## THE ORDER OF THE ESSENES 2527 SUNSET DRIVE TAMPA 6. FLORIDA

DEPARTMENT OF INSTRUCTION

YOU APPROACH MASTERSHIP: -

You are going to have something to think about in this and the next few sets of instructions. We know something good about you. - You are going to get an uplift when you find out about yourself.

This reminds us of a poem we want to share with you. We know not the author.

"Wouldn't this old world be better,

If the folks we meet would say--I know something good about you--and treat us just that way?

Wouldn't it be fine and dandy,
If each handclasp warm and true,
Carried with it this assurance—
I know something good about you!

Wouldn't life be a lot more happy, If the good that's in us all, Were the only thing about us That folks bothered to recall?

Wouldn't life be lots more happy,
If we praised the good we see--For there's such a lot of goodness,
In the worst of you and me!

Wouldn't it be nice to practice
That fine way of thinking too--You know something good about me
I know something good about you!

Now follow most carefully through the recent instructions and through eighty-six. We will give it to you in homeopathic doses - short and to the point.

When you get it, you have something that is in no other metaphysical course and you can make some records that will play back to you a life symphony.

You will not just believe -- you will know, and knowing you will have much to share - and sharing it will result in living more abundantly, - health, happiness and well being. You do approach Mastership.

Sincerely.

THE ORDER OF THE ESSENES

By I. Hamner Davis

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Enc. 76

## THE Essenes

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INSTRUCTION NO. 76

Assuring to the Accepted and Acceptable HEALTH, HAPPINESS AND SUCCESS

"SWEEP UP THE DEBRIS OF DECAYING FAITHS;

SWEEP DOWN THE COBWEBS OF WORN OUT BELIEFS,

AND THROW YOUR SOUL WIDE OPEN TO THE LIGHT

OF REASON AND OF KNOWLEDGE. BE NOT AFRAID

TO THRUST ASIDE HALF-TRUTHS AND GRASP THE WHOLE."

--- Ella Wheeler Wilcox

## MEASURING HUMAN ELECTRICAL DISCHARGES

In the last set of Instructions we told you that we would prove, generally speaking, the electrical character of thinking.

From a study of biology and physiology and well known experiments with very real laboratory equipment, we know that every activity of the brain and every impulse that passes through a nerve has its electrical component. In the eye-ball a current flows between the transparent cornea, and the photo-sensitive retina. Every muscle contraction, every movement of a finger, wink of an eye-lid, and shiver of the skin discharges electricity.

Until recently it has been impossible to measure the voltage generated in the human body, for the electrical charges were so tiny or minute, or speaking technically, so microdimensional that the measuring instruments consumed the electrical units in the process of measuring it, but scientists have now worked out a highly sensitive voltmeter that can measure a millionth of a volt without taking toll of the quantity it is measuring.

For a moment let us see what some of these marvelous instruments can do, and let us identify these appliances used by science.

We have what is known as the electrocardiograph. This instrument measures the currents generated by the beating of the heart.

Its operation is quite simple, but of course its make-up is not. The operator of the electrocardiograph straps one electrode to the patient's wrist, and the other to his ankle over an artery, and the instrument makes a record on paper, making little curves, jagged peaks, and spikes.

In this you can understand that an electrical impulse is transformed into a writing or a record by means of instruments which magnify or step up the volume of the current and then record it in these little jagged or saw tooth lines which you will more readily understand when later we describe the making of sound pictures.

In a perfectly normal person we have markings made by this electrocardiograph which are more or less regular, and in the normal person certain markings are made which show the regular working of the heart when the four chambers of the living pump are synchronized.

If markings are not in accordance with the general pattern, doctors have learned to read from it just what the difficulty is that makes the changed pattern. If the ventricle of the heart begins to contract before it has received its full load of blood, which you have heretofore learned is approximately two and a half ounces, there is a backward thrust of the undelivered blood, and this is what doctors call a heart block.

This shows up in certain patterns on the record.

By constant experiments and comparison of records, an accurate diagnosis can be made of just which action of the heart is not normal, and many disorders in the first stages are detected, and remedial measures are administered and thus many lives are being prolonged.

There is another laboratory instrument which is now standard as clinical equipment. It is known as the electroencephalograph. This instrument measures the electrical discharge from brain action — mental processes.

It has been pointed out to you that in the two hemispheres of the brain in certain specific and known areas are the registration of the optical nerves; in other areas, the registrations from the nerves of touch or feeling; and in others the registrations from the auditory nerves. These centers are known to the medical science. For instance, if a man has tumor of the brain over the area of the brain relating to sight, his sight will be effected.

In the operation of this machine it is not necessary to pierce the skin or have any operation of any kind. The electrodes are merely laid on the scalp over the section to be examined, and these electric currents are picked up, magnified, and the energy is transformed to make a written record by way of little markings like the teeth of a saw.

By long experimenting it is known what a normal brain action in that area produces in the way of a record, and when the brain wave pattern is abnormal, then they know that something is the matter.

A man, upon physical examination, may be found to have apparently normal eyes, and yet he may say that he cannot see and that he is blind, and if this electrode is put over that section of the brain in which center the optical nerves, and it produces a pattern different from that of normal cells, then they know that something is wrong, and a brain tumor, for instance, can be definitely located.

Very often thorough physical examinations and Xray photographs reveal nothing which indicate a difficulty, and yet the patient knows that there is something wrong with him, because his action is not normal and he may be doing strange and peculiar things without volition or exercising his selective and directive thought processes.

In all such cases, a tumor or a clot or a brain lesion is suspected and the electrode of this electroencephalograph is moved over the entire dome of the skull in just a few moments, and it reflects the activity of the brain cells underneath, and when a tumor or clot is located, then the exact spot is known and a brain operation is then comparatively simple.

Without this instrument and knowing that a blood clot or tumor existed, large sections of the skull would have to be removed in order to find the exact spot.

The point that we are stressing is that from the physical instrument, the brain, come forth electrical discharges or pulsations. As we said a while ago, every muscle contraction and every wink of an eyelid discharges electricity.

There is an electrical instrument which measures the electrical potential of the stomach.

With an empty stomach, there is one voltage. If food is introduced into the stomach there is another voltage, and if a stomach ulcer is found, there is a voltage change.

If the stomach is affected with a cancer, there is yet another record, and it has been found that early cancer gives a more pronounced indication than late cancers or old cancers.

It is hardly necessary to point out that the nerve systems to the brain from every part of the human system is so to speak, a two way telegraph system. Sense perceptions are telegraphed to the brain and from the brain come impulses which result in behavior. Let us make this clear. - You touch something hot

with the finger. It is telegraphed to the brain, and back comes the message - "withdraw the finger."

There is something marked about the impulses or messages from the brain. They are always to the end or have the objective of self preservation.

That we may lay a perfect foundation for understanding, let us repeat, that electrons are everywhere, or are universal. We again stress that they are of themselves electrical in nature and are in almost inconceivable minute form worlds revolving about a center common to each. Otherwise expressed, man's body is made up of trillions of minature solar systems, each with whirling planets and a central sun, and that man is made up of these basic units, and that there is communication between all units in the human system.

We know that man exercises dominion over his thought processes, - or can - and the thought processes are electrical discharges or impulses, and that every cell of the human body is capable of receiving the impulse.

If you well remember this you are going to come to the point when you can dissolve mystery and the mystical, which has been built up round and about human behavior and human reactions, and you can well understand the relation between the mental and the material; and God, the omnipresent, the omnipotent, and omniscient, will be understood without symbolism, metaphor, or wild speculation; and metaphysics will be taken from the field of hypothesis and theory, subject to whims of theorists and preconceived theological interpretations, — and established as a science.

In Instruction 75 we laid it down that there were three distinct groups or classes of forces which played upon the physical instrument, the brain. We have sufficiently explored and explained one group of forces originating in the physical senses.

We are next going to take up what may be termed the organic class of forces.

These are the forces which are inside of the living mechanism called the human body.

We know that we breathe. We know that we drink water, and we know that we consume food, and we know that this creates very distinct forces and that we do not have to have such delicate instruments as the electroencephalograph to measure some of these forces in the body.

At the outset we call attention to the fact that the forces or energies received through the physical senses can be entirely suspended, and man still lives, but we call attention to the fact that when all of the organic classes or forces cease, man dies. Therefore, at the outset we can know that the organic forces are constant and continuous.

It is not our purpose to go deeply into the study of biology and physiology, but to point out three distinct classes of forces acting upon the brain, and that all of them arise from entirely different sources and reach the brain by entirely different routes, and that they have entirely different actions and methods of action.

Once having clearly defined and separated these different forces we are in a position to recognize the particular action which they have and observe that they each can change the mind, or the result produced by the brain.

If a factory made up of a great variety of machines was operated and set in motion by several kinds of power being exerted upon the machines, we would know very definitely that if we change the setting of a machine or something about the machine itself, that we're going to get an entirely different product or result.

There is another observation we want you to fix in your mind. If the machines in a factory were different from the machines in any other factory on earth, you would know that the product was in some way different from any other product.

Another observation that may help in the ultimate understanding of mind is that if three classes of power were necessary or were used in the operating of a machine and you shut off or changed even one of the sources of power, you would have a change in the product.

We are more or less familiar with the human mechanism, and we know that we have blood, and that this blood is circulated throughout the length and breadth of the human system from the tips of the fingers to the tips of the toes, and that this circulation of blood is necessary to the maintenance of life and to the well being of every part of the body, and from the very early instructions in this course we know that every living cell is laved, bathed, and has its being in moisture.

We know that only in solution can the body utilize the elements necessary for the maintenance of life drawn from food, water, and the air.

We know too that the environment, the sense observations, perceptions, and impressions, the organic make-up, and the food, and the resultant chemical reactions, and glandular and metabolic make-up of each and every individual in the world is different, just as are their thumbprints, and therefore every individual mind in the world is different, which leads to the observation that each individual is the center of his own universe.

The human body, which is a living mechanism, cannot be fully comprehended in a lifetime of study, but it is a marvelous example of the extreme division of labor to produce given results.

We know that the brain will not function unless the heart functions, and we know that the heart will not function unless the lungs function, and that the lungs will not function unless the nerves also function, and thus we can demonstrate that all of the organs of the living body are dependent upon all of the others.

We know that the organic forces are constantly changing and from our study of the past we know that our thought processes can and do change organic functioning, and it is likewise true that organic functioning can and does change mental processes. For instance; if one by improper eating or eating while greatly mentally disturbed, upsets the digestive system and the digestive system creates certain poisons, and those certain poisons give him a headache——in the manner we have described in one of our instructions——then his sense perceptions are dulled or changed, and thus we have a change in the forces playing upon the brain. Hence we have changed the mind, because the mind is the result of all of these forces playing upon the brain.

We believe it will be very fascinating to you when we reach the point in these instructions where we show to you how the impressions or recordings in the brain are used, assembled, and reflected in thought processes, but at this time our endeavor is to show you the forces that are playing upon the brain to make the recording and impression.

It is a fact that the bodily temperature must be kept at about 98 degrees. A bodily temperature ten or twelve degrees above that is fatal, and a temperature ten or twelve degrees below that is fatal, and yet when you are working in a normal temperature of around 72 degrees, 98 is your temperature, and if you step out into sub-zero weather, 98 is also your temperature.

The liver turns sugar into the blood in increasing quantities as the temperature goes down, and we have bodily balance. When you again go into a warm temperature, that sugar must be taken from the blood stream; otherwise the bodily temperature would rise to dangerous heights.

Of course heat, cold, altitude and many conditions affect organic functioning - but in it all and through it all, organic conditions originate and disseminate a class of forces which affect the brain (and hence make a change in it) and thereby mind (a result of forces playing upon the brain) is changed or altered.

We avoid so far as possible, in our explanations, use of technical terms - but let us give you one example of changed conditions affecting organic functioning and trace the effects to the brain - and mind functioning.

A decided individual variation exists with regard to the ability to withstand high altitudes. In general, at an altitude of 6,000 to 9,000 feet (zone of reaction) various compensatory mechanisms involving the circulation and respiration are found. Mental symptoms usually do not occur, although tense or psychoneurotic persons may have sudden syncope (faintness or swooning) probably unrelated to anoxemia. (Anoxemia is a bodily condition due to deficient aeration of the blood).

At 12,000 to 15,000 feet is the zone of failing compensation. Mental symptoms occur with a rapidity depending on the man's susceptibility to altitude sickness, the degree of activity being carried out, the temperature, and other factors.

Fatigue, alcohol, tobacco, and nervous tension may greatly influence power of resistance to the deleterious effects of anoxemia. There may be a decrease in acuteness of hearing and vision; blunting of judgment; impairment of critical perception; indolence of thought; forgetfulness and absentmindedness; unmotivated changes in mood, and diminution or loss of the will to perform certain duties, though ability to perform them may be essentially unimpaired. The man himself is often unaware of these effects.

The next zone, between 18,000 and 24,000 feet, is the critical zone. The symptoms previously mentioned are exacerbated — or increased in violence. Muscular twitchings occur, then local and then general convulsive phenomena; amnesia, and finally come occur. The last zone is the lethal zone. The reactions are reversible by the administration of oxygen if given in time, and before permanent and irreversible changes in the nerve cells occur.

In modern high altitude flying, an uninterrupted supply of oxygen is indispensable to all operations carried out at altitudes above 12,000 feet. A grave danger at high altitudes is the development of gas bubbles in the tissues (aeroembolism), due largely to the liberation of nitrogen by fatty or fibrous tissue. At an altitude of from 58,000 to 65,000 feet the blood "boils" and gas emboli occur. At lower altitudes gas escapes from the tissues and may be dangerous.

At high altitudes acute pains often develop in or near the joints, due to accumulation of gas bubbles in the tissues.

At a simulated altitude of 12,000 feet in a low pressure chamber, fine, champagne like gas bubbles escape from the spinal fluid for several minutes up to 28,000 feet. Roentgenograms show no free air in the brain ventricles at alti-

tudes of 30,000 and 40,000 feet. The breathing of pure oxygen with exercise before ascent lessens the possibility of aeroembolism.

Grave accidents to the vascular supply of the brain have occurred, presumably due to gas emboli. The execution of turns and dives may produce anemia or even structural damage in the brain. The unusual environment plus the great strain involved in flying may produce chronic fatigue sooner than most other occupations. If this continues, a neurosis may occur.

We have in early lessons pointed out that when fear comes upon one the body is automatically prepared to run or fight, and we could go on endlessly showing organic forces operating in many strange ways, the object of all of which is to maintain or create bodily well being, and the brain is one of the most delicate of the human possessions, and organic forces are constantly playing upon it.

These organic forces that act upon the brain may be chemical, electrical, or physical.

It is at this point that we want to make a most important observation. The brain, we repeat, is a thing physical, and it of itself is not intelligent any more than is the heart or the kidney or the liver intelligent.

This observation is made that we may ever keep in mind that mind is not in the brain, but is a product of it.

In the next set of instructions we are going to give you the third class or group of forces that play upon the brain to create what we call mind, and then we are going to take up and explain the operation of physical mechanisms and instruments in common use with which you are familiar, in order to show you results that are produced by the transformation of one kind of force into another kind of force, so that when we explain how the mind functions and show you the connection between the mental and the material, it will be clearly impressed upon your mind, and then you are going to have a consciousness of why the instructions furnished you during the weeks and months past are scientific statements and not speculations.

--- and we believe that when you have a clear concept as to how your mental pictures and your heart longings are brought to realization in the physical world, you will be better able to demonstrate the truths we teach and you will have a greater appreciation of life science, and the fact that your mind and universal mind are one and the same.

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The chemical constituents of man's body are worth about eighty cents. But those same elements animated by life may prove worse than useless; a curse to their fellows; human liabilities; the Neros, Napoleons and Nazis; men minus God. Or they may become benedictions; inestimable assets; a credit to their Creator; the Pauls, the Pasteurs, the Kagawas, the Carvers, the many magnificent mothers and so on—man molded by His Maker.