

the

METATRON

THEORY



BY

JOHN A. HILLIARD

THE METATRON THEORY

SUGGESTIONS TOWARD A MATHEMATICAL INTERPRETATION
OF THE CONCEPTS OF HUNA
&
RELATED PSYCHO-PHYSICAL PROBLEMS

by

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(Excerpt from a letter written by Max Freedom Long, author of THE SECRET SCIENCE BEHIND MIRACLES, director of the HUNA RESEARCH ASSOCIATES, and Assoc. Director of B.S.R.A.)

" I AM GREATLY PLEASED TO KNOW THAT YOU ARE REISSUING H.R.A. JOHN HILLIARD'S BOOKLET ON HIS METATRON THEORY. IN MY OPINION, HIS WORK IS OF THE GREATEST IMPORTANCE TO THOSE OF US WHO ARE PIONEERING THE THIN FRINGES OF BORDERLAND SCIENCES, OR, AS WITH MY SMALL ORGANIZATION, THE FRINGES IN THE PSYCHO-RELIGIOUS FIELD WHERE WE DISCOVERED THE AMAZINGLY SCIENTIFIC THEORIES OF THE ANCIENT HUNA SYSTEM.

IN RECENT YEARS WE HAVE BEEN INCREASINGLY DRIVEN TO POSTULATE SOME FORM OF ENERGY SIMILAR TO THE ELECTROMAGNETIC, BUT ACTING IN A VERY DIFFERENT WAY - AS IF UNDER A CONTRARY SET OF LAWS. THE DOWSERS AND THE USERS OF THE 'RADIONICS' INSTRUMENTS, HAVE WORKED STEADILY FORWARD IN THE USE OF THIS STRANGE ENERGY WHICH SEEMS IN PART RELATED TO THE LIFE ENERGY IN LIVING THINGS. THEY HAVE GIVEN IT VARIOUS NAMES, AND HAVE TRIED TO DISCOVER WHAT IT IS AT BOTTOM, HOW IT WORKS AND WHETHER THERE ARE A NUMBER OF KINDS OF IT.

SO FAR AS I KNOW, JOHN HILLIARD IS THE ONLY ONE SO FAR TO BE ABLE TO FIND A PLACE TO APPROACH THE PROBLEM WHICH OFFERS THE POSSIBILITY OF UNDERSTANDING THE FOUNDATION WITHOUT WHICH WE CANNOT HOPE TO BUILD.

THE KNOWN ELEMENTS FIT PERFECTLY INTO HIS OUTLINE OF 'THINGS AS THEY MAY BE', AND WE HAVE LEFT SPACES FOR ANY ELEMENTS WHICH MAY EXIST IN THE UNIVERSE, BUT NOT ON THE EARTH.

IF WE CAN FOLLOW THIS LEAD AND IF THE THEORY CAN BE WORKED UPON AND THE FOCUS OF ITS NEW LIGHT BE THROWN ON THE USE OF THIS STRANGE REVERSE-ENERGY OF THE ETHERIC SIDE, WE SHOULD EVENTUALLY BEGIN TO UNDERSTAND MORE ABOUT WHAT WE DO WHEN WE THINK, WHEN WE USE OUR WILL, OR WHEN WE SEND A TELEPATHIC MESSAGE TO MAN OR THE HIGHER ENTITIES. THIS IS IN OUR LITTLE CORNER OF THE PIONEER FRINGE, BUT THE IMPLICATIONS ARE EVEN GREATER WHEN WE CONSIDER THE IMPACT ON CHEMISTRY AND PHYSICS. MR. HILLIARD HAS MADE A REMARKABLE CONTRIBUTION TO THE PROGRESS IN OUR TIGHT LITTLE CIRCLES, AND IF WE CAN HELP TO SPREAD HIS THOUGHTS MORE WIDELY, THERE IS NO TELLING WHAT FRESH KNOWLEDGE WILL EVENTUALLY BE GAINED "

(SIGNED) MAX FREEDOM LONG, F. H. F.

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INTRODUCTION

The search for truth is a search for facts. A fact is that which is to be explained. The explanation is theory. In Borderland Research we find ourselves faced with many facts. In studying these facts we are at once confused by a great profusion of theories. To add another theory is to add to confusion.

The bulwark of modern science is standardization of theory subjected to the rigid discipline of Mathematics. Mathematics is not necessarily quantitative but also may describe the inevitable result of a controlled condition. Natural conditions involve extraneous factors, so the results only approximate controlled results.

The working tools of science are measurement and analysis. Measurement involves the use of arbitrary standards, of units of time, distance and force. Analysis is the sorting out of extraneous factors and the setting together of those facts whose structure, thus set, is substantiated by theory. Theory is modified to suit new facts uncovered in the process of research. Among such new facts are some which do not bear directly on the objective of research, are considered insignificant, and are ignored.

Facts in the psychic category are considered not measureable. That is, no means is known by which to measure them -- not that there is no means. It is because it has not been to the interest of Material Science to seek a means of measuring psychic phenomenon. Again, measurement is not necessarily an application of units of time, distance, and force. But a formulation of equivalence may be used to measure the "imponderable".

In the field of occult research, spiritual research, etc., as in that of Dowsing, there seem to be many theories put in many terms. It seems confused, but a close study shows that confusion is only apparent. There is, however, some reluctance to subject such data to the critical analysis of Mathematics. Why? Well, when it's tried the phenomena won't "phenomenate". I believe the reason lies in the method of applying the rod of measure. We are doing what the Vivisectionist does. When he wants to study life, he just kills the animal!

The content of this booklet is simply an example of how we may proceed to put psychic phenomenon on an analytical basis without scaring away the phenomena.

Because material science cannot or will not extend the concept of matter beyond the tangible world, it must consider all psychic phenomena in the realm of the abnormal, and therefore to consist of facts irrelevant to its objectives. We know that to do this is to miss a most obvious opportunity to study the real forces of the human mind.

What we can discover of facts of the psychic order and subject to the "rigid" discipline of Mathematics will stand as a ground on which future generations may build concepts leading to a greater knowledge of Reality.

We are not subject, as many scientists are, to the idea that the Cosmos extends only plane-wise, physically, but has a third extension into the realms of matter of another order, having definite laws easily measured by proper methods, and readily subject to analysis and Mathematical definition.

So with this introduction -- read the "example" then Search for Truth.

-- J. A. H.

I

THE SPARK OF INSPIRATION

Ohms Law Applied to Huna

In our endeavor to give the ideas of the Huna an electrical interpretation we developed a theory of "thought forms" which we give here with some of its implications.

In working out this theory several terms had to be invented. Some of our readers will find these to be new labels on old bottles. We hope they will bear with us and our word inventiveness -- the ideas are more important than words, so it is better to think out what is meant rather than be caught in the net of word meanings.

Our theory, now called the Theory of the Metatron, is offered as a suggestion for further speculation rather than any statement of final science. Some one may find in it an opening into a workable understanding of the several problems studied by B.S.R.A.

The following is a short resume of Ohms Law applied to the manas and aka of Huna. It was from these simple ideas the more complex concept of the ideo-atom was developed.

Ohms Law is a mathematical definition of the relationships of voltage, resistance and current. Designating voltage by E, resistance by R, and current by I, the equation for voltage in terms of resistance and current becomes $E = IR$ (1). It then follows that the current $I = E/R$ (2) and the resistance, $R = E/I$ (3). From these three simple equations we get the following meanings:

In equation (1), if E is a constant, any change in I must imply a change in R, and we see that when one, I or R, is increased, the other must be decreased a proportional amount. In equation (2), keeping E constant, increasing R causes a decrease in I. This means that with a constant voltage an increase in resistance allows less current to flow. With equation (3) we find another fact, assuming I or the current is to be held constant, a change in the voltage E requires a proportional change in the resistance R.

In our application of these principles to the manas we chose to represent manas, the voltage of vital force, by the Hawaiian word wai using the initial w for our mathematical terms, since we understand the manas to be the driving force, the voltage or potential.

The word hi is a root meaning "to flow", and so we use hi to represent current or I and use the initial h for our symbol.

Since the resistance in a simple electric circuit is the controlling factor, we picked the root work na meaning the "thought form" and use its initial n. In this term, as in the electrical equation, it implies a material substance.

Now we can set up a simple law for the relationship of manas, the aka cord, and the flow of vital force over the aka cord.

We have the three equations: $w = hn$ (1), $h = \frac{w}{n}$ (2), $n = w/h$ (3).

From these fundamental equations we can derive considerable meaning, especially in (3) where n, the thought form, is seen to be a quotient of the values of the manas and the flow of vital force. It may well express the relationship of the manas to vital force in the thought form. However, we will see the relationship is not quite so simple.

The manas, thought of as a potential, conforms readily to this pattern; so also, the hi, or flow of vital force. But when we come to explain na the idea begins to unfold into ever more complex ideas. As the concept of the thought form was worked out, the other factors changed accordingly.

From a study of the phenomena of fire walking, instant healing, throwing sticks from M. F. Long's "Secret Science Behind Miracles", it began to appear that hi did not express a simple flow, in the sense of a substance moving from one place to another, but rather a flow of energy. This could be explained only by the ideas found in wave mechanics.

If a current, moving in a circuit, has a frequency of alternation such that its wave length is infinitely shorter than the circuit, then there will be no flow of electrical matter (electrons) through the circuit. Yet the circuit transmits energy. We conceive this to be the condition existing in a flow of vital force through the aka cord. Thus the basic idea of a flow of "voltage of vital force" is not far amiss.

Having conceived the vital current as a high frequency alternating current whose wave length is less than any possible circuit, we were confronted with the need to explain the na or aka-resistance in some other terms than simple fluid resistance. To do this we gave na two kinds of resistance, one which is purely frictional resistance, and the other a reactance resistance. In alternating electrical currents these two kinds of resistance are related as the square root of the sum of their squares, and is a value called impedance. The value of na in terms of its two kinds of resistance is the hypotenuse of a triangle in which the resistance is the base and the reactance the altitude. Na is the impedance of the aka cord.

With this idea we couple another, that the aka cord in itself has the property of compliance. It offers no resistance to the flow of energy over it. But, if we examine the fundamental equations we see that where there is no resistance, there is also no force. That is, if $E = IR$ when $R = 0$ $E = I \times 0 = 0$. Thus $E = 0$ when $R = 0$ or in our Huna symbols: $w = hn$ when $n = 0$, $w = 0$.

Therefore we set the na up as thought form, in a sense, first, as a conditioning of the aka cord to provide resistance and reactance, thus generating force.

But the na is involved in the thought form. The thought form is a thing in itself, the na expressing certain characteristics of it by which it influences the flow of energy over the aka cord. The na is a mathematical expression of a characteristic of the thought form. By virtue of the na the thought form is able to act on the compliant aka cord in a way to produce resonance in it. We visualize this by assuming the stuff of the aka cord to vibrate in a twofold wave completely antiphase. The na of the thought form is thus seen to resist one wave and assist the other so they are drawn into phase, thus augmenting one another. The degree to which these two waves are drawn into phase determines the amount of energy that will be delivered. The degree is determined by the qualities of resistance and reactance in the na or vital impedance.

This is analogous to inserting an inductance and a capacity in the cord. Those familiar with radio parlance will grasp the idea readily.

However, the thought form is not a simple thing nor are its effects simple, we found as our reasoning led us step by step into ideas about thought forms. The aka cord and the manas are the material and forces we work with but the thought form is the real tool with which we do the work. Hence we turn our attention to them and find they also explain the manas and the aka cord, and many other things as well.

The Kahuna described the thought forms as little round balls. Could the mathematics of the sphere describe some of the properties of thought forms? Perhaps. Atoms and molecules are sometimes described as spherical, especially when that description serves to define some particular property of matter.

A thought form does not necessarily have the "shape" of its physical expression. There are thought forms that have no physical expression. There is no material thing that does not have a thought form or archetype of thought matter. But before we go further, let us define some terms. First: thought, that which rises from the process of reasoning or mentation is not an object in the thought world, but a radiance of conditioned energy. It has color and tone and a transient shape. A thought form is built of mental substance using the force and energy

of thought, just as a carpenter must use energy to build a house -- all the motions the carpenter goes through are analogous to thought, the resulting house is the thought form. We do not build thought forms merely by thinking any more than the carpenter could build a house simply by going through the motions. It is apparent that we must gather and prepare material for our construction.

If we understand the difference between thought and thought forms, let us go on. When we think of a nail we generate in the mind the vibratory tones of the thought-nail. When we "see" a nail these same tones are roused or struck and we recognize the object as a nail. However, the thought form of the nail is rather complex and consists of several parts, i.e., a straight shaft, a sharp point, a flat surface for driving, a strong metal, etc. Consider the "straight shaft", at first the "idea" is "conceived". In this state it is simply a radiant energy having a certain tone. The conceiver, or thinker, then adds to this tone other tones and then a hazy thought form comes into being. The thought form, however, becomes a true and stable object in the thought world when the thinker makes a physical "straight shaft". It may be an axle, an arrow shaft, a mast for a ship, or a nail.

Thought forms become objective reality in the thought world, when the thinker realizes his idea in substances of other planes -- in the plane of his objective awareness. (Beings whose habitat is the thought world create thought forms that are objective reality in the thought world alone.) Sometimes a ritual or a ceremony will do the same thing for us.

The basic ideas such as a "straight shaft", a "sharp point", etc., are, as it were, material which we gather. These basic ideas the Kahunas called little round balls and symbolized as grapes on the vine. We shall here label them with the name, ideo-form; the object being to eliminate the confusion of using "thought" for an object that is the result of thinking and not the process of thinking. From these ideas follow the concept of the metatron and ideo-tron as we shall see as we go along.



II

THE POSTULATE OF A FUNDAMENTAL

To further our reasoning about thought forms, we found it necessary to postulate a fundamental particle. We know all too well that to postulate an absolute fundamental is to close the gate to any further discovery. At one time the atom was the last division of matter until someone found it necessary to invent the electron and the proton. We have come to the conclusion that certain ideas of ours can be best described by the invention of another fundamental and we call this unit the metatron.

This material particle is conceived to be the basis of all the material universe which includes our physical world. What this means will become clearer as we go along. Let us say for the moment that we believe the physical senses provide us with an extremely limited range of awareness of the whole universe. We do not mean here simply the infinite reaches of space or the infinitesimal volumes of the atom, but a certain more-ness that not only includes much of the perceptible physical world, but other worlds which exist, seemingly in the same space, at the same time, that is, interpenetrating one another, yet mutually intangible each to the others' respective inhabitants. If we visualize the universe as consisting of these worlds within worlds, and our selves being strictly confined to one of them while incarnate, moving on to another when death ensues, we get an idea of a vast universe in another direction than outward away from our little planet.

This vast universe is that which we have called the material universe. I believe it is what others have referred to as the omniverse.

The metatron is our concept of the fundamental particle that pervades and composes the elements of the omniverse. Its velocities or vibrations, and particular arrangements in the fundamental atom, the met'atom, determines the nature of the met'atom. The met'atom of the thought world we have called an ideo-atom and is the atomic structure of the ideo-form or thought form.

To get on familiar ground, all the atoms of the physical world are also met'atoms. The periodic occurrence of the characteristics of the physical elements, while readily explained by electron, proton theories, is also explained by the metatronic theory. Thus we hope to add to physical concept a bridge-over to the definition of the properties of the elements of other planes.

It may also follow that the periodicity of the elements continues into all the planes of the omniverse. Looking at our table of elements we see how the characteristics appear again in every eighth element, but modified in a certain way. There are twelve octaves, in the ideal

sense, and ninety two elements where there ought to be ninety six. In the modern table there are ninety two elements, and a hundred forty six isotopes making two hundred thirty eight distinct substances in all. That is, distinct in the nuclear chemical sense.

There is another division of the elements which correspond to the alchemical fire, air, water, earth, this is -- electrical properties, gasses, liquids, and solids, respectively.

We divide our material universe into four planes or categories. One of these four planes is this physical world, the other three constitute the Etheric, Astral, and Mental planes. As the properties of the elements known to us are repeated periodically we hold that the four fundamental properties of matter are also repeated in each of the planes. This means that in each there are solid, liquid, and gaseous elements and an electro-magnetic property of their respective substances.

The periodicity of the elements throughout the Omniverse is due to the velocity and atomical arrangement of the metatron. There is a difference between the vibratory speed and orbital pattern in the atoms of the various planes. We measure the velocity of light at 186,000 miles per second. As far as we are able to determine its velocity is constant for all observers. Our perception of light speeds of this velocity is due to the vibratory speed of the metatron. We will see in subsequent chapters how this holds, and we will also see that the velocity of the electro-magnetic waves of perception is not constant but has a different speed in each plane.

In addition to the idea of continued periodicity of the elements there is a native property of the elements for each plane which corresponds to the solid-liquid-gas division of each. Thus the group of elements which is our physical plane has the native property of solidity (inertia), the Etheric group has the native property of fluidity, the Astral group has the native property of gas and the mental elements are conceived to be electrical in their native characteristic.

Now the question may rise as to why we are not aware of all the materials of this fourfold universe since they are composed of the same basic particle throughout.

From hydrogen to uranium we perceive 92 substances some of which are gasses, some liquids, some solids and a few energetic substances such as radium. We observe in all matter a variation of electrical properties. Our perceptual apparatus is composed of some of these elements, mostly of Hydrogen, Oxygen, Nitrogen and Carbon. The metatronic vibration varies so little throughout the range of physical elements that it may be considered constant and is the measure of the velocity of light and the constant of gravity G. These 92 elements form the

background of our objective awareness.

But awareness is not wholly objective. It is largely subjective. In fact it can be shown to be almost wholly subjective, if we consider sensuality as perception of impact on the physical organism from and on which we infer the objective world. That subjective sense which has to do with the body sensations in response to any impact upon the body, together with the sensations of mentation and emotion are awarenesses of the materials and electro-magnetic forces of the other categories. Thus we are in a way aware of the whole Universe.

When we say the physical plane is, in correspondence, the solid phase of the material universe, we mean that it is perceived as an objectivity based on its being constituted of solid particles. In other words our idea of solid connotes substantiality as compared to the apparent immaterial conditions of thought and emotion. Hence, subjectively, the other planes must appear to us as fluid, gaseous and electrical forces. That is, our awareness of their activity in our body would indicate their native property to be such. Objective awareness is relative and depends on which of the planes the perceptual organism is related substantially. Thus the physical organism is built of physical substance, uses electric and chemical energy, its general vibratory tone relates it to that group of octaves of matter we call the physical; the physical world is, therefore, its objectivity. The inhabitants of other planes may be similarly limited to their objective worlds.

Another question that appears here is "How are the materials of the other categories related to the physical elements in our physical bodies?" In other words, if we have other bodies composed of other-than-physical substances, and are subjectively aware of their activity, how are they related in the physical body?

Our physical bodies are composed, for the most part, of hydrogen, nitrogen, oxygen, carbon, calcium and measurable traces of several other heavier elements, such as iron, copper and phosphorus. At present we think the metatrons of these "light" elements are so arranged as to allow etheric, astral and mental substances to be combined with them in a chemical sense -- just as sodium and chlorine are bound to make a molecule of salt. We can take a molecule of a complex substance as an analogy, allowing some of the elements involved to represent the etheric-astral-mental elements, and the others, the physical elements, we get a fair picture of the "living molecule", only part of which may appear as the "mysterious life energy". (We think "life energy" is the electric force of the etheric plane.)

If we have bodies related to the other planes, why aren't we aware of those other planes? We are. Only it is a subjective awareness since none of those bodies is awakened (except in a very few) to

objective awareness of their respective planes. Without those bodies the physical organism would be hardly more than a mass of chemicals, quite dead in the usual sense of the term.

But how one world can occupy the same space with three others will be seen when we have explained the basis of physical objective sense in the terms of the theory of the metatron. Suffice it now to say, there is plenty of space in any atom for several other atoms to occupy -- especially when their time-rates reduce the influence of the forces in one on those of the other. Yet no atom remains wholly independent of the influence of any of the others. The mode of influence is not accidental or random, but rather very definite.



III

A DEFINITION OF PERCEPTION

When we say several worlds may occupy the same space at the same time we must qualify our statement to the effect that such a condition depends on an observer.

What if there is but one space and one time? Yet all the evidence points to other spaces and other times. Assuming there to be but one space, for convenience, we'll call it M-space and M-time. Then the break-up of M-space into several seemingly independent space-times will depend on the nature of the several observers.

These several continuums are not illusory worlds existing in the fundamental substance of M-space. They are real worlds occupied and worked on by spiritual agents using vehicles composed of M-stuff of a definite range of vibrations.

Met'atoms interpenetrate one another as readily as one gas will mix with another. We assume also that the change in met'atomic structure every 12 octaves is such as to allow an even closer interpenetration of met'atoms. This we believe is due to the velocity of the metatron in its orbital motion (if it has an orbital motion.)

An observer limited to a given range of octaves will not be aware of all of Reality, but only of his range of elements as his objective universe. Therefore, the "planes" or Lokas are the limits of a finite observer. But while the Lokas exist separately to their several observing entities and are conceived by us to be distinct partitions in Reality they at once consist of the same fabric of Reality throughout.

The metatron can be defined in terms of waves vibrations, frequencies and quanta. Hence our personal being which consists of the materials of the above four categories is also a vibrating material. The range of frequencies determines which category.

Our perceptual consciousness depends on an apparatus, of which the brain is part, which like a stroboscope is off and on at such intervals as to make us aware of only a finite range of the infinitude of vibrations which constitute M-space. The "off" period may be much longer than the "on" period. A variation here might be the basis of our waking and dream consciousness and our variant sense of time or duration.

The basis of this off-on action is the particulate nature of the materials of the Omniverse. Whether or not cosmic matter is particulate is an unanswerable question, but by describing natural phenomena in terms of particles we are able to build up concepts that lead to

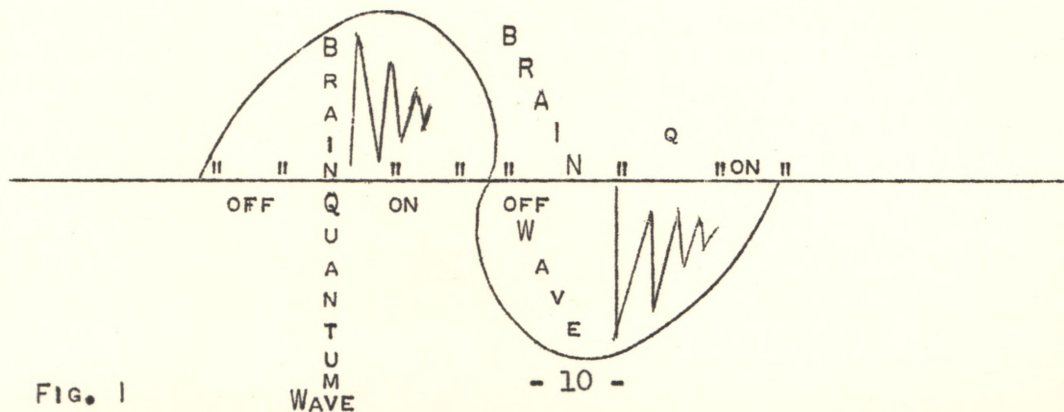
the discovery of new or previously unobserved phenomena. Thus we assume cosmic matter to be particulate. We then can apply such ideas as wave mechanics and quanta to our mode of awareness.

The subatomic particles of matter in any plane such as the electron and proton require both wave and particle definition to describe and measure their properties. It can be mathematically demonstrated that the velocity of electron waves, within the electron, can be faster than light. However, such waves are confined to the electron which, itself, can have no velocity greater than light. We contend that these high velocity waves may be evidence of the Metatron -- whence a neutrino may be an etheric atom. At present the neutrino remains unobserved but must be accepted to account for certain discrepancies in the exchange of energies in neutron collisions.

Now when one particle collides with another, they exchange energy. When photons are radiated by the "jumping" of electrons from one energy level to another, the exchange of energy is made in quanta, that is, small integral units of energy. Quanta are defined as the product of Planck's Constant and the frequency of the waves emitted which is in turn determined by the velocity of the particles generating the waves. Thus a quantum is $h\nu$ where $h = 6.6 \times 10^{-27}$ erg sec and ν the frequency of the wave.

We now visualize the physical mechanism of awareness to function in such a way that there are gaps between one quantum and the next. We apply the quantum idea on a larger scale. Consider the brain and nervous system as a whole -- it has a certain vibratory frequency. The cycle of vibration is a building up of potential to a critical point at which it discharges and begins to build up again. The interval of discharge of energy is of short duration, the interval of the "building up" of long duration. The whole cycle occupies a very short interval of time. There may be several million cycles per second.

Drawing a wave diagram of this discharge we make two wave forms. In the diagram Fig. 1, the large sine wave represents for us the rise and fall of nerve potentials and measured as brain waves; the small damp waves a, are what we call brain quantum waves, or q-waves.



Each of the peaks in the group of q-waves is said to represent a multiple of quanta. The brain quantum waves are conceived to be a group of high frequency damp waves. The duration of the group is less than a quarter of the wave length of the measured brain wave. Thus one-half the frequency of the brain wave times the frequency of the quantum groups times the constant h would give us the quantized energy of the brain quantum waves. The interval in which the large wave rises to full potential the awareness is in its 'off' period. The q-wave interval occurs during the fall of potential of the large wave and is the quantum of energy that affects the 'on' period of awareness. The waves represent the exchange of energy in the perceptual mechanism. When energy flows there is consciousness, when it is null there is sub-consciousness. We think the wave pattern of consciousness (consciousness as a flow of quantized energy) is very complex and that the q-waves may have a reflection or resonance that would readily account for such phases of consciousness as dreams, visions, clairvoyance, hallucinations, etc.

The velocity of the q-wave when it is the same as the physical photon provides the ensouling entity with awareness of those elements whose fundamental-wave velocity is that of light. However, since there may be waves in electrons that, theoretically, move faster than light, we may assume that certain subjective q-waves may also have speeds greater than light. Those put the ensouling entity in rapport with that range of elements whose wave velocities match. It is significant that the propagation of events in a dream are about three times faster than equivalent physical events.

To get a little better picture of this idea we turn to the radio for analogy. The ether is full of radio programs, each on a different wave length. When we tune our radio receiver we set its several circuits to vibrating in step with our selected program. The oscillations of the circuits in our radio affect an off-on period in which it is off to all but our selected station. And there may be secondary oscillations and 'ghost' stations, caused by resonance in the circuits, which may be due to faults in the design or to deterioration of some of the parts. As in the radio our 'person' is a mechanism consisting of several groups of circuits of which some are related in frequency to the physical continuum and others to the other four categories of our Omniverse. We conceive this 'tuned circuit' idea to be the basis of the seeming division of a One World into continuums. We will say here, that while considering the several bodies of man as mechanisms we must keep in mind that they are truly living things. We don't consider propagation and growth as essential adjuncts to alive-ness. Also, we consider the several bodies not to be actually so many distinct and independent vehicles. They are considered no more separate and distinct than the four groups of octaves of Met'atomic matter of M-space. Their distinctness is apparent, it being only a function of the mechanism of perception.

If the 'body' of man is a wholeness throughout the four planes; how do we explain the phenomena of death? In other words, what will we do with the corpse? To answer this question we refer to the ideoform. Some of our occultist friends will recognize in this the archetypal body, or model-body. It is built of mind-stuff. But it does not have the shape of the physical body. But the forces in it determine the particular shape of all the bodies. The fundamental or native property of the elements of the mental category is Energy, Vibration, aptly described as electrical. The model-body is a complex structure of vibratory energy, or energy-matter. However, the shape of it requires maintenance. That is, since it does work in the manifestation of the person as a whole, its energy has to be regressed -- brought back to its beginnings; a process which is under the control of the spiritual agent who created the model-body. Death is a radical modification in the energy-pattern of the model-body. This modification shifts the focus of awareness to another continuum in such a way as to leave the physical impress of the model-body as a lifeless person. The physical elements continue to vibrate for some time after, but as inertia and friction within the molecule has its effect, the physical elements eventually return to their primal state. In other words, the corpse is analogous to the after-tone that is heard when a bell has been struck; and like the after-tone, it also fades away. That a dead body is different from a living one, anyone will agree; but we say that it is substantially different in that the corpse is less real than the model body in the same sense that the after-tone of the bell sound is a resonance.

To expand the idea of the archetype, we can imagine it as a complex of vibrations in which there are "standing waves" and "nodes". The "bodies" understood as distinct from one another are aggregates of elements gathered in the "nodes".

Modifications made in the archetype have their effects on all the bodies. A given change will cause different reactions in the different bodies. "As a man thinketh in his heart, so is he," is literally so. But here we see that there is a difference in modes of thought. Conscious mentation may not be a modification of the archetype, but continued thinking coupled with much "feeling" about the ideas may affect modifications in the archetype that produce tangible changes in the body structure of the person. The effects of these deeper emotional thoughts or "continuing attitudes" is well known to psychology. They may cause actual organic illness. It is the root cause of all manias and phobias and psychoneurotic effects, even to the extent of producing physical disability. But while the negative side is thus more noticeable, the effect of good health, moral and emotional stability, also rise from the same root. If the basic thought-feeling is pure, free from conflicts, healthy and unashamed, there can follow from that cause only a healthy, wholesome life even though other causes may bring the person into adverse conditions.

In the modifications of the archetype is the means by which the neophyte to self-mastery seeks to accomplish his objectives. Continued attitude, meditatively maintained, is the controlling element. This can also apply to the science of Huna in which we seek to control and use the forces of the etheric plane. Modifications in the archetype constitute removal of psychological "block". Some of these blocks are the inborne feeling that no such forces as the manas, the aka, and the thought-form exist or have any real existence. We see how effective these deep-rooted attitudes are when after years of assenting to belief in extra-physical powers, we yet cannot produce any of them. Our impotency in that respect is due to blocks that no mere assent to theory can remove. Yet in our research we know those powers exist because others have demonstrated them.

From the above we indirectly get the sense of the archetype and its relationship to the person as a whole. The archetype is not just a mold into which substances are poured to make material bodies. It is better defined as a pattern of inter-atomic forces which combine the elements of four categories into a living shape. Where we say inter-atomic, we refer to the met'atom.

To return to the corpse. While the man lives he is a wholeness not composed of four distinct vehicles. We are now trying to think of the person as a whole related to a world in which a certain range of elements constitute only a fourth part. And of that whole, as being so constituted of the elements of the great world as to limit the awareness of the ensouling entity to just the fourth part of the whole. Now, when the ensouling entity by any means modifies his personal structure so as to withdraw his awareness from the fourth part of the whole, the modification may be such as to withdraw his maintenance forces from the body structure in the fourth part. The man and his person does not cease. Since the physical matter has the native property of inertia or solids, it continues to vibrate for some time after the modification is completed. We take the after-tone out and bury it with great pomp and ceremony.

Sometimes it is possible to so modify the parts of the person as to bring awareness into focus on other than physical brackets of elements, and the person is said to be psychic or clairvoyant. We have physical organisms in the body structure that make clairvoyance possible while incarnate. Certain changes may also make it possible to leave the physical body at will and to return to it at will. But whether the self and his person goes anywhere with respect to physical space-time, it is hard to say.

We have endeavored to describe the person as a whole in its relationship to M-space. In doing so, we have considered it as an undivided whole. The division of the person into four distinct vehicles is a matter of convenience of description, and a study of occult literatures

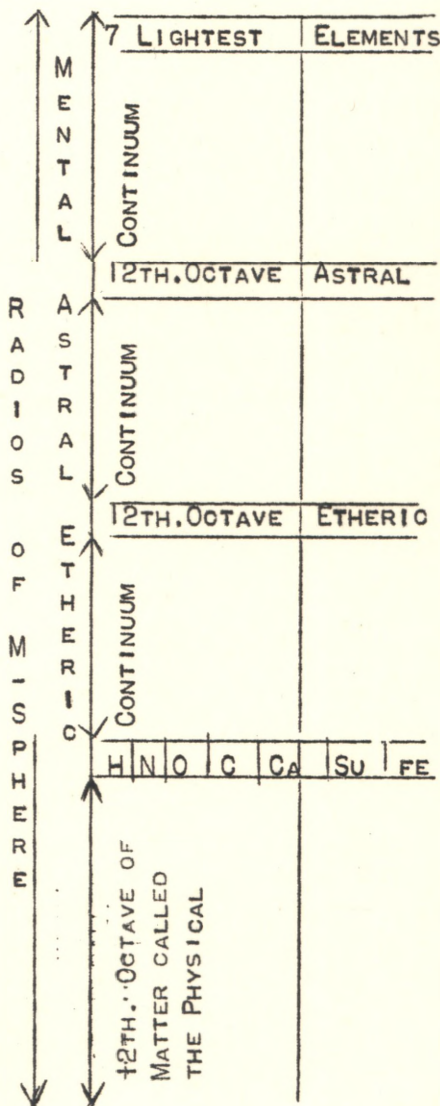


FIG. 2

shows that various schools of thought divide the person differently. It is also true of the Omniverse -- we divide it into four categories as a matter of descriptive convenience.

To summarize this chapter, we have an ensouling entity believed to have its existence beyond the range of matter considered as the Omniverse. By the arranging of ideoforces in the Met'atom this entity creates for itself a "person" consisting of the whole range of matter of the Omniverse or M-space. We conceive this "constitution" of the person to consist of the "lighter" elements of certain periodic octaves. Thus the person does not consist of all the kinds of matter of M-space -- but idealistically it consists of the seven lightest elements of a given series of octaves throughout the Omniverse; the seven elements of every twelfth octave.

This person is so constructed as to focus the otherwise infinite awareness of the ensouler upon some one or other octaves of the matter of M-space. This focus is such as to make of the lower eleven octaves an objective world with respect to the body which is an aggregate seven elements of the twelfth octave. The body forms the background against which is established the sense I-ness or individuality in any given plane.

In this structure of the person it is the shape of the organism as well as the vibratory rate of the elements in it which determine the focus of the objective sense as to the plane. For example, if our eye-organ consisted of etheric matter we would see the etheric world. But the eye is composed of physical matter, hence it seems physical substance. The etheric, astral, and mental matter involved in its structure have a different function with respect to seeing. The physical brace of M-space elements is our visual objectivity.

Physical consciousness consists of more than seeing. The aggregate of physical structure provides us with a physical identity. Since

all the rest of M-space elements are of subjective quality with respect to this physical identity we are cut off from any awareness of the rest of the omniverse as being anything different than our own subjective consciousness. The function of other-than-physical matter in the structure of the person is in the mechanism of response to the physical environment.

To the question, "Why do we not detect other than physical elements through instrumental tests that are independent of sense?" First, we are not sure that discrepancies in instrumental measurements are not due to other-than-physical elements. Secondly, if our instruments were etheric we would measure etheric matter with them. When we come to the consideration of light speed relative to M-space we will see another reason why an instrument built on physical principles will not reveal other-than-physical matter. And we may see how instrumental measurement is possible.



IV

THE PROPERTIES OF THE FOUR CATEGORIES

1: The Etheric Elements.

We consider the range of matter to extend from somewhere below the physical density upward through the etheric, astral, and into the mental. Matter and energy go beyond this, therefore, we chose a range of matter extending from the heaviest known physical atom through the smallest known physical particle and beyond into some high portion of the world of mind. We divide this range of matter into four planes arbitrarily, choosing that group of elements perceptible to us as the physical world. Since the elements beyond the physical are not perceivable in the same way or by the same means, we must assume much on the basis of little knowledge, of the sort we have of the physical world. To say an etheric atom has a structure similar to a physical atom is an assumption, a theory, since we cannot measure an etheric atom in the same way we do a physical atom.

We assign properties to the elements of the four divisions of matter considered; such properties as determine a periodicity in them. Thus there are non-metals and metals, solids, liquids, gasses, some conductive, some resistive to electric force, and there is a periodic repetition of electrical properties throughout the four categories of matter.

We are particularly interested in this last. We want to find out how the electric property of etheric elements is related to the electric properties of physical elements. Physically, it is the electron and its polar values which determine the valence of substance, determines whether the substance will or will not conduct an electric current, and whether or not it can be influenced by a magnetic field.

We just suppose that the etheric equivalent of iron is readily influenced by the magnetic forces of the etheric category; that etheric copper will readily conduct etheric electricity. Neither of these properties is sensible to us in the same way as their equivalent physical properties.

We also suppose an etheric static-electric force, that is a potential accumulation of free etheric electrons. An etheric electron being different than a physical electron, is supposed to have a greater velocity and be less affected by physical forces, thus to seem to have less mass. Its difference is due to a regular variation of the metatronic structure as we go up the scale of elements from the physical. These physical forces may be expressed in the same mathematical terms which express equivalent physical forces. However, this relationship may be found (eventually) to have a different pattern due to a quality of the whole range of etheric matter.

This quality is defined as fluidness of etheric matter. Physical matter has the quality of solidness and inertia. Etheric matter has the quality of fluidity. Hence mathematical definitions of etheric matter must take that quality into account. This quality of being liquid will mean that etheric matter will be less compressible than physical matter.

In order to account for the propagation of light and heat over great distances at the speed of light, the hypothetic ether had to be considerably denser than any known substance, fluid and incompressible. We believe there may be an etheric element which is too dense to be perceptible to the Etherian, too "thin" to be perceptible to us, which may be the carrier of our electro-magnetic waves. The modern concept of the proton pretty well satisfies the requirements of the propagation of light and heat through space without recourse to an etheric carrier. We can use the same idea for our etheric range of elements. We propose an etheric photon which travels faster than physical light and is an energy particle which may deliver its energy to any element able to stop it. Etheric photons do not necessarily confine their influence to etheric elements any more than etheric electricity is entirely confined to the etheric category. The phenomena of life and growth, of sensation and physical awareness, as well as such phenomena as the propagation of heat through physical materials, magnetic fields, and also the several varieties of psychic phenomena such as ectoplasm, apportations, materializations, etc., may well be due to the influence of etheric electro-magnetic forces acting through and upon physical matter.

We have defined the native property of etheric elements as being fluid. This property is not considered to begin abruptly with the next element beyond hydrogen but rather that these lower etheric materials have a great deal of earthy inertia and the properties of physical mass. Only toward the middle of the etheric spectra of elements will we find the solids, liquids and gasses having a dominate fluidity. It may seem odd to some that a solid could be considered fluid in any sense. But if special conditions are allowed, things that seem stiff and solid to us may be seen to flow like thick syrup. I'm thinking of the way some metals, even steel, "flow" from the dies of an extrusion press. The only difference between the fluid property of physical matter and the etheric is the speed of perception of the motion of the molecules past each other. (The speed of perception depends on the velocity of light--the electro-magnetic waves of any category. This velocity is not the same in them.)

We think this fluid property of etheric matter is alluded to in the Huna Science. The aka cord may be composed of etheric material. We think of it as an electric conductor. It is often referred to as a hollow tube, a pipe through which a stream of manas may flow. We can take these several ideas as principles and define the property of the aka cord as a hollow conductor of circular section; this round tubular section being the result of the attractive forces in the molecules of the

substance of the tube. These "forces" would be in balance when their arrangement is circular, or spherical, when the cord is not attached or drawn out.

The low manas are free etheric electrons, are fluid and highly energetic, luminous to etheric sight, and has the property of an electron stream. This "manas" flows through the aka cord. We have the two parts before mentioned, the external substance of the cord and its core of manas. The external wall of the cord is the resistive element, the core is the compliant element. When these are in balance there is no flow of energy over the cord. The thought-form or Ido changes the balance so there is a wave of energy flowing through the cord one way or another.

Since the energy transmitted through the core stuff of the aka cord is a quantized wave train, the pattern of the wave train may well determine the effect at the end where the energy is applied. This concept of the aka cord and manas, while it is applied to the description of such phenomena as healing at a distance, telepathy, and other such influences over physical space, it can also be applied to the facts of physical growth, body control, embryology, etc., because the etheric materials and forces are plainly manifest to us as the vital energy of "live things".

Consider for a moment how the etheric part of our bodies is used in the control and manipulation of the body. Take for example the physical and mental activity of an engineer working out some complex problem, using his math and laboratory equipment in the process. Psychologically, we observe a large amount of extremely complex neural impulse patterns, many of which do not devolve from any external stimulus. Psychologists with their electric probes and galvanometer would have us believe, on the basis of nerve response to electric shock, that all nerve impulse is derived from some kind of physical stimulus. With such a theory in mind the picture of our engineer, in terms of neural impulse pattern becomes hopelessly involved. We have another definition which allows the Psychologists' external stimulus to hold and yet to show the problem not so difficult. (However, recourse to a Spiritual element will prove repugnant to most scientists.)

Light carries imagery to the eye. The image on the retina sets up a complex train of nerve impulse. (Each neuron in the optic nerve affected carrying a simple impulse.) This is external stimulus. But these impulses must be interpreted, a decision has to be made as to their meaning. More than one course of procedure is involved. This means that out of a given number of action patterns a certain one must be chosen. What decides? What is IT that selects the proper patterns of activity? Let us assume, for convenience at least, that there is a spiritual intelligence in man. This intelligence, on the basis of incoming nerve impulse from the various sense organs, selects certain reaction patterns. We visualize the process in this way: the brain

consists of large and complex bundle of neurons, most of which connect with one another. When a thought form is generated in the brain its shape and the disposition of its parts is such as to enfold certain groups of neurons. Thus, the thought form is seen to have a "brain shape", web-like in structure, and consisting of roving clouds of luminous energy. This thought form is constructed of the mental material and energy of the archetype of the brain and nervous system of the body. The archetype of the brain consists of mental matter (Ideo-atomic matter), and is not a fixed structure but is constantly modified from two sources, the environment of the sensual organism, and the spiritual agent. Now the question: How does the modification of the mental archetype affect electrical impulse in the physical brain and nerve system, thus producing predecided patterns of activity. And conversely, how physical stimulation of the senses can influence the mental modifications.

As we proceed from the scintillating, light-like mental brain toward the physical we find the geometry of action assuming a more fixed pattern. Thus the etheric and physical brain structures are nearly identical, except that the etheric brain matter is seen to flow slowly through the physical, turning on certain stationary points or pivots.

The astral brain, like the archetypal, is always in motion, due to the gas-like property of astral matter. It seems to have no fixed pattern except to be confined to the ovoid human aura. We must assume, however, that it has a definite rhythm, or basic vibration.

Beginning with the physical aspect -- the brain proper consists of bundles of neurons. We know that when a neuron is stimulated it will discharge its potential into the next several adjoining neurons through their mutual synapses and thus set up a chain reaction of electrical impulses. Where the stimulated nerve delivers its impulse into a synapse joining a large group of nerves, it is the thought form existing in that group at the moment which determines the paths of the impulse waves. Since the waves follow the path of least resistance the thought form achieves its object by varying the resistance of the synapse of the nerve paths.

This is easy to visualize when the process is the result of external stimulus. But what about the internal stimulus of the reasoning process and the mechanism of decision? To answer this question we assume that the chemical composition of certain groups of brain nerves is such that a shock from an etheric-electric force will cause them to discharge their physical-electric potentials, the shocks being applied in a definite patterned order.

Since etheric-brain nerves are moving, let us say, flowing along their prescribed paths, the picture looks as though the physical nerve

in the brain consists not only of an electro-chemical structure but is also the channel or cable over which flows an etheric-electric current. We can then imagine that when the etheric-electric current reaches a certain density it "triggers" the otherwise quiescent physical electric potential in the neuron.

We now suppose the relationship between this etheric-electric current and the astral brain to be similar, if not the same, as the relationship between a pulsating magnetic field and the electric current it generates. The astral brain being the magnetic component literally drives the etheric current along its paths. Mathematically or geometrically, this relationship is expressed by the three lines of space lying at right angles to each other. Remember, that the electronic phase is here considered to be the "where" the various planes are related to each other.

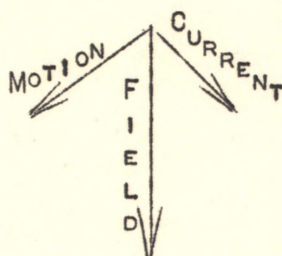


FIG. 3

In turn, the mental modifications in a similar manner influence the motions of the currents of the astral brain, which like a moving magnetic force generates currents in the etheric brain, the varying densities of which "trigger" physical potentials into physical action or sensation, the pattern of which is predetermined by the modifications in the mental archetype of the whole brain. Simple, isn't it?

Since this chapter deals with the category of etheric materials, the above description of thought-action, while it sheds light on the nature of the other categories, is intended to give us some working ideas about the etheric plane.

From occult and spiritual sources we have the fact that glass is quite impervious to most etheric substances and forces. Glass consists mostly of silicon. From this we conceive the notion that our silicon and etheric lead fall into the same periodic group or column; that while silicon and e-lead are not identical, they have very similar properties: that is, for one, they absorb etheric e.m. energy.

Counting down from lead to radium, we have just the number of elements as between silicon and calcium. Calcium is a mildly active metal, the etheric correspondent is or may be etherically radio-active. The essentialness of calcium to balance in living things is well known to medicine and biology. It is especially essential to the balance and proper function of the nervous system. The presence of calcium granules in the brain glands would seem significant to the occultist.

We take note here too that nearly all the elements from calcium to hydrogen are in some measure involved in the structure of living organisms. They are the life elements.

We believe these light elements are of such metatronic structure as to be readily combined with etheric elements and are seldom found pure in that respect. Here again our theory upholds the idea of manas from the air we breathe, prana of the yogi, etc.

2. The Astral Elements.

Occult science defines this region as the world of desire and emotion. And as the place of "Heaven" where all our wishes find fulfillment.

Our perception of desire and emotion is of an immaterial force or drive toward some action. The feeling of emotion may be described as a conditioned subjectivity affecting certain neural patterns, hence we laugh or cry, love or hate, etc. Hardly any action but is not the result of desire or emotion. For this reason it is called the mainspring to action.

This is how it works according to our theory:

The astral category, like the others, is composed of matters which are arrangements of the fundamental particle, the metatron.

Astral matter also falls into periodic groups; it also has the property of valence in its elements, and states of solids, liquids, gases and electrical properties. However, as we conceive these states, we must modify our concept from the physical so that the properties of gas become a native property of all the elements of the astral category. This means that all these elements when without the restraint of a mental matrix, become diffuse. And that they can be readily compressed, generating both heat and pressure in the process. Here again the formulae of mathematics may be applied to define the relationship between the energy of constraint applied by the matrix and the heat-pressure forces generated.

When the thought form which is the matrix is constructed in a certain manner, the heat-pressure energy of the constrained astral matter may be used to do work. This, in a sense, is the mode of the drive of emotion and desire.

We conceive the idea that the qualities of solidity, fluidity, and gaseousness somewhat modify the native property of astral elements so that the solids are less active, that less mental energy is required to hold them in place. It may also be that some structures in the astral world are so built as to hold astral matter momentarily. Thus the thought form is stable vibration, a standing wave shape through which astral matter flows continually. The object would be perfectly stable for an astral person.

The ovoid of luminous matter which the occultist describes as the astral aura of the human being is composed of astral solids, liquids, and gasses, the same as the physical body is composed of such physical matter. The kind of matter used in it and more particularly, its basic structure determines the character of the person, whether moody, joyous, hateful, selfish, generous, etc.

We think the relationship of astral forces to etheric forces is right-angular -- this means that when they are interactive, the motion of one causes the other to move in a direction at right angles to the first.

Descriptions of the planes from various occult sources lead us to believe that as we approach the mental category, we find the materials of the omniverse more alive and consequently more directly subject to the spiritual will. This is one way of explaining how the spiritual being controls the personality, because according to our theory, the whole range of matter in which we have our person is continuous and mutually interactive. They can be mixed, compounded, alloyed, arranged so as to work together as a whole. There is no reason to believe the planes not to be continuous, as we shall see further on, or that their elements cannot be combined in a chemical sense to form a living mechanism. The planes are derived from the idea of worlds, objectivities, as it were, whole worlds with people, places and things, yet the substance of the whole is continuous throughout and only the properties varying periodically and being gradually modified in velocity so that those elements below our plane are considerably slower than ours, therefore more dense. As we go up the scale they become faster meta-tronically and therefore, for us, less dense, more active.

3. The Mental Elements.

The elements of the mental plane, like the rest of the universal materials, fall into periodic groups, have a variety of properties. There are solids, liquids, gasses, here also, and an electronic phase. We see that each major division of matter is partly determined by what we call the native property of the plane. We do not believe there is any sharp demarkation between the native properties of the several planes but rather a shading off from one to another. The astral materials shade off into the mental, thus high astral elements are virtually electric in character, low mental, somewhat gas-like.

The native property of the mental elements is electric. What is the nature of electric properties as such? Their motion has great speed, they are radiant, must be conducted over substances, generate magnetic fields by their motion, cannot be constrained without an insulation, and are generated by the motion of a magnetic field. Now lest we misconstrue the term "magnetic field", it is understood to be

the magnetism of the mental spectra of elements.

As we shall see later magnetism and the electric particle are related throughout the four categories of matter. What we observe physically as electricity is a very limited view of what electricity really is.

Our mind is built of mental matter. It is conceived by us to be a special electronic mechanism -- like a radio, analogically. The electric and magnetic forces active in it also act upon astral, etheric and physical structures through the electronic phases of these planes because the electric and magnetic forces are one throughout the whole.

Thinking alone does not build thought forms of mental matter. It radiates mental energy which, when properly directed, may build up mental forms. These, unless stabilized by certain processes will dissolve as soon as the generating energy of mentation is withdrawn. A good deal more than mere thinking is required to build a thought form that is enduring. For instance, when we desire, plan, and build an object physically, we will have built a thought form, beginning a little before the physical building begins. This thought form may endure for a far greater time than the physical object due to the inertialessness of the mental elements.



V.

CONCEPTS BASED ON THE METATRON

In the research of the ancient magic of the Kahuna it may be that we are learning to manipulate etheric forces and materials. We may in time learn to manipulate astral and mental energies.

Involved in the human being are structures consisting of the materials of four categories of matter -- the mental, astral, etheric, and physical. The particular elements of each used in the related vehicle are such as to be combined with the elements of the other vehicles in a chemical and mechanical sense. If the matter of the cosmos is continuous so must be the materials of which the person of man is composed. The division into distinct vehicles must be then governed by some law of properties of the periodicity of the elements.

We may say that within the human person our sense of physicality is basically molecular, our sense of "aliveness" is atomic, our sense of emotion and desire is electronic, and the sense of mentality is nucleonic, if we consider that in each of these physical divisions we find the forces operative which are the energy-matter of the other categories. (Energy-matter equals the substance of the electronic phase.) Thus in the physical body structure the forces inhering in molecules are physical, forces inhering in the electron are astral, and the forces inhering in the nuclei are mental.

By learning to extend control of these forces beyond the body structure we may be able to control and manipulate the related physical elemental structures. For instance, in Huna Pamphlet Pt. VI, pg. 24, p. 3, it is stated that the Kahuna, by a certain prayer mechanism, could cause a stone to disintegrate into dust. How? By the manipulation of molecular forces. How are molecular forces changed so the molecules will fall apart? By the change of polarity in the electrons of the elements composing the molecules. This means that the Kahuna could and did concentrate astral energy upon the matter of the stone, in such a way as to nullify the electronic bond between its molecules, hence the stone fell apart. If this picture is true we may get an idea of the extent and direction of the forces used, basing measurement on known physical properties and may yet be able to define etheric and astral properties.

The theory of the metatron is an attempt to move in that direction. It implies a continuity of substance both above and below the range of known physical elements. There is no real break in matter making one plane distinct from another; there is no dimensional difficulty here as though we had to turn off at some impossible angle to arrive at another plane. We believe the atomic concept of modern physics is applicable to our metatronic theory as working tools with

which to search out and define the properties of other than physical matter. This means the periodicity of the elements, which depend on the number and arrangement of basic particles will also follow through above and below known physical elements.

We may arrange a periodic table of elements with added octaves above the hydrogen-oxygen octave. We observe that the number of distinct elements between uranium and lead is the same as between chromium and silicon, with calcium falling on radium's place. Now, arranging a graph of the ninety-two elements with hydrogen 1 at the top and letting the graph move to the right one space for each element we have a straight line representing the gain in atomic number. If we graph the weights, allowing the graph line to move to the right spaces corresponding in length to the values of atomic weights, we will have a slightly curved line coming out at the bottom somewhat further over to the right of the atomic number line. We then draw a vertical line from the base through the point on the atomic number line corresponding to lead. Between this line and the curve of atomic numbers we have an area that represents the ratio of the tangible and imponderable forces in these elements from lead to hydrogen. The area below lead is negative to that above and indicates that these elements have an imponderable part that is relatively denser than lead. Lead is the end product of radio-activity and according to our concept the only wholly ponderable material in our plane. It alone is a pure physical element.

It may seem that these elements are becoming more etheric as we go up the scale to hydrogen but that is not what we wish to imply. Let us suppose that every atom is spatially the same and that if we could measure the whole of any or all atoms in terms of an absolute weight (mass), every atom would weigh the same, yet every one differs in properties. We may here also suppose every atom as a whole to have the same complex of properties; that of these, also, as of the sense of mass, only some are perceptible and therefore measurable. The ponderable part and the imponderable of any whole atom is the effects of the arrangement or the inter-relationship of metatronic particles.

Because properties of elements seem to vary through groups of seven elements, we say their periodicity runs in octaves. The fact that nearly every eighth element has similar properties to the first of the preceeding and following octaves would imply that for the physical category, at least, the possible basic arrangement of metatrons was limited to seven. In all these the imponderable part is conceived to enter into the periodicity only partly, that in the other categories, the part that is imponderable to us becomes the measurable, the perceptible, and ours is the invisible, that is, with respect to the elements which have a physical component. We do believe there are wholly imperceptible materials in the cosmos, and these may have unsuspected properties that would be incomprehensible in any terms we know. In the

definition of the described graph we mentioned the weight or mass of the atom as a whole: and we ask why do we not find elements lighter than hydrogen, or heavier than currium? How come our table of elements cuts off so suddenly? Going up the scale, we ran out of particles with which to make atoms, going down the scale, there seems to be a limit to how many particles may be packed into an atom in our gravity field.

But we would no more attempt to say what gravity is than we would say what matter is. We may, and will, often state the law which describes that property of mass understood as gravity -- and the metatron is no more than a law which should enable us, eventually, to describe and measure the properties of other than physical materials.

Let us ask, does our gravity affect elements lighter and heavier than those known to us? Perhaps; let us assume that it does. This implies, first, that there is a property of mass contingent with the force of gravity which presents to us an imponderable, in other words, what we define as gravity is only a part of a greater whole-force.

We measure hydrogen and currium and declare there are none lighter, none heavier that can be construed as elements. These mark the ends of our range of perceivable matter. All this implies that perception is the basis of the appearance of our physical world structure, that hydrogen is not the lightest, or currium, the heaviest, but that these mark the limits of our perceptual mechanism. This does not mean that the world as we observe it objectively is a figment of our imagination; it does mean that the material body limits our consciousness in such a way that only certain definite properties of cosmic matter appear to us. These properties are the fundamental basis of the objective structure of our physical world, our space-time continuum.

According to our graph, though it may appear so physical elements may not be preponderantly etheric as we approach hydrogen but rather that a greater portion of the cosmic atom, or met'atom is imperceptible, that is, the energy of that portion does not flow in a direction that can in any way affect our sensual organism.

This means that the imponderable part of the physical met'atom may not be sensible to the etheric plane, but to some other category. We do not know these things yet.

It is generally supposed that we get our vital energy from the combustion of carbons in the body. The elements involved in our food are mostly Carbon, Oxygen, Hydrogen, Calcium, with smaller amounts of Sulfur, Iron, and Nitrogen. It is pure conjecture but it may be that the heavy and radiant etheric elements (etheric energy metals) can be combined, in a chemical sense, with the light physical elements in their organic combinations to form the life substances. Life must be

something more than mere chemical combustion. For our yogi friends: this life energy is not to be confused with Prana. We believe Prana to be free etheric electric energy.

Other-than-physical-matter is possible when a basic atom is assumed that may vary in its properties according to its metatronic structure.

Our idea of space is limited in such a way that we find it impossible to say what the force of gravity is. We find it difficult to think of imponderable substances and forces. Why then, if the imponderable part of an element is also subject to the force of gravity they do not all weigh the same? It would appear that the imponderable part were not subject to the force of gravity. But then, is all the property of matter we call gravity sensible to us?

Here is a suggestion: gravity may be considered a lessening of the resistance of space to a body free to fall. A body rests when space tension is the same in all directions from the body as center. It falls when there is a difference in the tensors in any direction -- it falls toward the lesser tensor.

The laws of inertia and momentum define the resistance of space. These become apparent only when there is a slowing or speeding up of a mass in motion. Real space has no resistance for a body at rest or in a state of uniform motion. Only the extra increment of motion in an accelerated state is real motion in space.

Gravity imparts real motion to a body free to fall. As we observe it, there is an attractive force acting between the mass of the earth and the falling body. If gravity is a lessening of the resistance of space then it is not a force but an increasing lack of force. We conceive the resistance of space to grow less toward the center of gravity of any mass. It diminishes thus toward the center of the earth. It is as if the body of a mass were condensed from space leaving a hollow place of decreasing density as we procede toward the center of mass. The extent of the hollow place is proportional to the mass. The ratio of density of the mass to space may be a factor in the calculation of the volume of the hollow place; and thus its extent beyond the mass. It would seem from this that bodies whose hollow spaces do not touch are not attracted to each other.

The rate of diminishment of resistance or space density toward the center of mass is such as to allow the body to gain in velocity 16.1 ft./sec./sec., or to move on real space 16.1 ft. per second. This theory implies that the inertia of any mass would be less in a gravity field than in stellar space where all the space tensors are equal.

It would seem on consideration of the fact that things have

different densities that the resistance of space depends on the mass of the objects compared. It is so when gravity is considered to be a force. It would seem at first that a heavier body would have the greater acceleration, but this is not so. All bodies regardless of their weight fall with the same acceleration, or the same motion in real space. We will say this is due to the mass of all met'atoms being the same rather than to the mass of the electron. For according to the Relativity theories the mass of the electron must vary with its speed hence they cannot all be the same all the time.

We speak of the body as falling through space or being resisted by the density of space, as if the body and space were two separate things, they may not be. Space and the objects in it are in some manner interdependent. Space and matter may be two aspects of a wholeness of which we see only a very limited part. The space of eye-perception, like the partly imponderable atom, is only the part which acts on the sensual mechanism and is not the whole.

Equal quantities of substances of differing atomic weights have the same acceleration in the earth's gravity field. But we conceive the met'atom of one element to have the same mass as any other. Any met'atom perceivable to us must consist of physical mass plus metaphysical mass. Metaphysical mass together with its physical component constitutes a unit atom, a met'atom. The resistance of space or force of gravity imparts to the unit atom a velocity of 16.1 ft./sec. in real space -- an accelerated physical motion 16.1 ft./sec². The metaphysical mass is subject to the forces of space as is the perceptible mass. One physical element falls just as fast as another regardless of any differences in weight or quantity. We think of gravity as acting on met'-atomic mass rather than on two kinds of mass, thus affecting an equal acceleration in all matter.

The question now is, why do we sense a difference in weight? Space is something other than a void with particles of matter roving about in it. Physical space is the other pole of the met'atomic mass. Our sensual mechanism can sense only part of either space or mass.

The met'atom is a vibrating unit whose wave pattern varies periodically throughout the whole range of matter. Our sensual mechanism can interpret a limited number of the frequencies of the wave pattern. These are what we perceive as the physical continuum. We can measure the weight of given quantities of substance and derive answers seemingly independent of sense. But any apparatus we can build to measure mass would actually give us the whole answer only if we could perceive the whole apparatus. The physical parts of the apparatus will give us physical data agreeable with our senses, the metaphysical part will give us the intangible effects; intangible but none the less a part of the picture as a whole.

The mass of the met'atom is more than the sensible mass of the physical atom. In the consideration of the velocity of light in its relation to physical mass -- the equation $M = hv/c^2$, M is understood as physical or perceptible mass. To write it as met'atomic mass we would have to use a term that defined mass differently. M would become $M_p = M_e$, where M_p is physical mass, M_e is metaphysical mass.

In the space of the metatron, being the inner space of the met'atom, or as we will call it subsequently M-space -- in the space of the metatron the uniform motion or stasis of a physical mass is not motion as we sense motion. A mass (physical) at rest or moving with uniform speed is a potential in M-space. Only as our physical mass changes its state of motion does this M-space potential become kinetic, and a real motion in M-space.

An electron traveling in an orbit at a constant velocity would have no motion in M-space, but its motion is there a potential. The electron moves either in a circular or elliptic orbit. Its change of direction in the orbit gives it angular acceleration. Angular acceleration is real motion in M-space, and a form of kinetic energy. How do we have a thing moving and not moving? The motion in M-space is not the movement of the electron, but of the metatrons within the electron. The electron is analogous to a cloud of gyroscopes all with their plane and direction of rotation the same, thus all precessing together as the motion of the cloud changes direction; the motion of the cloud being physically perceptible as matter, the motion of the gyroscopic particles being the metaphysical motion of the electron. That the cloud has energy with respect to M-space agrees with the physical law, Force equals mass times velocity.

Light as a uniform velocity is in a state of constant potential in metatronic space.

The orbital motion of the electron or any particle can be plotted as a sine wave which in turn pictures the angular acceleration and thus the real motion of the particle in M-space.

Light is considered to have a wave-motion. Light, or photons, are thus conceived to have both M-space potential and motion. The frequency of the light wave expresses its motion in M-space. But its velocity of propagation is a potential in M-space.

Transposing the equation $M = hv/c^2$ for v, we get $v = Mc^2/h$ for any given physical mass, where c is a potential or force, M the mass $= \frac{\text{weight}}{32.2}$, h is Plank's constant, 6.6×10^{-27} erg.sec. This means for

us the angular acceleration that is represented as the wave will have a frequency depending on the physical mass. Or the physical mass is the result of v, since our sensual organism in response to v perceives

the corresponding mass M . The potential of light in the met'atom is $c = \left(\frac{hv}{m}\right)^{\frac{1}{2}}$ for the mass of any physical atom.

The basis of the velocity of light is the potential c in M-space. Now if metatrons are said to have orbital motion they also have angular accelerations. This is a cyclic increase-decrease of speed in M-space and is to our sense the uniform velocity of light-wave propagation. This we know to be 186,000 miles per second.

We have in effect said that the velocity of light depends on the frequency of metatronic vibration in their orbits. We consider this frequency to vary slightly through the range of physical elements and to have a rather measurable difference toward the middle of the next range of elements, the etheric. We think it is greater there. Together with this we believe the wave length will determine, in part at least, whether a substance will be perceived as a solid, liquid, or gas, or electrical phenomena. In our equation we let M be the perceived mass and allow electrical phenomena to be expressed in terms of mass M . Our perceived physical mass M may be expressed as $M = hv/c^2$ where the wave length times the velocity of light equals v .

In physical measurements c is considered to be a constant, and as we have assumed is an M-space potential. But we hold that it is not constant throughout the range of cosmic matter, but increases toward what we term the etheric planes.

Thus if c_2^2 is greater than c^2 then M is less where the equation is $M = hv/c_2^2$.

We allowed that $v = lc$ where l is the wave length. Whence $l = \frac{v}{c}$

This means for us that l becomes shorter as c increases or that v becomes greater (more per unit time.) (l is wave length, v wave frequency).

Where the wave length l determines the observed mass and let it be observed by two entities A and B. Let A be the etherean, B the terranean. For B, mass with wave length l equals hv/c^2 . For A, c^2 is less than his speed of light whence the wave length is longer and the equation $M = hv/c^2$ for A, gives us a mass too dense to be sensible, because A's perception depends on the value of $V = lc_a$, where c_a is the light speed in A's plane.

For A, when mass is perceivable, c_a is greater than c . Mass, for B becomes too tenuous to be sensible when $M = hv/c_a^2$. This means that for $v = lc_a$ is too high a frequency for the sense organism to register.

This applies as well to the physical measuring apparatus as to the sensual organism. Before we can measure the properties of matter that lies beyond the physical we will have to learn to gather material refine it and shape into non-physical apparatus. The lens in an electron microscope is a step in that direction.

The wave length λ determines the quality of a substance as to its being solid liquid or gas. λ will vary with the speed of light. Since the speed of light is greater as we go up the scale of matter, λ becomes shorter -- gas becomes fluid, liquids become solid, and solids vanish from sense. Let us say M is a liter of hydrogen: for B it is a gas, for A, near the physical continuum it may appear as a liquid. $M = hv/c^2$ holds for all planes provided c may vary. If B and A are looking at the same liter of hydrogen, by the metatronic theory they see two different aspects of the same thing. Remembering that the metaphysical part of hydrogen is the greater part, A may see those aspects of the atom which appear as fluid, while B sees only the part that is gas, these qualities being the property of wave length dependent on light speed. Thus the velocity of light may provide for us the basis for the perceptual difference between the planes.

Other-than-physical element having frequencies of a different order might well co-exist with the physical world and not be sensible to us, nor in any way interfere with the objects of our plane, although there is some interference. Our own living organism is an excellent example of the interaction of elements combined from all the planes. Certain functions of nature are interferences. Many of the well established laws of nature are partial definitions of interferences. For, why should not they mutually interfere with one another producing the effect we call life, thought, emotion? We err indeed if we think our little crumb of matter is neatly tucked away in space, wholly independent of all the rest, or even unique in the cosmos.



SUMMARY

We summarize now, perhaps to clarify a little or to confuse all the more: --

First: In postulating the metatron we simply repeat history. At one time no one believed there could be an electron. Since its postulation many wonderful things have been done with physical matter and its inherent forces. We simply go a step further and conceive another division of matter, splitting the electron into yet more fundamental units. This is no attempt to formulate a new science but rather to build upon those foundations already laid and found sufficiently stable to support the load of new structure.

Because we believe implicitly in the existence of other continuums we see no need to spend ink and paper endeavoring to demonstrate their existence, or prove them. Their eventual discovery is inevitable. We here draw the picture that leads to that discovery as we see it. As human discovery moves on, the view may differ somewhat from ours. When they have reached the place we visualize, we shall have moved on, for we labor in the region beyond the discovered.

Second: The postulate of the metatron is intended to allow us a basis on which to extend the table of elements beyond our known physical range. In doing this we have somewhat fallen into the error of thinking there is a duplication of elements in each of the categories or continuums of matter. We speak of physical copper and its radiant counterpart found in the astral plane, but we should understand that these are definitely two different substances and are related only by their relative positions in our arbitrary table of elements. They are not any more the same than gold and mercury are the same just because they fall in the same period but in different series, so to speak. Thus the property of a given range of elements determines the sensual continuum because it varies throughout the whole range of elements. The etheric range is basically fluid, the astral, basically gas-like, and the mental, like the substance of an electrical corona.

All matter is considered to be relatively subject to the will of the spiritual entities who work in and with it.

We conceive matter to be graded in properties that appear periodic, and gradually modified through the whole of the material world, (the four categories of matter as we have conceived them).

Third: Matter, as found in any one continuum, when arranged in a sensating mechanism limits the sense of awareness to that continuum and its fundamental properties. Thus, in the physical world we perceive and measure matter as solid particles, define mass, momentum, and

inertia in terms of weight and velocity. In the etheric plane, matter is perceived as fluidic, and subject to the will through a different process. There matter is dimly alive and responds to command. The astral materials are somewhat more alive, etc. What we mean to show here is that the continuums as such do not differ in a geometric sense but rather in the fundamental property of their elements. I do think however that when we come to define the properties of other than physical matter we will have to use some dimensional ideas. As I understand it now for instance, we live in a plane world physically. The surface of the earth is for us a distinct division between above and below. While the astral world is a volumetric world due to the peculiar properties of its elements. While there are surfaces on which to walk and erect buildings, etc., one finds such places in almost any direction to the sides, above, or below. From all descriptions of that plane, its two outstanding features are its cleanness where it is clean, and its utter foulness where it is foul, and the two are never blended in any way. It is either heaven or hell.

Fourth: By recourse to the ideas of wave mechanics and quanta, we may so define the nature of the metatron so as to allow the interpenetration of worlds. This means that vibration or the frequency and wave length of matter are the basis of the perception of matter. The sensual mechanism is in a sense tuned in on a definite range of matter which is its objective environment. The mechanism is subjectively tuned to matter which it cannot sense objectively without a special organ being set up.

Memory, which underlies objective consciousness, is the continued resonance of the mechanism after each impact of force upon it, whether the impact comes from the objective environment or from the subjective environment. Remembrance, that is the ability to recall events, is achieved by setting up old patterns in the astral and mental bodies and energizing. Remembrance comes when the pattern is recognized. Recognition is achieved through similarity or the feeling of similarity. Most events are never truly forgotten, some are. Remembrance memory is much more inaccurate than we often suppose.

Fifth: From the descriptions of occult science, we believe that the limiting mechanism of sense, of each group of sentient beings, occupying the four categories considered, effect their limitations in such a way as to leave several series of elements between the categories. These are insensible to the groups on either side. This is a sort of barrier, or no-man's-land. Here we have the demarkation of the planes of being.

On the other hand we believe that some groups are less restricted than others. We are physically restricted to a range of 92 elements. The Etherian may perceive a range of matter covering three or four times as many elements.

And finally, this paper does not finish the metatronic theory. We have given hardly any detail. Like other science, it is to be given mathematical form, most of which has yet to be worked out.

We exclude nothing that has any basis in fact, and likewise carefully study every concept and theory for possible clues and angles.

We do not say any phenomenon is absurd, at least until we know the cause. We do not say anything is impossible. We want to know why a thing is possible or impossible.

We are attempting to define the properties of matter beyond the physical. We never will try to say what matter is.

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