

A Selected Compilation On Science From The Tibetan's Teachings

By Daniel Kruppenacher, Ph.D.

There are two ways to slide through life: to believe everything or to doubt everything: both ways save us from thinking. —Alfred Korzybski

Many authors have lately proposed, in psychology, philosophy and mysticism, that the tenets and principles of the "new physics" or "new science" have often strong similarities with those of Oriental and Occidental philosophies and mystics. Curiously, in these attempts to new syntheses, no mention is ever made of the works of H.P. Blavatsky and Alice A. Bailey: the attempt here is to show by some examples that the work of A. A. Bailey deserves to be included into these new syntheses.

The following excerpts are meant to introduce this subject and mainly speak for themselves, although I have added some preliminary comments. This compilation is only aimed at giving a first idea of how the Tibetan relates to science, to the positive influence of the Ray 5 of concrete science in esotericism, and to the need to bridge science and esotericism. Science, as discussed by the Tibetan, includes many topics such as the sciences of impression, rhythmic living, triangles, etc.; actually it is so extensive that, for the purposes of this selected compilation, we have restricted the term science to actual science as understood by the general public, and its relation with esotericism.

It is interesting to note that some of the wording the Tibetan uses appears old-fashioned. I think that it emphasizes the facts that:

1. The Alice A. Bailey books have been written in the first part of the century and also in a number of instances, the Tibetan has directly borrowed from H.P.B. and her knowledge of how science was in the past century;

2. The Tibetan candidly admits (see quote below) that science is not really His field of expertise, and that A.A.B.'s brain is not equipped scientifically; hence some words chosen in science to describe esoteric notions seem more approximations or analogies than scientific facts.

Contents

Comparing esoteric and exoteric science— <i>Esoteric Psychology 1</i> , 120
Acknowledging the etheric body— <i>A Treatise on Cosmic Fire</i> , 88-89
Electrical energy and the etheric body— <i>A Treatise on Cosmic Fire</i> , 428
Form and energy— <i>Telepathy and the Etheric Vehicle</i> , 140
Science's recognition of etheric matter— <i>A Treatise on Cosmic Fire</i> , 611, 638
Scientific work concerning the ethers— <i>A Treatise on Cosmic Fire</i> , 441
Science and immortality— <i>Esoteric Psychology 1</i> , 183-4
Evidence of the centers— <i>Discipleship in the New Age 11</i> , 576
Web between physical and astral planes— <i>Esoteric Psychology 1</i> , 123-5
Cycles of radioactivity— <i>Esoteric Psychology 1</i> , 369-370

Electrical force of the soul—*Esoteric Healing*, 368-370

Light and matter as synonymous—*A Treatise on White Magic*, 9

Atomic energy release—*The Externalization of the Hierarchy*, 491-2

The scientific use of energy—*The Externalization of the Hierarchy*, 577-9

Electricity and rays working in cycles—*A Treatise on Cosmic Fire*, 426-7

Radiation and the seventh ray—*Esoteric Psychology I*, 226

Scientists as light bringers—*A Treatise on Cosmic Fire*, 1037

Discovery of the nature of the atom—*A Treatise on Cosmic Fire*, 920-1

Occupation with causes and effects—*A Treatise on Cosmic Fire*, 1028

Astronomy and the Lipika Lords—*A Treatise on Cosmic Fire*, 1142

Science and future discoveries—*A Treatise on Cosmic Fire*, p. 917-8

Comparing esoteric and exoteric science—*Esoteric Psychology I*, 120

Psychology I, 120 "When the true nature of the seven rays is grasped, and when their effect on humanity in expressing the seven types of men is also understood, we shall then approach the subject of man's duality with greater intelligence. We shall comprehend better the nature of the forces which constitute one or another of these dualities. This is the true esoteric science. The science of the seven qualities or rays, and their effect upon the myriad forms that they mold and energize, is the coming new approach to the correct method of training and developing the human family. Modern esoteric science knows much about the outer form, or matter aspect, and its electrical nature. Esoteric science knows much about the nature of the subjective energies and the qualities which color and condition the form. When these two knowledges are brought intelligently together, we shall evolve a truer and more accurate psychology and a new, science of human culture. ...

"All the sciences find themselves on some one

or other of the rays, and a science is literally the light thrown by a ray into a particular field of divine manifestation."

Comments:

The need for a bridge between esotericism and science is often emphasized by the Tibetan, as well as by H. P.. Blavatsky. All sciences and scientific attitudes will be more emphasized under the coming of the Fifth Ray of concrete science transmitted by the constellation Aquarius in the Aquarian Age to come. Science needs to discover the etheric body and the soul and prove their existence; esotericists need to recognize the validity of scientific methods of investigation. After all, we are presently living in the fifth sub-race of the fifth root-race, hence the Fifth Ray emphasis in our present civilization.

Acknowledging the etheric body—*A Treatise on Cosmic Fire*, 88-89

"Scientists admit already the fact of etheric matter; the success of photographic endeavor has demonstrated the reality of that which has hitherto been considered unreal, because (from the standpoint of the physical) intangible. Phenomena are occurring all the time that remain in the domain of the supernatural unless accounted for through the medium of etheric matter, and in their anxiety to prove the spiritualists wrong, scientists have aided the cause of the true and higher spiritism by falling back on reality, and on the fact of the etheric body, even though they consider it a body of emanative radiation—being concerned with the effect and not having yet ascertained the cause. Medical men are beginning to study (blindly as yet) the question of vitality, the effect of solar rays upon the physical organism, and the underlying laws of inherent and radiating heat. They are beginning to ascribe to the spleen functions hitherto not recognized, to study the effect of the action of the glands, and their relation to the assimilation of the vital essences by the bodily frame. They are on the right road, and before long (perhaps within this century) the FACT of the etheric body and its

basic function will be established past all controversy, and the whole aim of preventive and curative medicine will shift to a higher level. "

Comments:

In my opinion, the fact of the etheric body is as yet more recognized in physics than in psychology or medicine. For example: fields (e.g., electromagnetic) and plasmas (which form a great proportion of the Universe) are very close or identical to a rather concrete grade of etheric substance. Einstein (who had a copy of the Secret Doctrine on his desk) actually exemplifies the existence of the etheric plane when he writes: "We may regard matter as being constituted by the region of space within which the field is extremely intense ...

There is no place in this new kind of physics both for field and matter, for the field is the only reality." The treatise Esoteric Healing by A. A. Bailey mainly deals with man's etheric body, and the particular importance of it in medicine has still to be fully recognized by science, although the new techniques using magnetic resonance imaging and other similar ones might operate at the interface between physical and etheric matter (see also next reference).

Electrical energy and the etheric body

—A Treatise on Cosmic Fire, 428-429

"The coming into power of this fourth Ray at any time (and such an advent may be looked for towards the close of this lesser cycle, which ended in 1924) will produce a corresponding activity in connection with the fourth sub-plane in each plane, beginning with the fourth physical ether; this will result in the following effects:

"First, physical plane scientists will be able to speak with authority anent the fourth ether, even though they may not recognize it as the lowest of the four etheric grades of substance: its sphere of influence and its utilization will be comprehended, and "force" as a factor in matter, or the electrical manifestation of energy within definite limits, will be as well understood as is hydrogen, at this time.

Indications of this can already be seen in the discovery of radium, and the study of radioactive substances and of electronic demonstration. This knowledge will revolutionize the life of man; it will put into his hands that which occultists call power of the fourth order" (on the physical plane). It will enable him to utilize electrical energy for the regulation of his everyday life in a way as yet incomprehensible; it will produce new methods of illuminating, and of heating the world at a small cost and with practically no initial outlay. The fact of the existence of the etheric body will be established, and the healing of the dense physical body, via the etheric body, by force utilization, and solar radiation, will take the place of the present methods."

Comments:

Here the Tibetan suggests many avenues, from radioactivity to electricity to 'force'. He predicts elsewhere that new discoveries will evolve in these fields, especially in the domain of electricity. Physicists can only agree that understanding must grow in the mentioned fields.

Form and energy

—Telepathy and the Etheric Vehicle, 140

"One of the main obligations of occult students today is to testify to the fact of the etheric body; modern science is already thus testifying because its researches have now landed it in the realm of energy. Electrotherapy, the growing recognition that man is electrical in nature, and the realization that even the atom in apparently inanimate objects is a living vibrant entity substantiate this occult point of view. Generally speaking, science has preceded esotericism in its recognition of energy as a dominating factor in all form expression. ...

"The fact of all manifested forms being forms of energy, and that the true human form is no exception, is the gift of science to humanity and not the gift of occultism. The demonstration that light and matter are synonymous terms is also a scientific

conclusion. Esotericists have always known this, but their aggressive and foolish presentations of the truth have greatly handicapped the Hierarchy. ...

"Here is a basic statement—one that is so basic that it governs and controls all thinking anent the etheric body:

The etheric body is primarily composed of the dominant energy or energies to which the man, the group, the nation, or the world reacts in any particular time cycle or world period."

Comments:

This quote is self explicit. But let us particularly examine the sentence: *'the realization that even the atom in apparently inanimate objects is a living vibrant entity'.*

This expresses one of the major tenets (the hylozoic theory) of esotericism. It posits substance as being a living substance "composed of a multiplicity of sentient lives which are continuously swept into expression by the Breath of the divine Life'. This theory recognizes no so-called inorganic matter anywhere in the Universe, and emphasizes the fact that all forms are built up of infinitesimal lives, which in their totality--great or small--constitute a Life, and that these composite lives, in their turn, are a corporate part of a still greater Life...all the way from the tiny life called an atom (with which science deals) up to that vast atomic life which we call a solar system" (*Esoteric Psychology I, 149*).

Science does not recognize this living aspect of matter, although some scientists suspect its existence. For example, Bohm describes in his landmark work on plasmas that he had often the impression that the electron sea with which he was working was "alive", and behaving as if it was part of an interconnected whole (Briggs and Peat, *Looking Glass Universe*, Simon and Schuster, 196). Bohm also wrote in this book that even a rock is alive, for life and intelligence are present not only in all matter, but in energy, space, time, the fabric of the entire universe. (*See The Holographic Universe*, p.50, by M. Talbot, Harper Collins, 1992, and see also P.

Russell, the *Global Brain*, J.P. Tarcher, Los Angeles, 1983.)

Concerning the difference of presentation--that light and matter are synonymous terms by science and esotericism, mentioned here by the Tibetan Master--H.P. Blavatsky was very uncompromising with the scientists of her time, but one has to remember that science had attained its most materialistic peak at the end of last century, at which time scientists even declared that science had reached its water mark and that nothing new was to be discovered. The progress of science and its power of transformation on our civilization has been enormous since that time. Unfortunately, one finds in the present occult literature--when dealing with science--too much material arrested on obsolete, last century scientific concepts as they were existing during H.P.B.'s time; on the other hand scientists have yet to recognize now how close esotericism can be to science and what is the relation between both. Indeed, science is "systematized knowledge derived from observation, study and experimentation carried on in order to determine the nature or the principles of what is being studied" (Webster, 1972).

Another aspect of the scientific process is to propose a hypothesis and check through experimentation(s) its validity. The Tibetan has the following definition of the esoteric sciences and occultism:

"The esoteric sciences carry us within the form or forms, and enable us to penetrate the quality aspect. Students would do well to remember that occultism may be the study of forces, and that the occultist moves in the world of forces, but these are also the worlds of quality and of those qualifying energies which are seeking to manifest through the world of appearances ...the skilled occultist [will] eventually work in a dual yet unified world of force, and be the creative will which guides, blends and utilizes the world of appearances and the realm of qualities" (*Esoteric Psychology I, 195*).

We have here a direct exposition of the connection already existing between science

and esotericism .

Science's recognition of etheric matter—*A Treatise on Cosmic Fire, 611, 638*

"This recognition by science that all forms are built of intelligent lives will come about when the science of magic begins again to come to the fore, and when the laws of being are better understood. Magic concerns itself with the manipulation of the lesser lives by a greater life; when the scientist begins to work with the consciousness that animates substance (atomic or electronic), and when he brings under his conscious control the forms built of this substance, he will gradually become cognizant of the fact that all entities of all grades and of varying constitutions go to the construction of that which is seen. This will not be until science has definitely admitted the existence of etheric matter as understood by the occultist, and until it has developed the hypothesis that this ether is in differing vibrations. When the etheric counterpart of all that exists is allocated to its rightful place, and Known to be of more importance in the scale of being than the dense vehicle, being essentially the body of the life, or vitality, then the role of the scientist and the occultist will merge."

Comments:

The hylozoic esoteric law can give man a new sense of responsibility when he realizes that he is the 'steward' of all the lives which form his instrument, down to the very atoms themselves. Then the blind exploitation of our planet will be transformed into loving care and the scientists will recognize the quality and living aspect in matter.

Scientific work concerning the ethers

—*A Treatise on Cosmic Fire, 441*

"The fifth Kumara, the Lord of the seventh Ray (for it is necessary to Keep in mind His dual position as one of the points of the five-pointed Star of Brahma, and as one of the triangles in the sevenfold logoc body) has a unique position as the "Ruler of the Building Devas" of the physical plane, the devas of the

ethers, in cooperation with their Deva Lord. He guides and directs the production of the form by means of certain occult words. He works, therefore, through the etheric body of all forms and it is through His inflowing force that we may look for that increased stimulation of the matter of the etheric brain which will make the physical brain receptive to the higher revealing: truth, and will put into the hands of scientists the secrets of the fourth and third ethers. The development of the matter of the brain parallels the stage of development of its atomic correspondence, and in the vitalization of the fifth spirilla and the consequent reflection of the seventh, we may look to see the miracle of man assume proportions, and attain achievement, as yet un-thought and undreamt."

Comments:

Beside the fact that again the knowledge of the etheric body is essential to understand phenomena in physical matter, one should never forget that the Tibetan, when he mentions the ~ physical body, often means the essential or etheric body. This is because, although physical matter is formed by small living entities, it is considered as a mere scaffolding of these small lives aggregated around a living, creating, etheric template.

An example: The Tibetan speaks here of the stimulation of the matter of the etheric brain and its atomic correspondence; analogically science can now make the difference between short term memory (effected by electromagnetic impulses-of etheric nature) and large term memory (induced by chemical exchanges--of atomic nature).

Science and immortality—*Esoteric*

Psychology I, 183-4

"The third area of doubt--doubt as to the fact of immortality--will be solved before long in, the realm of science, as the result of scientific investigation. Certain scientists will accept the hypothesis of immortality as a working basis upon which to base their search, and they will enter upon that search with a

willingness to learn, a readiness to accept and a desire to formulate conclusions based upon reiterated evidence. ... There will be no question in any one mind that the discarding of the physical body will leave a man still a conscious living entity. He will be known to be perpetuating his existence in a realm lying behind the physical."

Comments:

The Tibetan links here the scientific discovery of immortality to the development of the etheric vision. This is due to the fact that, later, man will also develop the capacity to see the being who has discarded the physical body and the etheric 'double' after death.

Evidence of the centers-*Discipleship in the New Age* 11, 576

"It must always be borne in mind that evidence of the centers is to be found in the nervous and glandular systems and these three must ever be related if modern science is to appreciate and appropriate the new Knowledge."

Comments:

Medicine and modern science have tremendously progressed in the study of hormones and their interaction, the neurons and their chemical interchange, etc... Again, the etheric counterpart is not yet fully evidenced.

Web between physical and astral planes—*Esoteric Psychology* 1, 123-5

"Four rays dominate at any given period, with one in excess of the other three. I mean by this, that only four rays are in physical incarnation; for on the plane of the soul all seven types are of course found. This idea is brought out in the four castes in India, and you will find that these four are found universally. The four groups of devas are a band of servers to the Lord, and their special work is to contact men and to give them definite and experimental teaching. ...

"They will enable human beings, as a race,

and not as individuals, to expand their consciousness so that it will embrace the super-physical. Forget not the important fact that in the accomplishment of this the web that divides the physical plane from the astral plane will be discovered by the scientists, and its purpose will eventually be acknowledged. With that discovery will come the power to penetrate the web, and so link up consciously with the astral body. Another material unification will have been accomplished."

Comments:

The study of the elementary particles, their reaction to forces, and their quantum numbers requires both scientific and occult penetrations. An example: The Tibetan tells us here that four rays, i.e., four energies, dominate at any moment. Is it a coincidence that there are four types of forces--as described by physicists--binding matter together? That leptons (point-like, sizeless elementary particles) respond to three types of force, while quarks (thought to be the elementary particles possessing size and mass) respond to the four forces (and this only on the physical plane, although on that quantum level the distinction between physical and etheric is blurred)?

What the structure is of the etheric plane(s) is another question of importance if a scientist wants to bridge science and esotericism. This structure has been investigated, for example, in *Occult Chemistry* by Leadbeater. Is there any scientific correlation?

Also, what about the four bases of all genetic codes (adenine, guanine, thiamin, cytosine) which are found at the core of the substance of the vegetable, animal and human kingdoms?

Cycles of radioactivity

-Esoteric Psychology 1, 369-370

"One point remains as yet unrealized by science, and that is that these radiations are cyclic in their appearance; under the influence of the seventh ray it has been possible for man, to discover and work with radium. Radium has

always been present, but not always active in such a manner that we were able to detect it. It is under the influence of the incoming seventh ray that its appearance has been made possible, and it is through this same influence that we shall discover new cosmic rays. They too are always present in our universe, but they use the substance of the incoming ray energy as the path along which they can travel to our planet and thus be revealed. It is many thousands of years since what are now studied as the Cosmic Rays (discovered by Millikan) played definitely upon our planet, and at that time the fifth ray was not active as it now is. Therefore, scientific knowledge of their activity was not possible.

"Other cosmic rays will play upon our earth as this seventh ray activity becomes increasingly active, and the result of their influence will be to facilitate the emergence of the new racial types, and above all else, to destroy the veil or web which separates the world of the seen and tangible from the world of the unseen and the intangible, the astral world. Just as there is a veil called "the etheric web" dividing off the various force centers in the human body, and protecting the head centers from the astral world, so there is a separating web between the world of physical life and the astral world. This will be destroyed, slowly and certainly, by the play of the cosmic rays upon our planet. The etheric web which is found between the centers in the spine, and which is found at the top of the head (protecting the head center) is destroyed in man's mechanism by the activity of certain forces found in, that mysterious fire which we call the Kundalini fire. The cosmic rays of which the modern scientist is aware constitute aspects of the planetary Kundalini, and their effect will be the same in the body of the planetary Logos, the Earth, as it is in, the human body; the etheric web between the physical and astral planes is in process of destruction, and it is of this event which the sensitives of the world and the spiritualists prophesy as an imminent happening. "

Comments:

As mentioned previously, the Tibetan tells us that He is not a scientist. He states it this way:

"A.A.B. has not the necessary scientific knowledge to do more than grasp the broader outlines of the intended work [of the seventh, scientific, seed group], and then only primarily from the angle of the more mystical and philosophical approaches. Nor, my brothers, have I. It will take a fifth or seventh ray initiate to deal with this matter, and though I could invoke the assistance of such a brother, it does not seem to me a profitable expenditure of force at this time" (Externalization of the Hierarchy, 58).

This may explain difficulties encountered by scientists when, for example, the Tibetan deals with the terms 'radioactivity', or 'magnetism'. These terms—so far—do not seem to be equivalent to the same terms used by scientists (otherwise they would be measurable). Radioactivity—for scientists—is a very predictable and steady process of transformation ruled by well-known equations and countless verifications; it is not affected by cycles and has always existed, but the instruments to detect it were not developed in past centuries. Indeed, geologists nowadays utilize fossil radioactivity to determine the age of geological formations and of the Earth. Often one has the impression that the Tibetan, to describe purely scientific processes, chose His words (from A.A.B.'s brain) as best approximations, possibly along analogic lines. True, atoms are changed by radioactivity, fission, fusion and by entering black holes; by analogy man, an atom of another kind, is changed by transformation, transmutation, and finally, at the third initiation, transfiguration.

As for the cosmic rays (which mostly are extremely high energy protons—around 10^{17} eV—coming from deep space, probably of galactic origin or further, discovered by Hess in 1911 and extensively studied by Millikan in 1925), they indeed have a destructive effect on our biosphere, inducing new mutations. The intensity of these cosmic rays reaching the

earth increases cyclically through geological times, during the interim period when the poles change polarity, a phenomenon that has been measured to recently occur in cycles smaller than one million years.

Electrical force of the soul

—Esoteric Healing, 368-370

"H.P.B. prophesied the work now being done many years ago when she spoke of the recognition ultimately to be accorded by science to an universally diffused omnipresent Deity (the ether of space is an entity, she also tells us) and that the mystery of electricity, when solved, holds for us the solution of most of our problems. Many of the theories of modern science are laid down in *A Treatise on Cosmic Fire*, though scientists have not gone far enough yet to recognize this fact; there the electrical nature of man is posited. You would find it interesting and helpful to search out such passages. Science, however, gives no place to the electrical force of the soul, which is steadily growing in potency. A few of the scientists among the most advanced are beginning to do this. The next step ahead for science is the discovery of the soul, a discovery which will revolutionize, though not negate, the majority of their theories.

"Individual students might aid in this if they took some of the basic postulates of a scientist whose researches appealed to them, and endeavored to discover in my books, for instance, or in *The Secret Doctrine*, those paragraphs which will throw occult light upon what he says, or which may negate his hypothesis. Then they would be growing and using the analytical mind as a bridging factor between the world of human science and the occult sciences."

On Ions and Radiation:

"Scientists have made statements to the effect that the air we breathe contains electrified particles positively or negatively charged, and they are able to produce artificially electrified air; that even an open flame in a fireplace ionizes the air; that with

suitable apparatus one may extract either the negative or the positive ions, and that patients exposed to the positively electrified ions developed feelings of fatigue, dizziness and headache, while if exposed to negatively charged ions a feeling of exhilaration was experienced; that positive ions increased the blood pressure and produced general discomfort, and negative ions lowered the pressure and brought a feeling of comfort and relaxation.

"The question arises whether the healer's radiation has the effect of ionizing the atmosphere surrounding the patient. I must point out that to answer such a question accurately would necessitate two things: the revelation of one of the mysteries for which mankind is not yet ready, and at the same time the giving of an answer which would be quite in explicable to you, for there is no terminology adequate to the latent truth. In this truth is embodied the whole story of duality--which is the story of the relation of the negative and positive aspects of the living process. Certain things, however, I can point out:

1. The negative and positive ions with which the scientist deals are etheric in nature and, therefore, of the physical plane. These unseen particles of substance which can only be traced through their effects and through interference with their activities, are rapidly moving particles in relation to each other and, at the same time, are themselves affected by a greater controlling factor which keeps them so moving.

2. In healing with disease, the patient can only truly be helped when the positive radiation of the healer over comes the negative condition of the patient.

3. The radiation of the healer has to permeate and overcome the resistance of the patient's disease--not of the patient, who may be mentally and emotionally negative to the healer, and therefore in a position to be helped. This is done through the more powerful radiation of the healer. The magnetism of the healer is then brought into play and, consciously and with intent, he can draw out and disperse those atoms of substance that are

the seat and source of the patient's discomfort. A hint is here given of s one of the future physical plane modes of dispersing a disease. The power of directing definitely the magnetic currents radiating from a source outside the physical body is not yet realized, but it will embody one of the new modes of healing. "

Comments:

The Tibetan alludes here to the etheric body. Some paramedical experiments are being performed now, but the real breakthrough in these matters will come when etheric vision / will be more common, owing to the increasing number of Ray / Seven Egos to incarnate as a result of the incoming Seven Ray which governs the etheric body. Scientists will then find ways to measure the then visible etheric body. Also, we will be able to directly see the Devas whose abode is in the fourth and third etheric planes, and a more direct interaction with them will be possible. Applications in the field of the healing of the etheric body of man will then incur. Accurate vision and understanding of the devas of the etheric planes can eventually lead to power upon them: one can therefore understand the extreme caution (expressed elsewhere) exhibited by the Tibetan in those matters.

Light and matter as synonymous

—A Treatise on White Magic, 9

The third basic postulate is that the object for which life takes form and the purpose of manifested being is the unfoldment of consciousness, or the revelation of the soul. This might be called the Theory of the Evolution of Light. When it is realized that even the modern scientist is saying that light and matter are synonymous terms, thus echoing the teaching of the East, it becomes apparent that through the interplay of the poles, and through the friction of the pairs of opposites light flashes forth. The goal of evolution is found to be a gradual series of light demonstrations."

Comments:

In science, the exchange between light and

matter has been known theoretically and demonstrated in accelerators. For example, the nucleus of an atom, when bombarded with high energy gamma rays (a form of high energy light) produces a pair of negative and positive electrons. The reverse reaction is well known too ("through the friction of pairs of opposites light flashes forth"—when a positive electron meets a negative electron, a gamma ray is emitted).

Concerning light: the massless particles called photons, which describe the particle aspect of light, form more than 99% of the total of particles when compared to all other particles extant in the universe. Thus, it is an almost perfect approximation to state that the universe is formed of light, that the universe is a "light demonstration." Perhaps the Tibetan describes all the possible spectrum of electromagnetic vibrations (infrared, light, ultraviolet, X and gamma rays, and so on) when he talks about 'a gradual field of light demonstration.'

Atomic energy release—The Externalization of the Hierarchy, 491-2

"I would like at this time to touch upon the greatest spiritual event which has taken place since the fourth kingdom of nature, the human Kingdom, appeared. I refer to the release of atomic energy ...

"Some years ago I told you that the new era too would be ushered in by the scientists of the world and that the inauguration of the kingdom of God on Earth would be heralded by means of successful scientific investigation. By this first step in the releasing of the energy of the atom this has been accomplished . . .

"Man's attention is normally focused on the externalities of living. Nevertheless, all great discoveries, such as those made in connection with astronomy or in relation to the laws of nature or involving such a revelation as that of radio-activity or the epoch-making event announced this week concerning the first steps taken in the harnessing of cosmic energy, are ever the result of inner pressure emanating from Forces and Lives found in high Places.

Such inner pressures themselves function under the laws of the Spirit and not just under what you call natural laws; they are the result of the impelling work of certain great Lives, working in connection with the third aspect of divinity, that of active intelligence, and are concerned with the substance or matter aspect of manifestation. Such activities are motivated from Shamballa. This activity is set in motion, by these Lives, working on Their high plane, and it gradually causes a reaction in the various departments of the Hierarchy, particularly those working under third, fifth and seventh ray Masters. Eventually, disciples upon the physical levels of activity become aware of the inner ferment, and this happens either consciously or unconsciously. They become 'impressed' and the scientific work is then started and carried through into the stages of experimentation and final success."

Comments:

It is deeply impressing that this event, which for the first time brought humanity into contact with cosmic forces, claimed more than 200,000 lives. We might remember here that the Earth school is called in occult circles "the school of magnetic response," and that it leads its pupils to become "graduates of painful endeavor," therefore linking advancement and pain. Uranus, which governs the element uranium, "wields the power of cosmic etheric prana" (Esoteric Astrology, 683). Whereas no mention is made of Pluto (Uranium and Plutonium are used in the fabrication of atom bombs), the influence of Pluto is known by astrologers to be destructive and regenerative.

A study of the Manhattan project (the scientific endeavor which culminated in the fabrication of the bomb) can give the reader an idea how disciples upon the physical levels may respond to higher and subjective energies and transform them into creative science. This study can give a hint as to how the part of an Ashram or Ashrams composed of scientific rays types might externalize for a specific purpose.

The scientific use of energy—The Externalization of the Hierarchy, 577-9

"... it is through the scientific use of energy that the world will be rebuilt and the factual nature of the Hierarchy be proved. ...

"Allied to the efforts of ... two groups of disciples and initiates will be those disciples on the fifth ray, whose task will be to lead mankind into the benefits of the atomic age. The occultists have ever proclaimed that the field wherein the Hierarchy works is that of energy; they have taught that there is nothing in existence but energy in some form or other, and that all we see, all with which we daily work (including our own material natures, mental, emotional and physical), and all that produces phenomena is energy in relation to forces, or forces as they are directed by energy."

Comments:

I think that the efflorescence of physicists in the first quarter of this century (Einstein, Plank, Schrodinger, Dirac...) were the initiates and disciples described in this quote.

Also, here the Tibetan distinguishes energy and force where force is directed by energy. In physics, force is a quantity that changes the motion, size, or shape of a body; energy is the capacity to do work or to produce a change, for example, heat, light, sound, electricity, and mass (as in $E = mc^2$).

Electricity and rays working in cycles—A Treatise on Cosmic Fire, 426-7

"We might now take the four minor Rays, which, with the third, make the sum total of manas, and see wherein their influence may be expected. The subject is so stupendous that we cannot possibly do more than touch upon certain points, nor can we enlarge along the Line of the mechanistic development of forms to utilize the force. This is all hidden in the science of electricity, and as exoteric science discovers how:

"To utilize the power in the air, or to reduce electrical phenomena to the uses of man;

"To build forms, and create machines to contain and distribute the electrical forces of the atmosphere;

"To harness the activity of matter, and to

drive it towards certain ends;

"To employ the electrical force in, the air to vitalize, rebuild, and heal the physical body; then the phenomena of the Rays, working in cycles, will be comprehended, and vast opportunities will be seized by man to bring about specific ends during specific cycles."

Comments:

In relation to new scientific discoveries, the Tibetan tells us (*A Treatise on Cosmic Fire*, 456) that two-fifths of a formula explaining electric phenomena has worked out through the achievement of such men as Edison and the scientists working with radioactivity, and that the three remaining parts will be worked out during the fifth root race. A challenging statement, although presently abstruse for the scientists!

Radiation and the seventh ray

—Esoteric Psychology I, 226

"People today have no idea what effect this radiation (due to the incoming ray) will have, not only upon the surrounding mineral world but on the vegetable kingdom (which has its roots in the mineral kingdom), and upon men and animals in lesser degrees. The power of the incoming cosmic rays has called forth the more easily recognized radio-activity with which modern science is now, concerned. It was three seventh ray disciples who "interpreted" these rays to man. I refer to the Curies and to Millikan. Being themselves on the seventh ray, they had the necessary psychic equipment and responsiveness to enable them intuitively to recognize their own ray vibration in the mineral kingdom."

Comments:

The seventh ray rules the mineral world. It is interesting to note that major discoveries are made in accordance to profound similarities of vibrations and numbers between planes and rays.

Scientists as light-bringers

—A Treatise on Cosmic Fire, 1037

"...it will become apparent that the revolutionizing scientific discoveries which can be traced down the centuries, such as the formulation of the Law of Gravitation, the circulation of the blood, the ascertainment of the nature of steam, the discovery by man of that form of electrical phenomena which he has harnessed, and the more recent discovery of radium, are in their own department (that of the Mahachohan), analogous to the effort made during the last quarter of each century to stimulate the evolution of men through a further revelation of some part of the Secret Doctrine. Newton, Copernicus, Galileo, Harvey, and the Curies are, on their own line of force, light-bringers of equal rank with H. P. B. All revolutionized the thought of their time; all gave a great impulse to the ability of man to interpret the laws of nature, and to understand the cosmic process, and only those of circumscribed vision will fail to recognize the unity of the many force impulses emanating from the one Lodge."

Comments:

This statement of the Tibetan shows again the important role of true scientists and the need, in our civilization, of a bridge between esotericism and science; a bridge which can be consolidated by disciples proficient in both disciplines and animated by an insatiable curiosity about all things created and all worlds subjective (the hallmark of a true scientist disciples eager to evolve new synthetic ideas and find practical solutions for the world.

Discovery of the nature of the atom

—A Treatise on Cosmic Fire, 920-1

"In these triple emanatory forces may be found the origin of all that is visible and objective, and through their agency our solar system takes its place within the greater cosmic scheme, and a certain basic cosmic fire is formed. They are the sum total of the head, the heart and the throat centers of the solar Logos, and their correspondences will be found within a Heavenly Man, a human being, and an atom."

Hence the scientist, as he discovers the nature of the atom, is putting himself in touch with these three types of solar energy, and is unravelling the central mystery of the system. As the triple nature of the atom stands revealed, so likewise the triple nature of man and of God gradually becomes proven. The energy of these groups passes through the physical sun, and from thence they sound the Word for the particular plane of their specific endeavor."

Comments:

There is a surprising amount of information released in *A Treatise on Cosmic Fire* and other esoteric literature that is related to atoms, their structure, and the elemental particles forming them. Correspondences between exoteric and esoteric descriptions are fascinating. Many difficulties come from the language used by esotericists and scientists, from the angle chosen in investigating the atom (quality versus matter itself), and from the type of mind used (analogic, symbolic, linear, rational versus intuitional). Definite work of correlation should be done.

Occupation with causes and effects

—A Treatise on Cosmic Fire, 1028

"The modern fact of the modern scientist is his approximation of a part, and often an infinitesimal part, of some greater whole, and even then it concerns only the most objective part of manifestation, for that which is the essence is not regarded as a reality at all by them as it is by the real occult knower. That which we see and can touch is but an effect of inner underlying causes. The occultist does not concern himself with effects, but only with their originating cause. The modern scientist, therefore, is not as yet occupying himself with causes, and during the past only approached the realm of these initiatory impulses when he began to comprehend the energy aspect of matter, and to consider the nature of the atom. When he can pass more directly in his thoughts to the discussion and consideration of the

etheric substratum which underlies the tangible, then and only then will he be entering the domain of causes, and even in this case, only those physical causes which underlie the grossly objective; he will not really have ascertained the vital impulses which produce Being. Yet a great step will have been made for, under the Law of Analogy, he will then be in a position to comprehend some of the major secrets of solar manifestation; for the planes of our solar system constitute, as we know, and as this Treatise seeks to demonstrate, the seven subplanes of the cosmic physical plane."

Comments:

I think that the scientists have already theoretically discovered the existence of the etheric body. An example could be Einstein (see quote above) or Bohm, who distinguishes an enfolded reality (the subjective, essential, etheric, world) out of which another unfolded one (matter, as it appears to us) manifests. An interesting point: scientists, by extending to the utmost the limits of the concrete, logical, experimental mind, naturally step into the etheric body. In other words, an investigation, if pushed to its extreme limits, contains in itself the elements that break open its own ring-pass-not. This is true in all sciences; philosophy, hard science, and spiritual research.

When scientists are able to see and measure the etheric body, this discovery will then become part of the culture and higher planes will stand open concretely.

Astronomy and the Lipika Lord

—A Treatise on Cosmic Fire, 1142

"Another series of files in the records give—under a different formula—information as to what is esoterically called "the heat content" of any unit, "the radiating light" of any form, and the "magnetic force" of every life. It is through this knowledge that the Lipikas control the bringing in, and the passing out of every Life, divine, superhuman, solar and human, and it is through a consideration of that formula which is the basic formula for a solar

system that the physical plane appearance of a solar Logos is controlled, and the length of a cosmic pralaya settled. We must not forget that the Lipiha Lords of the solar system have Their cosmic prototypes, and that These have Their feeble and groping human reflections in the great astronomical scientists who endeavor to ascertain facts anent the heavenly bodies, being subconsciously aware of the existence of these cosmic formulas conveying information as to the specific gravity, constitution, radiation, magnetic pull, heat and light of any sun, solar system, or constellation. Many of them in future and remote ages will pass to a full comprehension, and will have the formulas committed to their care, thus joining the ranks of the Lipikas. It is a peculiar line, requiring cycles of careful training in divine mathematics."

Comments:

It is said that the Masters are sometimes called "the rare efflorescence of a generation of inquirers." Here, the Lipikas—the cosmic astrophysicists—are described as the rare efflorescence of a human generation of astrophysicists. As a footnote, our Planetary Logos has been called the "experimenting divine Physicist" (*A Treatise on Cosmic Fire*, 1212).

Science and future discoveries

—*A Treatise on Cosmic Fire*, 917-8

"It is here--in the relation between positive electrical energy in its fourfold differentiation, and the triple negative receptive lower substance--that scientists will eventually arrive at certain definite deductions and discover:

a. The secret of matter itself, that is, matter as we know and see it.

b. The key to the process of creation upon the physical plane, and the method whereby density and concretion on the three lower levels are brought about.

c. The formulas for organic transmutation, or the key to the processes to hereby the elements as we Know them can be disintegrated and recombined.

"Only when scientists are prepared to admit the fact that there is a body of vitality which acts as a focal point in every organized form, and only when they are willing to consider each element and form of every degree as constituting part of a still greater vital body, will the true methods of the great goddess Nature become their methods. To do this they must be prepared to accept the sevenfold differentiation of the physical plane as stated by Eastern occultism, to recognize the triple nature of the septenary manifestation.

a. The atomic or Shiva energy, the energy of the first sub-plane or the first etheric plane.

b. The vital form building energy of the three ensuing etheric levels.

c. The negative receptive energy of the three planes of the dense physical, the gaseous, the liquid and the truly dense. "They will also eventually consider the interplay between the lower three and the higher four in that great atom called the physical plane. This can be seen duplicated in the atom of the physicist or chemist. Scientific students who are interested in these matters will find it worth while to consider the correspondence between these three types of energy, and that which is understood by the words, atoms, electrons, and ions.

Comments:

Considering some of these points:

a) Possibly addresses all transformations of matter that are known today: radioactivity, fission, fusion, incorporation into a black hole (all these transformations are emitting energy). These processes could be (loosely) compared to the manifestations of the principle of Fohat.

b) and **c)** Particles can be created in accelerators. Science recognizes, though, that these transformations occur through high energy. But one can legitimately wonder whether the scientists who announced findings in cold fusion had not found (by accident or willingly?) a process of transformation or transmutation.

a), b), c): At the beginning of the century, the theosophists Leadbeater and Besant studied by

clairvoyance the transformation undergone by atoms from the gaseous to the etheric (from the fourth sub-plane to the first). Some descriptions are clearly reminiscent of the inferred behavior of quarks in particles. A whole subject here awaits penetration and confirmation.

working on a Ph.D. from the USSR. Professor (ret.) at the University of Geneva (Switzerland) and at San Diego State University, he will be the instructor of the new USSR curriculum in science and esotericism, to be started October 10, 1996 at Rancho Santa Fe, CA. His email address is danielk@cts.com.

Conclusion

Science seems to be the process through which a so-called occult, esoteric processes-energies-are rendered concrete and measurable. Could one say that science seems to be the manifestation of a process that makes us closely cognizant of form and energy, actually so cognizant that form and energy can become part of the automatism located below the threshold of consciousness or re-enter the reservoir of 'unprincipled' matter?

At the same time, science also de-mystifies magic and, through one-pointed discrimination and no-nonsense, can allow us to sharpen the difference between the not-self and Self and eventually discover 'differentiated Oneness.' The occultist, since he manipulates forms and energy, needs science and its technique, on all levels. Finally, scientific investigation (even when involving concrete measurements) when pushed to its extreme limits, reveals paradoxes which break open its own ring-pass-not.

For example, the study of the speed of light led scientists to a paradox which was solved by Einstein by including the fourth dimension in a world believed to be three dimensional; also, very precise measurements of the movement of co-generated particles has revealed what seems to be a principle of non-locality or of other dimension(s), and so on.

This process of breaking one's own barriers is a process common to all disciplines, including spiritual disciplines.

Copyright © 1996 Daniel Krummenacher--All rights reserved.

Daniel Krummenacher holds a Ph.D. in geological and mineralogical sciences, an MSE in psychology and healing from the University of the Seven Rays (USR), and is currently