air. The etheric reflections are sometimes under favorable conditions rendered visible to physical sight perception, but we have no command of the phenomena under these conditions and we do not see the whole world's panorama. We see only fragments. The object appears to be inverted. This inverted position of the object is due to the sunlight. In the psychometric study of space we see the objects in natural size and position in one continuous reel of events. The plains with their mountain background in Arizona and New Mexico are rather favorable for mirages. We may mention that the so-called Lorentz' contractions that every body which is in motion relative to the ether is subject to a definite contraction along the direction of motion, which of course depends upon the velocity of the body. This H. A. Lorentz and Fitzgerald theory has stood the test throughout our investigations. It is evident that these investigations have been of the most far-reaching nature, and there are many important facts in

the physical and chemical universe which have not come to light yet so far as worldly knowledge is concerned. I lay down the results arrived at in these investigations for criticism before the whole realm of psychophysics. We shall in the next chapter analyze the stability of the Relativity Theory. It is the most complex thought structure ever established by man, but we have in these chapters been prepared to deal with complex problems, so we enter upon quite familiar ground.

CHAPTER III.

A PSYCHOMETRIC STUDY OF THE RELATIVITY
THEORY.

We shall in this chapter turn our attention to the study of the greatest thought structure ever established by man, the Relativity Theory. In complexity it stands alone, without a parallel, as a shining monument of the highest scholarly attainments of a brilliant scientific master mind. It is our natural privilege to study and analyze all scientific theories and put them to a critical test in order to see if the statements set down in formulating the theories are in harmony with natural laws. We must decisively admit that the intellect combined with reasoning capacity are proper instrumentalities for carrying on investigations of this nature. Let us mobilize these two competent forces to the fullest capacity. In order to approach, study and analyze the stability of this formidable thought structure, which extends beyond the boundaries of scientific materialism, we shall in this chapter, without going into specific details, analyze the foundations and study the corner stones on which this structure stands, which we believe is necessary before we accept the theory as an absolute truth; and we shall without any preliminary argument in an analytical way start to investigate the Relativity formula, which demands that when a ray of light passing the sun at a distance of A sun-radii from its center, the angle of deflection (α)

should amount to $a = 1.75 \text{ sec. of arc.}$ The theoretical background for these mathematical generalizations does not stand the test in our investigations, for several reasons. The principal reason for our rejecting the theory upon which the Relativity formula is established is because the kinetic energy in the illuminous cycles does not seem to be subject to the laws of material mechanics.

A second reason for our rejecting the Relativity Theory is that Mr. Einstein's conception regarding the behaviour of the light in traversing space does not stand the test in the actual field of action when he accepts the time-worn quantum theory, or that light travels in the form of bundles of energy through interstellar space.

A third reason for our rejecting the Relativity Theory is that Mr. Einstein has not taken into account the bending effect of the light due to the variable heat formations combined with the atmosphere's high curvilinear velocity in passing around the sun.

The fourth reason that induces us to reject the Relativity Theory is that if light is subject to the law of gravitation, then how is it possible for the solar electrons in the light to leave the sun? I suppose the answer to this is that the radiation pressure is forcing the light from the sun into space. I ask, how is the radiation pressure possible, and what causes it?

The fifth reason for rejecting the Relativity Theory is that Mr. Einstein has not given any satisfactory explanation as to how it is possible for the planets to reflect the light back into space if it is subject to gravitation, and

how it is possible for the light to be so uniformly distributed in the universe if it is subject to gravitation. We believe it is essential that Mr. Einstein makes clear his conception regarding the operation and nature of the propelling mechanism of the light when he has robbed the universe of the universal ether; or to put it in other words, how is it possible for light to travel such enormous distances through space and be reflected back into space by the planets? I presume Mr. Einstein's answer is that light travels by virtue of its own nature, but this answer does not satisfy our demand. Our conception regarding the propelling mechanism of light is that the light from the sun travels through an unbounded ether sea in cycles, or that light from the sun is propelling its way through an unbounded ether sea in one continuous spinning around. The fact is, that the sun's gravitational field has no effect on a ray of light when passing the sun. The radiation pressure has a tendency to repel the light, or in other words, to throw a ray of light from the sun into space. This can be proved by purely material observations if the observations are made when the tail of the comet happens to come too close to the sun. It is repelled by the radiation pressure. It will be admitted that the repelling effect on a single ray of light will not be as large as on the tail of the comet, due to the large mass of solar electrons in the latter. We asked the question: How is the radiation pressure possible? And what causes it? The sun's radiation pressure is entirely due to the high curvilinear velocity of the illuminous cycles, or to the propelling effect of the curvilinear velocity of the illuminous cycles. We have in chapter I explained the principal cause of this pressure. Meteorites and cosmical dust always enter into the gravitational field of the sun.

The meteorites are reduced to cinders, or nearly so, due to the heat generated in passing through the sun's atmosphere. When these cinders and dust reach the solar surface and come in contact with the solar energy they are reduced to solar electrons in the form of illuminous energy cycles, or in other words, the potential energy inert in the mass of the meteorites is transformed to kinetic energy in the form of illuminous cycles, and these energy cycles are not subject to the law of attraction. As the amount of liberative energy increases in the sun's atmosphere it is forced to seek other fields for release, and it goes into space in the form of illuminous cycles, equipped with two velocities, curvilinear and rectilinear. We said in Chapter I that this transformation process embodies friction, and part of the illuminous cycles are transformed into electro-magnetic cycles, and we observe the phenomenon called sun spots, for the electro-magnetic cycles are not illuminous unless they meet resistance so that the heat generation renders them illuminous. It is evident that the liberative energy is enormous, when we consider the quantity of matter consumed. This variable energy supplied to the sun causes a variable solar radiation on the earth and other planets. The radiation pressure will be enormous if a meteoric shower happens to enter the sun, and for this reason all suns in space, including our yellow star, are variable in light fluctuations. It is true that the atmosphere's curvilinear velocity in passing around the sun serves as a means for uniform distribution of electrons over the white velvet-like solar surface; but these do not entirely eliminate the sun's variability.

We have seen in these discussions that a ray of light cannot be bent by gravitational force, for the energy in

light is not subject to the law of inertia. We are now confronting the question: What causes the curvilinear propagation of the light in passing the sun? It is a well established fact that rays of light are propagated curvilinearly in passing the sun, when reflected from heavenly bodies beyond the sun, or in other words, there is a displacement of spectral lines of light rays reaching us from large stars as compared with the corresponding lines for light produced in an analogous manner terrestrially. We said above that light is not subject to the laws of material mechanics, and consequently cannot be attracted by any gravitational force. The question arises: How could it be possible to design a theory with nearly mathematical exactness on pure guess-work? This staggers our mind in the first glance at the problem, but let us close in on this specific point with reasoning in order to see how so close an approach to the actual condition was possible.

We know by experience that heat formations in the earth's atmosphere are very unevenly distributed, but this is not the case over the sun. The atmosphere's curvilinear velocity in passing around the sun keeps the heat formations above the sun very evenly distributed. They are practically constant over the whole solar surface. The realizable ground of experiences in our investigations is that light passes the sun in cycles and conforms to the way of the heat formations around the sun, and that light is bent in proportion to the density of the heat formations. A close study of the phenomena suggests three factors to be the disturbing agents to the rays of light in passing the sun, the atmosphere's high curvilinear velocity, the heat formations and the radiation pressure. These disturbing agents to the light de-

crease in proportion to the distance the rays pass the sun. There is very little variation in these factors, if we take the average effect on light rays for any specific distance from the sun. If we assume a certain amount of curvature for one sun radius from the centre of the sun, which can be obtained from the average value of a series of observations, we have a very close approximate formula for the amount of curvature of rays of light in passing the sun. We can now appreciate why the argument is not convincing which is brought forward in the principle of the Relativity Theory when rays of light are not bent curvilinearly by gravitational force. The Relativity Theory has thus lost its accuracy in the domain of mechanics, for the whole Relativity scheme seems to have a tendency to verify the statement made by Henry Poincare that "mathematics are sometimes a nuisance, and even dangerous when they induce us to affirm more than we know." The Relativity Theory has lost ground in other fields of equal importance. It is narrowing down the conception of reality by excluding the function of the ether from universal phenomena, and thus tearing certain holes in the fabric of reality only to patch them up by mere auxiliary conceptions. The process of science does not justify us in thus narrowing the conception of reality. The creation would be simple indeed if it included in its make-up only things we are able to see and perceive of by the material sense perceptions. On the contrary, it is very complex. There are infinite numbers of universes in one mass in space, all subject to different laws of vibration within their own sphere. I ask: If the ether is excluded from the elements of reality because it cannot be seen, or is tangible to the crude organic perceptions of the race in the present state of evolution?

The electric forces cannot be seen, but they are elements of reality. They are measurable. The Relativity Theory points out that the distribution of matter is limited, or that the material universe is finite, and some astronomers and Relativity disciples claim to be able to back this particular point by observing the sky at night; for if the universe were continuous indefinitely all the black or blank spaces between the stars would be filled up, because the sky would be a continuous sphere of light. This observation is based on the fact that a ray of light traversing the universe will keep on forever. They claim to be able to verify these observations by a mathematical process, based on the proportion of light to dark spaces. The boundaries are shown to be 3,300 light years. This fallacious theory deserves our sincerest consideration. Our conception and realizable ground of experiences in our investigations is that light expands itself to infinity, if not absorbed by nebular formations and myriads of black planets in space. They absorb the light they receive from the sun. This is necessary in their preparatory development for vegetation. Their whole surface is still entirely black or similar to the lava flowing out from a volcano. Our survey of space proves that it is an infinite ocean of stars beyond the black or blank spaces observed in the telescope. We find the infinity of the universe in the behaviour of light. If light expands itself to infinity the universe must be infinite, for wherever light reaches space we find nebular formations and the formation of matter. A mathematical formula based on the proportion of light to dark spaces must take into consideration the absorbing effect of light by the countless black planets and nebular formations. We cannot give a definite answer to the question regarding

the space expanse of the universe, although we are able to penetrate into inconceivable depths in space beyond the range of the most powerful telescope, but there is no sign of an end to the starry heaven. All we perceive of it is the shifting of the celestial perspective of infinity. It would not be economy in nature with a finite universe in an unbounded space. The metaphysical reality is that there is an infinite universe in an unbounded space. We believe that it is very essential that Mr. Einstein clearly set forth his conception regarding the mode of origin of the worlds before calculating the space expanse of the universe; or in other words, that Mr. Einstein set forth his conception regarding the function and operation of the mechanism of material creation before calculating the space expanse of the universe.

We have in Chapter I clearly outlined our conception regarding the mode of origin of the worlds, or that all planets originated from the nebular seed in the light, and light expands itself to infinity and consequently matter. The Relativity Theory has in actual investigations been decisively annihilated in the two principal sectors, on the ether front and on the gravitational front, with the theory of a finite universe on the right flank steadily losing ground with the development of scientific instruments of higher efficiency for penetrating and exploring space, which will result in a material verification of our conception of an infinite universe in the unbounded space, and that the whole sidereal universe is self-perpetuating and always has been. The whole gigantic Relativity thought-structure has collapsed. It is laid in the dust, and we shall on the ruins for the realm of physics establish a general empirical cycle theory for

light as follows: "Light traverses cosmic space in one continuous stream of cycles independent of any gravitational field."