

PAN PAMPHLETS



MEDICINE AND
DIALECTICS

BY

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MEDICINE AND DIALECTICS

The following pages contain the substance of an address given by Professor Edmond Székely, Director of the International Cosmotherapeutic Expedition, at a Summer School of Cosmotherapy, held under the auspices of the Expedition, at Rio Corona, Ciudad Victoria, Mexico, in September 1936.

MY lecture to-day may appear rather abstract and unpractical, but on the contrary it is the most practical part of the whole course. For we are this morning concerned with the *method* of the course. Now, the chief consideration in any system, medical or otherwise, is the method; good methods lead to good results. And the value of the system depends on the sum total of the results which it achieves. The most important thing in cosmotherapy (cure by the cosmic, solar, and terrestrial radiations) is its method, for it is this which differentiates it from other systems. Cosmotherapy as a system resembles other systems, but its method is totally unlike those of other systems.

It is no mere chance that modern philosophy begins by dealing with method. Descartes' *Discourse on Method* marks its commencement. All modern philosophy is based on method, and not only philosophy, but all the modern sciences, too.

We must learn to look at things through a new pair of spectacles—the spectacles of modern scientific method. If we examine the world with these glasses it will be revealed as an entirely new world—not only in the sphere of politics but also in that of science.

Classical science saw only the external appearances of things; it saw chairs, tables and pictures, as we see them when we take a glance round the room. But under a powerful microscope we shall discover that a table is not a static and rigid thing, but a conglomeration of millions of molecules, and even more millions of atoms and ions, which whirl continuously with great rapidity, with a velocity like that of the stars in space. In final analysis we find only one thing—*motion*. Matter itself is nothing but a form of motion; it is composed of molecules, atoms, etc.; it is a system of many motions grouped around central points and held together by the play of interrelated forces. Matter is whirling motion. Sometimes motion is not circular but straight, in which case the motion is force. Thus we find that straight motion is force, while circular motion is matter. The rays of the sun have a straight motion; a table is a system of circular motions of many billions of atoms. Air also is made up of billions and billions of atoms. The current of air through a room is a current of atoms and molecules constantly changing their position. In a room there is nothing motionless; all is movement. And the same is true of the universe.

The Greek philosopher Archimedes said: "Give me one fixed point anywhere in space and I will move the universe." But that point was never given, because there is no fixed point in the universe.

There are also people here to-day. But under the microscope we see billions of living cells in perpetual movement and a constant flow of blood, and also millions of nerve cells (neurons) moving at great speed. There is no fixed point. There is also voice in this room—which consists of propagating radiations, of acoustic radiations. These arouse motions in the neurons—our thoughts and ideas. Thoughts, too, are currents and radiations, a form of radiant energy of the nerves. There are also diverse temperatures in the room—constantly changing temperatures of air and of bodies, which have a tendency to equalize themselves. Then there are magnetic currents. Every human organism has its magnetic currents, just as the atmosphere has its electric currents. In this room there is a constantly moving group of radiations, and so it is in the universe.

We have molecular and atomic energies moving in these objects and we have thermic, optical and acoustic radiations; we have also magnetic and electrical radiations and constant nerve and thought radiations of various organisms. We live in a constant dynamic medium. We may say that things move rather than that they exist. Only motion exists; all other appearances are the manifestations of eternal never-ending motion.

We have established that everything is dynamic motion without fixation. This apparently abstract fact has very practical consequences.

The entire history of human culture is the antagonism and struggle between two points of view—between a static world concept and a dynamic world concept. Let us go back several centuries in world history. Greek philosophy is the basis of all western culture. The philosophies of the middle ages renovated the classical philosophies, while the modern sciences have verified them.

One hundred years before Socrates there was a bitter struggle between two philosophical systems. On the one hand was the philosophy of Zeno the Eleatic. His thesis was: "En kai pan"—one and all. In his conception only one thing existed; the universe was a single static and immovable object. Motion did not exist. Everything that is movement is only appearance. The arrow shot through the air does not move, but remains fixed. He substantiated his view by saying that at any given moment the dart was in one point of space, and that if during the whole period of flight the dart is always at each moment at one point in space, though at many different points, it is nevertheless at all times fixed at one given point. Similarly he held that if Achilles were to race with a tortoise which had a yard's start, Achilles could never overtake the tortoise. This was an absurd theory, yet it was

left to Hume to prove it so.

"A" always equals "A." This is the principle of mathematics, and we know that if the mathematical foundation is false, all else is false. For physics, chemistry and biology are based on mathematical principles. Pythagoras tells us that numbers are the basis of the universe, while for Galileo "Nature is written in mathematical language." If all is motion, undulating motion—a series of valleys and mountains—it is possible to express everything in mathematical formulas.

The foundation of mathematics was the conception that "A" equals "A," and this would be so if things were fixed and unchanging. But modified, it is as follows: "A" equals "A" plus all the numerous correlations round "A."

Then came the great revolution in mathematics. Two great geniuses appeared simultaneously—Newton and Leibniz, the creators of differential and integral calculus. The calculus stated that "A" does not equal "A," but that every number constantly changes and has varying values. Modern sciences use and apply calculus. The International Cosmotherapeutic Expedition has applied it in its medical work, but has given the results in non-mathematical language so as to make them accessible to people without knowledge of higher mathematics. Previously, medicine was based on the old static conception of mathematics—on the false theory that "A" equals "A." The revolution in medicine has therefore had to wait on the revolution in the basic science of mathematics.

Opposed to Zeno was Heraclitus of Ephesus. He said: "Everything is flux and reflux." "Panta rei." And the whole of Greek philosophy is a struggle between these two systems—and the struggle continues to-day unabated.

The two rivals debated publicly in Athens. Zeno voiced his conception that nothing moves. He used irrefutable arguments to substantiate his theory. When he had finished, Heraclitus stepped forward, but made no verbal reply to Zeno. He did not dispute Zeno's contention, but instead he began to move continually. This was his only argument.

All the scientific systems have been based on the absurdities of Zeno. Static science has reigned for many hundreds of years. But in the last few decades Heraclitus has been rehabilitated. Theory supports Zeno, but practice upholds Heraclitus.

Sterile, theoretical discussions are a waste of time; we must give practical answers in order to achieve practical results.

Official allopathic medicine is completely static. It has a voluminous literature and millions of arguments to support it which are dogmatically repeated in every official institution. And just as Zeno had unanswerable arguments that nothing moves, yet Heraclitus moved, so does the new natural

medicine—cosmotherapy—cure diseases regarded as incurable despite the arguments of official medicine. We must not argue, but show by practical results that we are right.

Practice is fact. Theory is only thesis. But practice is thesis plus verification. Practice is the more important. For if we are strong in practice, we are also strong in theory, but the converse is not true. Official medicine is strong in theory, but impotent in practice. The minimum of theory needed is the method. This method is the key with which every lock can be turned, if the key be really perfect. So first and foremost we must have the perfect key able to open every lock. Method is the most important thing in medicine and healing. The locks to be opened are human organisms. The key is a good therapeutic method. We cannot advance in the field of healing until we perfect the key.

If we accept the classical conception that all is static and motionless, that "A" equals "A," that change is impossible, then all science is in vain. If there are incurable diseases, then it is vain to try and cure them. If the earth is immovable in space, then there is no possible way of calculating the course of the earth in space, for immobile objects have no course.

If we contend that there are no incurable diseases, scientists will wish to burn us, just as their ancestors wished to burn those who declared that the earth moved. Yet every year we establish that many so-called incurable diseases *are* curable, in spite of all the arguments of official medicine to the contrary.

Official medicine holds that there are diseases of the foot, eye, ear, stomach, etc., and that each requires a different medicine and treatment. If a single organ is diseased, that single organ must be treated. At first sight this demand seems practical and logical, and it would be right if all the organs of the body were carved from wood or stone and fixed in place with wire and nails. But in reality all the cells of the body are interlaced and in constant motion. The movement of the blood binds them all together. The currents of atoms forming the cells bind all the parts of the body into one ever-moving system. The human organism is therefore a single totality. It follows, then, that if one part of the body is disordered, it is not sufficient to cure that one part, but it is necessary to pay attention to the whole organism. All the cells have a reciprocal influence upon one another. We must not confine ourselves to the treatment of one part when the whole body needs attention.

Official medicine is the putting into practice of the static concept of Zeno that nothing moves. Cosmotherapy—cure by the cosmic, solar and terrestrial radiations—embraces the theory of Heraclitus that everything moves, a dynamic and not a static philosophy.

Not only are the human organism and nature dynamic unities, but there is complete dynamic unity between the

human organism and terrestrial nature; between terrestrial nature and the solar system; between the solar system and the galactic system, and between the galactic system and the ultra-galactic system. There is a perfect dynamic unity between the human organism, nature, earth, sun and the entire cosmic system.

The connecting link between man, earth, sun and the cosmos is the radiations. In the great eternal and unending ocean of radiations man, earth, sun and cosmos are completely unified. They make reciprocal interchange of their various energies, all of them radiating and absorbing energies, in the microcosm and in the macrocosm.

Let us examine the constitution of an atom. The microscope shows us that an atom is a circular motion round a centre, a miniature solar system, a motion as that of the planets round the sun. At times atoms disintegrate and their energy changes; in the process of disintegration their motion in the form of energy is passed on to the external world—circular motion becomes straight motion. The contrary also happens: straight motion becomes circular motion, and then energy changes into matter. The metabolism of the universe is the application of these two changes of motion. Straight motion becomes circular motion; circular motion becomes straight motion. Energy is transformed into matter, and matter into energy.

The appearance and disappearance of atoms has the same aspect as the appearance and disappearance of planets. Matter in all its forms is radiation. The human organism is a perfect model of the universe; the cell is a perfect model of the atom. Every cell of the body has its own radiations and the entire human body is a conglomeration of all the cells. The human radiations of an individual consist of the separate radiations of the cells which constitute that person. In the light of modern science man is a radiating machine, as are the sun and other heavenly bodies in the universe. The whole universe is eternal movement—be it sun, planets or human organism. They are all merely limited motions, while the boundless universe is unlimited motion. If the equilibrium is upset in the universe, cosmic disasters occur which destroy planets or whole solar systems; if the equilibrium of the human organism is destroyed, catastrophes happen in the body, such as disease and death.

Health is simply a state of equilibrium between the radiations of the cells of the body. Sickness is merely disturbance of the equilibrium between the radiations of the cells of the body—internally among themselves and externally in their relations with the solar and cosmic radiations. External equilibrium assures the longevity, while internal equilibrium assures the health, of the human machine. The science of health consists of the technique of maintaining perfect equilibrium between the human organism and the human, terrestrial, solar and cosmic radiations. This is the practical technique of health and longevity.

I have mentioned the two world concepts—the static world concept of Zeno and the dynamic world concept of Heraclitus. The basis of the static world concept was that "A" equals "A," while that of the dynamic world concept is that "A" equals "A" plus all other correlations round it. We have seen how the whole history of human culture is a struggle between these two conflicting theories. Throughout the history of civilization we find protagonists of both concepts, particularly in the sciences. The difference between the two outlooks marks the difference in approach to all problems.

The partisans of the static world concept believe in the unchangeable absolute. They say: "A thing either exists or does not exist." If it exists, it exists as it is; we must accept it as it is, without any change. They have never apprehended the relativity of things. From this world concept have sprung all the fanatics of every age. They declare: "We possess eternal, absolute truth; all other truths are false." They say: "There is only one truth—*my* truth, which all must accept without discussion." These were the men who wished to burn Galileo and did burn Giordano Bruno. Out of this static world concept have come all the inquisitions and political terrorism we meet in human history. Its upholders are exclusivist and intolerant, they are those who are capable of massacring thousands of human lives for the difference of an iota. The belief in the absolute, the static world concept, is extremely dangerous. Those who hold it say: "I know all; I have the absolute truth; I have no need to search further. We must not experiment or search, we must accept what we have." This is one-sided dogmatism. When these tendencies hold sway in the realm of science, then there comes a sterile period in scientific progress. When these tendencies are in power in politics, there are wars and terrorism. When they come in power in religion, there is fanaticism and persecution.

The dynamic world concept which does not believe in an absolute says: "Everything is in constant motion; everything changes; everything is relative. What is a truth to-day may to-morrow prove to be an untruth, just as the truths of to-day are no longer truths." This concept is summed up in the Latin line: "Times change and we change with the times." In every age there have been certain dominant truths, but these truths were merely hypotheses, and when practice showed these truths to be untruths, more perfect hypotheses appeared in their place. As the field of human experience becomes larger and larger, so does the comprehension of all phenomena become clearer and clearer, and our truths become more and more perfect.

In the era of classical astronomy the system of Ptolemy held the field. He said: "The earth is the centre of the universe—it is always at the same point—it never moves." This was the static concept. His disciples also contended that the heavens were fixed in place like a gigantic tent. And for centuries this was the accepted view of the universe.

Then long afterwards appeared Galileo asserting that the earth moved. He was attacked by the supporters of the static

world concept who were angry at his attempt to destroy their truths and sought to burn him. Then came Copernicus and Kepler who showed that not only the earth, but all planets move. Thus was human truth and experience continually enlarged. Later still was Newton who, with practical formulæ, demonstrated the precise movement of celestial bodies. Einstein followed, and further perfected the system and method of Newton, getting rid of the erroneous parts of Newton's conception and opening up vast new fields. Truth does not stop, but is an endless path of evolution. The road so far built by Galileo, Copernicus, Kepler, Newton and Einstein, and many others, is only a fragment of the way to be traversed. Human science is very young. An elementary school child to-day probably knows more than the sages of ancient Greece, while the child of to-morrow will know more than the wisest of contemporary civilization.

The larger the part of the universe that we understand, the greater our knowledge. The larger the number of generations that accumulate their understanding, the more perfect does our knowledge become. We must remember that the history of human culture covers only a few hundred generations; we must not, therefore, claim to possess absolute truths. We have no right to be intolerant of truths other than our own. We have no right to be dogmatic and prejudiced against other systems. We must examine each law, each phenomenon and each experience without prejudice. We must remember that everything is relative and that some factors complement others. Such must be our attitude towards other systems. We must strive to be liberal and tolerant, and to search where and when in the field of culture there may be something worthy of our knowledge. If to-morrow we find something better, we should accept it immediately, for only practical results can show what is good and what is evil. By its fruits do we know the tree; good fruits come from a healthy tree, while inferior fruits come from a corrupt tree.

Let us return to matter. Everything is motion, or more concretely, radiation. Straight radiations are the various forms of force, while circular radiations are the diverse forms of matter. After force and matter let us turn to time and space.

What is space? There have been many conceptions held about it. The classical concept of space was that it was an empty thing. Then science discovered that there is no emptiness, but that there is something everywhere—atoms, radiations, etc. It was in the philosophy of Kant that philosophy reached its peak in matters pertaining to time and space. Kant said that time and space are just a form of our perception or mind, and that they do not really exist. This philosophical contention about space is unacceptable because it is contrary to all experience. The classical conception is rejected because science has established that there is no emptiness, but a diversity of densities (gases, solids, liquids, etc.). Cosmotherapy goes a step further and establishes that there is an ultra-etheric state. In brief, space is nothing but diverse radiations, one beside another. Space is the

juxtaposition of radiations. Certain radiations are stronger than others, some are observable, some are not observable, but space still remains simply radiations one next to the other.

What is time? Many systems say that time does not exist, that there are only sequences of phenomena, one after the other. Other systems say that *only* time exists and that time is the creator of all events. Our chronological system is based on the motion of the earth and of the sun. It is based on motion—on terrestrial and solar radiations. Thus we see that time also is nothing but radiations, one after the other. A succession of different radiations.

Space is radiations one beside the other. Time is radiations one after the other. Space has three dimensions, while time is a fourth dimension. Every phenomenon that we measure must be measured with these four dimensions. So when we examine any phenomenon or law we must observe the following points:

- (1) Is it a straight line radiation—a form of force?
- (2) Is it a circular radiation—a form of matter?
- (3) In what part of space is it located?
- (4) When is it located in time—before and after which radiations?

In this way we can define every radiation and phenomenon.

When we examine any phenomenon and its relation to energy and matter, together with all the temporal and spatial forms of radiations, then we are adhering to the principle of totality. From the dynamic principle that everything moves is derivated the principle of totality—the totality of all correlations which complement each other, which are one after the other, which cause one another and which result one from the other. From the principle of totality springs the principle of cause and effect.

We can see that the static concept is wrong when it says that "A" equals "A," because "A" equals "A" plus all other material, energetic, spatial and temporal correlations around "A." Every point in the universe influences every other point by its reciprocal motion. Hence the existence, significance and value of every point depend on the totality.

In our organisms there are billions of atoms which move in themselves and also move within the larger molecules, which in turn move in the chemical elements that are in the body. These chemical elements themselves move in the cells of the organism. Many diverse radiations pass through the cells each instant, while the human organism has its own motion and is also carried along in space by the motion of the earth. The earth bears the human organism at great speed round the sun, while the sun itself moves with great rapidity bearing the

whole solar system in its train. And the whole world system of which our solar system is a part also travels in space at enormous velocity. Proceeding outwards, the entire galactic system travels at immeasurable speed in cosmic space, these together with the ultra-galactic worlds moving rapidly in unknown directions.

Every phenomenon exists in a system of multiple motions. And all these motions have the form of radiations. We may classify them as follows:

All radiations existing in the human organism are *human radiations*.

All radiations existing in the milieu of our planet are *terrestrial radiations*.

All radiations existing in the centre of the solar system are *solar radiations*.

All radiations which come from beyond our solar system are *cosmic radiations*.

We proceed from small to great—beginning with human radiations and continuing with terrestrial, solar and finally cosmic radiations. These radiations are not all independent, but are interlaced with one another. The stronger radiations pass through the weaker radiations in the human organism; these stronger radiations are the solar and cosmic radiations. These classifications into various radiations are only made to facilitate calculations and the practical application of them. We must not fall into the error of the static concept and say that there are no other radiations than these. When we examine the cells of the human organism we must differentiate between the human, terrestrial, solar and cosmic radiations in it. We must measure precisely how these different radiations influence one another; we must establish whether they are straight line or circular line forms (energetic or material), whether they are coexistent one beside the other, whether they come after one another, whether they are the cause and effect of one another, and in what manner they increase or decrease one another.

We have seen that the principle of totality has two forms: totality in space and totality in time. How are we to apply the principle of totality in space to the human organism? If we examine the environment of man, we find that man lives in the midst of the atmosphere. The atmosphere is a zone. There are also other zones in space—those of the hydrosphere (water), lithosphere (earth's crust), and pyrosphere (earth's interior). Beyond the atmosphere is the stratosphere (sphere of sun) which also influences the human organism. Beyond that again is the cosmosphere (source of cosmic rays). All these zones or spheres send radiations into the human organism. This is the application of the principle of totality in space. All these spheres are next to one another and also mixed with one another. If we take the mathematical symbol "A" as

representing man, then we see that "A" does not equal "A"—that man does not equal man simply, but that man is equal to man plus all these different spheres surrounding him, because without the atmosphere, stratosphere and cosmosphere, man could not exist. The human organism would not be a human organism in the cosmosphere; in one instant it would be disintegrated into infinite particles and no longer be a human organism. The extreme cold of infinite space, its lack of oxygen, of water and of terrestrial atmospheric pressure, the lack of innumerable factors necessary to man, would in a moment nullify the human organism. If we pull out a tree by the roots it will die. The tree has its roots in the solid part of the earth; the roots absorb water from the hydrosphere; the foliage absorbs air and various radiations coming from the atmosphere and stratosphere. In like manner man is set in the midst of these spheres and needs all the special radiations of each of them. The human organism cannot exist outside its natural environment.

Next let us consider the principle of totality in time. It is as impossible to remove man from his position in time as it is to remove him from his position in space. Removed from these two positions it is impossible to understand man and his organism. The present is the result of the past and the future will be the result of the present. In order to diagnose a human organism it is necessary to have a general knowledge of its history since the moment of birth. For everything that passes through the organism leaves traces; nothing that happens to a man from the time of birth is erased. The human cells register everything precisely. The nervous system with its complicated system of billions and billions of cells absorbs and registers every feeling, thought and idea, every tendency and impression of the external environment. The vibrations of the cerebro-spinal system go through all the cells of the human body. An individual who all through life has had unpleasant thoughts and feelings will have them registered in his face; he will have a dark, pessimistic face—with deep lines which almost speak. The lines on the face of a man who has always had pleasant thoughts and feelings will be entirely different. The nervous system will react differently in either case. In the first case there will be constant strain and weariness, in the second constant vitality and freshness. If we place both individuals in the same situation they will react quite differently. The influence of the past will determine their behaviour. This illustrates the operation of the principle of totality in time. But we must go still deeper. All heredity illustrates the influence of the past. The past influences the organism in two ways: all the experiences of the individual are termed ontogenetic experiences, while those of his ancestors are called phylogenetic experiences. To apply the principle of totality in time we must always study these two experiences of the individual whom we are considering.

The ontogenetic experience of the individual may be known by applying the psycho-analytical method first developed by Freud, and also the individual psychological methods of Adler. With regard to phylogenetic experience, the

International Cosmotherapeutic Expedition has, during the last three years, discovered how to revive the experiences of ancestors through the experience of the individual. By means of psychotechnical apparatus and methods we measure exactly the coefficient of the abilities of an individual, together with the memory, intelligence, power of concentration, and all his psychic qualities. Certain correlations make it possible to reconstruct the equivalent qualities of the ancestor from whom he inherited them. For over a year our Expedition measured the psychic qualities of the Polynesian and other races.

There are four general classes of heredity:

(1) Direct heredity—in which the newborn inherits equally the qualities of both father and mother;

(2) One-sided heredity—in which the child inherits the qualities of only one of the parents;

(3) Atavistic heredity—in which the child inherits, not from the parents, but from an indirect or remote ancestor, an uncle, grandparent, etc.

(4) Periodic heredity—in which, for instance, if an ancestor had a certain experience in his fortieth year, his descendant will have the same experience exactly in his fortieth year also.

Thus we see that the past has an enormous influence and that it manifests the importance of the principle of totality in time.

Having examined the experiences of individuals and their ancestors, we must next look at the different species from which the human race developed. The work of Darwin and Lamarck shows clearly the family tree of the human race. And embryonic development during pregnancy demonstrates the various steps in human evolution, while certain of our organs plainly indicate that we inherit certain qualities from the species that preceded us. This evolution exists not only physically but psychologically. We can see from this why in the human organism feelings are always stronger than thoughts. Human thought is only a few thousand years old, while the sentiments are much older, having an age of several million years. Man has been in possession of thought since the age of *Homo Sapiens*, and in a small degree since the time of *Homo Cromagnonensis* and *Homo Neanderthalensis*. But feeling and instinct existed thousands of years previously. The human race inherits many of its qualities from the species that preceded it.

We must next consider how life came to be upon our planet, for we cannot understand life and vitality unless we examine the origin of life.

The static world concept looks at things only as they are at the present moment. But we have to study not only existent

things, but the manner in which they came into being. And the same with life and vitality.

Let us take the problem of the genesis of life on the earth. According to the official view, life began in the sea, and the first unicellular thing alive was the amoeba which appeared in the ocean. Our Expedition's researches have led us to very different results.

The main precondition of life is a favourable temperature. There are two limits of temperature above and below which life cannot exist. A too high or a too low temperature destroys life. If we apply the principles of our method to the question of the origin of life, we must reconstruct the earth as it was many millions of years ago.

When the first favourable temperature for life appeared on the earth, the solid part (lithosphere) of the earth had an excessively high temperature. Moreover, it was not completely solid, but was halfway between solid and liquid. The masses of water (oceans) were in contact with this gradually hardening shell. Naturally the water was extremely hot through contact with this fiery ball. The water was converted into vapour which rose rapidly to the higher regions as gigantic geysers. In that state of affairs no life was possible in the ocean, as no animal, unicellular or otherwise, could live in the burning heat of that water. When these millions of geysers shot the steaming gaseous waters into the higher regions of the atmosphere, the temperature of the water became lower as it came into contact with the higher regions which were cold through their proximity to the ether of cosmic space, where the temperature is too low to sustain life.

There was thus a region in the higher atmosphere during the primordial geological ages when there was too low a temperature in the high regions and too high a temperature in the lower regions, for life to manifest itself. Life appeared between these two limits of temperature in the vaporous levels of the atmosphere. It did not first appear in the oceans, as is generally supposed.

The first unicellular living thing, the amoeba, had a very minute body and a consistency between the fluid and the gaseous state. Its life could only be of short span because it had only two possibilities: either it appeared in a current or geyser shooting upwards to a too low temperature in the proximity of the ether, in which case it was killed by extreme cold, or else it appeared in a downward current and fell into the boiling waters of the ocean, where the extreme heat would destroy its life. Even to-day we know of insects which live only a few hours. The life of the early amoeba was similar.

Later the amoeba developed several external organs which served to defend it against either current and enabled it to remain at a level where life was possible. This task of remaining at a safe temperature was lightened as the external part of the earth became more solid and cooler and insulated

the atmosphere from the interior heat of the earth. In this way the oceans and atmosphere became gradually less warm with a consequent widening of the zone of life. The constant currents of geysers and water of the oceans became milder, and it was finally possible for life to descend from the air into the ocean. The ocean was the second station of life; the first was the vaporous primordial atmosphere.

Later still, life left the water and occupied the land when that appeared. At first life remained at the water's edge and the aquatic animals, while acquiring organs for use on dry land, retained their aquatic organs. This was amphibian life. After the amoeba, the fish and the amphibian, comes the vertebrate. The vertebrate inhabited the steppes, those huge prairies which were just beginning to appear on the surface of the earth. They either ate grass or devoured one another. The superior forms of the vertebrates began to evolve, and those which evolved most towards perfection were not carnivorous but herbivorous. They carried life into the forests which were then appearing on the earth. When life moved from steppe to forest, the superior vertebrates began to eat not only grasses but also the fruit of trees. Several varieties of the race which were compelled to climb trees to procure their food developed special organs. In this way appeared the various species of the simian family. They fed on fruits then just as they do to-day. Because of its constant climbing, that race became used to the vertical position, and when they descended to the ground they still retained it. In this way appeared the primates. Gradually certain superior branches of the race lived more on the ground and less in trees. The vertical position became permanent. Among them were the ancestors of primitive man. Next came aboriginal man, followed by *Homo Neanderthalensis*, *Homo Cromagnonensis*, and finally *Homo Sapiens*.

There were many intermediate stages, but we must here confine ourselves to the chief stations of human evolution. Only *Homo Sapiens* is capable of concentration of thought; only he has a perfected nervous system which gave him his superiority over all other species on the earth. He has not muscular superiority, but superiority of his nerve cells which evolved through millions of years because of his life in harmony with the laws of nature. The lateral branches of the race which were living less in harmony, or even in opposition to these laws, little by little disappeared. For instance, the ichthyosaurus, dinosaur, etc., now exist only in museums.

The reader may be asking why it is necessary to know the origin of species and of life for the practice of medicine. The answer is simple: man of the present time inherits something from every ancestral race from which he has developed. Let us for a moment examine the natural environment of all previous species. The first environment of the first form of life was air. The medium of the second form of life was water; of the next form of life, earth; of the fourth form of life, the vegetation of the steppes; of the fifth, forests, trees and fruit. If we look at the present needs of the organism we can see that its needs are air, water, earth, plants, trees and fruit, with

their accumulations of rays of the sun. Thus the needs and preconditions of contemporary life are very precisely determined by the diverse phases of previous forms of life. We therefore find that the laws of nature are revealed to us by the experience of previous species. Only those factors can sustain life and health which assisted the origin and genesis of life. The past as a form of the principle of totality in time shows the fundamental laws in regard to air, water, vegetation, fruits and the solar energies which they contain, and the various organic energies in earth and vegetables. It is only with a knowledge of the past that we can have precise knowledge of human vitality, know how to sustain the health and vitality of the organism and cure the diseases from which it may be suffering. There is a Latin proverb which says: "History is the teacher of life." To apply this proverb well, we must understand the history of the earth, of all the species, of life as a whole, and not merely the history of the last few thousand years, because this later history teaches us little, while the complete history of life on earth teaches us everything.

We must complete our study of the problem of life by examining life in the cosmos as a whole. For we must go down to the bottom of every problem. Such is the importance of the principle of totality in time.

There are several theories about the origin of life. Some say that life first reached the earth by coming in a meteor from some other planet possessing life, as life can only come from life, and matter only from matter. Organic life could not come out of inorganic matter in the earth, but only from organic life in other planets. This is not a complete solution, but merely a postponement of the answer, because if the first living cell came from another planet, then whence did life come to the latter, and so on.

Another theory is that life sprang up of itself, independent of external forces—the theory of ontogenesis. There are many arguments against this view. If at one time, millions of years ago, it was possible for life to appear spontaneously, why does the same thing not happen now?

Both the ontogenetic theory and the meteor theory are weak and very contradictory. In order to fortify them, various intermediate theories have been advanced. It is suggested that the first living cell arrived from other planets, but possibly not in material form, but as a current of pressure through space. This hypothesis is not very strong or well-founded. Why has the problem hitherto escaped solution? Simply because the question itself has not been properly formulated. The question was asked in accordance with the static world concept that "A" equals "A." Looked at from this point of view a thing is either alive or not alive, and similarly with an organism. Its method of thought is rigid.

But if we examine the problem in the light of the dynamic world concept we can establish that there is no absolute line

of demarcation between the world of the living and the world of the non-living. There is constant evolution and interchange between the organic and the inorganic worlds. There is a natural and cosmic law that life is a quality of matter and of energy. In all forms of energy and matter there is potential life in latent state; if certain favourable preconditions appear, then those latent possibilities become a reality and manifest themselves. If the favourable preconditions appear, then life also appears automatically.

Life, like radiation, magnetism, electricity, etc., is a function of the cosmos. Wherever there is energy or matter there is in latent form the possibility of life. Just as there is a great cosmic ocean of radiation, magnetism, gravitation, etc., so is there also a cosmic ocean of vitality. Life is a form of radiation no less than electricity and gravitation. And in the same way that in certain conditions these radiations do not manifest themselves because other forces paralyze them, so life does not manifest itself where the lack of favourable preconditions prevents it.

We have seen that the first favourable precondition of life is temperature. When a favourable temperature appears, life also appears. Organic life does not exist in the sun, which is an ignited gaseous globe; the temperature is too high. Nor does it exist in the moon, because the temperature is too low. We have in them a picture of the past and future of the earth. Until the earth became cool, life could not appear in it; when the earth has lost its heat and become as cold as the moon life will cease to exist.

The earth is now living its life of millions of years at a medium temperature between these two extremes. The reign of vegetable, animal and human life is now on earth. We can say of all the planets in cosmic space that life only exists in those that enjoy a medium temperature. It is only in a very small number of planets that the preconditions favourable to life exist. Our planet belongs to the favoured minority that sustain life.

What are the other favourable preconditions besides temperature? Atmosphere appeared first on earth and in it appeared the first forms of life. Life without atmosphere is impossible.

We next established that this primordial atmosphere was vaporous, saturated with water. Life is not possible without water. In addition to air and water there was the potent force of the sun. The interior heat of the earth is not sufficient to sustain life. The earth is the child of the sun and needs to draw nourishment from it. The body of the earth is derived from the sun and ever since it parted from its parent it has continued to draw its nourishment from the same source in the form of thermic, luminous and electromagnetic radiations.

Summing up, we may say that the first favourable preconditions for life on the earth were: (1) temperature, (2)

atmosphere, (3) water, and (4) sun.

But there were other preconditions. From the water, life migrated on to the earth. Without earth, life could not exist, because the solid crust of the earth (lithosphere) is an insulator which prevents the fiery centre of the earth from consuming life by its great heat. The earth passes its chemical elements through their roots to the plants which nourish life. In the absence of vegetation, life could not have survived on the original steppes.

We are now in a position to formulate the law of life: "When the favourable preconditions appear, the virtual and potential life lying latent in inorganic matter becomes organic life."

All living forms of matter and energy are mutually interrelated in cosmic space. There is inorganic universal gravitation and organic or vitalic universal gravitation. The former, by its force, pulls everything towards the centre of the planets, because the planetary centres are the centres of inorganic gravitation. On the other hand, organic gravitation pulls everything towards the surface of the planets in the opposite direction to inorganic gravitation. If we throw a stone in the air, it is the servant of inorganic gravitation, and it will fall to the ground. But a plant growing, shoots upwards in a contrary direction. The movement of beasts, the flight of birds, are opposite to inorganic gravitation. If inorganic gravitation conquers organic gravitation death supervenes, and plants, animals and human men disintegrate and fall back to inorganic matter. Life is a constant struggle between organic and inorganic gravitation, a struggle that has lasted on earth for millions of years. Birth and death, death and birth. The same process goes on on a larger scale in the entire cosmos. Life and death are opposite states and opposite forces. And they are not only in constant struggle, but follow one another in mutual sequence. They are not only contrary, but also complementary to one another. Without the one the other cannot exist. They are correlative, like light and darkness. The most important cosmic law is the law of correlativity. All things which exist, which are opposite, which complement each other, which cannot exist without each other, are called correlative. The mechanisms of the cosmos and of life are correlative. Correlativity is the greatest and most general law in the cosmos, because we see that all that exists exists in correlative form. Nothing exists in absolute form, by itself or in itself, independently of the other parts of the cosmos. Nothing is simply relative—that is, depending on something else. But everything is correlative, and correlativity means mutual interdependence. One thing depends on several factors, but those factors in turn depend upon the one thing. The entire history of human culture is a struggle between the absolute and the relative world concept. The struggle has proved to be unending and without solution, because both protagonists have considered only one aspect of reality. The mechanism of the universe is neither absolute nor relative; it is correlative. It is the same with the human organism. In the

cosmotherapeutic method we apply in practice the principle of correlativity. It has a very important role. It will enable us to solve those problems which appear insoluble, because correlativity is the link between man and the universe, between the organic and the inorganic worlds.

Let us return to the problem of life. The essential quality of life is the power of reproduction. Whatever is devoid of that capacity cannot be called life. Up to the present no one has succeeded in creating life. Life cannot be manufactured in the laboratory.

Life cannot be created to-day because the preconditions favourable to life to-day are not the same as they were millions of years ago. The sun, air and water of millions of years ago were not the same as they are to-day. We must remember the principle of totality in time. The primordial atmosphere was vastly different from the atmosphere we have now. The density of the vapours was quite otherwise. The earth was young—an infant. It is now calm and no longer in a chaotic, evolutive state. All the chemical elements which appeared in its infancy had different qualities. The movements of the atoms and molecules in the different pressures then obtaining were quite different. The earth's capacity of absorbing radiations from the sun and cosmos was quite different to what it is now. All the spheres—stratosphere, atmosphere, cosmosphere—were different. All the processes going on in these spheres were more rapid, as geology proves to us. Astronomers have calculated that the speed of the earth on its axis was different. The earth was then nearer to the sun and moved round the sun faster than it does to-day. Its orbit was shorter. So the earth millions of years ago was a different earth. If we apply the principle of totality in time we see that "A" does not equal "A," earth does not equal earth. Those preconditions which existed then will never again come to the earth, and they can never be reconstructed in a laboratory.

Our study in method is simply a clarification of the various natural laws and their precise formulation. We must give concrete examples of their operation.

Consider an almond. It is planted in the ground; it grows into a tree which will later produce thousands of other almonds. This natural phenomenon teaches us an important natural law, just as the falling apple instructed Newton about the law of gravitation. What happens to the almond? First it is transformed into a tree, while the almond itself disappears. So the almond sacrifices itself to create an almond tree. In precise language it is the negation of the almond. The almond indeed disappears for a long time, but not for ever, because we shall see that the tree will grow and in time bear thousands of almonds. The original almond has not only produced other almonds, but through the evolution of many generations has led to almonds of a higher quality. This process is very common in nature. This great natural law was established by Friedrich Engels who called it the principle of negation and the negation of the negation. He made this law the

fundamental principle of dialectics. The first negation is when the almond disappears to give place to the almond tree. The second negation, the negation of the negation, is when the same almond reappears in the form of thousands of other almonds. This principle is operative equally in the organic and inorganic worlds, in nature and in society. We will now consider another very important principle.

Suppose we have a piece of ice. If we increase the quantity of heat up to 0 degrees Centigrade the quality of the ice changes and the ice becomes water. The solid state becomes a liquid state. If we continue to increase the quantity of heat until we reach 100 degrees Centigrade, the quality of the water changes once again and the water becomes steam. What has happened? The increase of quantity has brought about a change in quality. This very important law was also formulated by Engels who called it the law of the transformation of quantity into quality. The formula is: "A certain increase in quantity brings about a change in quality." Let us take another example, not a physical one, but from the sphere of human activities. If in an organism the quantity of toxins increases up to a certain point, the quality of the organism—its health—is transformed into disease. If we increase up to a certain point the vitality of an organism which is diseased, then the quality of the organism—a state of disease—will change to one of health. We see that the change of quantity leads to change in quality.

History provides us with a further example of the operation of this law. The dialectical principle is applicable alike to the organic, inorganic and social worlds. Every field of existence is subject to the laws of dialectics.

When Napoleon attacked Egypt the French army fought the Mamelukes. Napoleon observed that individually one Mameluke was worth more than one Frenchman, because when two Mamelukes met three Frenchmen, the latter were defeated and killed. The Mamelukes were superior in courage and physical strength. But Napoleon also observed that when a hundred Mamelukes met a hundred Frenchmen, they were about equally matched; and that when a thousand Frenchmen met a thousand Mamelukes, the French won always. This observation of Napoleon was very profound; he applied dialectics to military tactics and this gave him his superiority over the generals opposed to him. His enemies decided statically, while he decided dynamically. By increasing the number of soldiers Napoleon increased their quality. In small numbers the Mamelukes were of better quality, but in large numbers the French were superior. By applying the principle of the transformation of quantity into quality, Napoleon vanquished the Mamelukes. This principle has very often to be applied in medicine.

Another important dialectical principle is that all phenomena which exist have their foundation and superstructure. Inorganic matter is the foundation of organic matter; organic matter is the superstructure of inorganic life.

Similarly psychic activity is the superstructure of organic life; organic life is the foundation of psychic activity. The principle of foundation and superstructure is a very important principle of dialectical methodology. The law can be formulated as follows: "The foundation determines the development of the superstructure, and the superstructure reciprocally influences the foundation." Note that it is the foundation which *determines*, while the superstructure only *influences*. There is reciprocal correlative influence. What is the difference between determining and influencing? If we fire a gun the direction of the shell is determined by the direction in which the gun was fired. If the shell encounters an obstacle, this obstacle will influence the original direction taken by the missile but will not determine it.

Next we give an illustration of the principle of foundation and superstructure. The inorganic chemical structure of our planet is the foundation of earthly life. And earthly life is the superstructure of inorganic earth. Similarly the consciousness of man is the superstructure of his physiological foundation. Thus the earth determines life on the earth, while the physiological organism determines the psychic consciousness. Life on earth influences the earth, but does not determine it, just as psychic consciousness influences, but does not determine, the organism. We shall often encounter this natural law in practical therapeutics. It is a most important one.

Another important law and methodological principle is that abstract truths do not exist, but only concrete truths. For instance, there are many therapeutic systems based on abstract truths. One such system says that milk and eggs are not healthy foods, while another says that these foods are excellent. Both of them are based on abstract truths, because they fail to specify what eggs and what milk they mean. Milk and eggs do not exist in the abstract; only this or that particular milk or egg exists. For instance the milk of the Swiss cow in the Alps feeding on clear water, green grass, and enjoying fresh air and constant sun, is very different from the milk of a cow living in a stable and fed on refuse from human food or on artificially prepared foods, and lacking movement, air and sun. We can easily appreciate that the quality of these two milks will be very different.

And the egg will also vary according to whether the hen moves in freedom and feeds on pure grains and vegetables or is cooped up and fed on refuse and unclean worms. We can see that the precise quality of things is the deciding factor.

Another natural law and methodological principle is the law of causality formulated by that great methodologist, Stuart Mill. He laid down the law of the variation of causes, and this law is applied by all the empirical sciences—physics, chemistry, biology, etc. This law says: "Every effect has a cause and every cause has effects." Owing to the great mixing of causes and effects it is often difficult, if not impossible, to determine what effect belongs to what cause and vice versa.

The fact that a phenomenon comes after an event does not prove that the one was the cause of the other. The medieval argument "post hoc, ergo propter hoc" was a great error. Mill showed what effect belonged to what cause. He said we must experiment with the variation of causes. If we have simultaneous causes we must withdraw one of them and see if any change in the effects occurs. Then we must withdraw another cause and observe the effects, and so on. If we see that an effect disappears simultaneously with one of the causes, then we know that that effect belongs to the cause with which it disappeared. This is the law of the variation of causes. All these laws are laws of methodology and they pursue exclusively practical aims. Let us take a practical example of the variation of causes. A sick person eats a variety of foods and develops a disease of the stomach. What causes this disease? There are a number of toxic foods among those he eats, and these we naturally forbid. But if after eliminating these toxic foods the disease still persists, we must then withdraw the non-toxic foods one after the other to find out which one is the cause of the disease. In certain pathological states even non-toxic foods might cause disturbances. If the trouble disappears after withdrawing one of the foods, then we know that it was the food causing the disturbance. This is a good example of the variation of causes.

The next methodological principle is the principle of concentration. This says that "A," "B," and "C" separately are different from "A," "B" and "C" together. If we have a heavy weight to carry and three porters to carry it and ask the first porter to move the weight alone, he will not be able to do so. Neither could the second move it, nor the third. But if the three take up the load together, it can be transported with ease. It is the same with therapeutic forces. If we apply sun, water and exercises separately, the results will not be satisfactory. We need to apply all the natural forces together. This is the principle of concentration in time and co-ordination in space.

There are many therapeutic systems which are based solely on one principle, or on two or more unco-ordinated principles. One such system says: "We cure only by dieting." Another says: "We cure by hydrotherapy." And so on. Each claims to have the only-true system and alleges that all others are valueless. The fundamental principle of all these systems is not necessarily bad, it may be good. But they can only obtain partial results and never perfect and complete results. For perfect results there must be co-ordination and concentration offered.

Another important principle is the anthropocentric principle. The first philosopher to lay it down was the Greek philosopher Protagoras. He said: "Man is the measure of all things." This is a very important principle because it shows us that we must concern ourselves with what pertains to man. Researches made about the human organism are more important, for instance, than those made about the galactic system. We see that the results of all discoveries in the

scientific field begin to have value when they are applied to the human field. We live in an age of expanding technique. Each year brings new machines and mechanical apparatus. Unfortunately they are built only for their commercial value, without regard to their effect on the human organism. In large cities where machines abound there is far more disease than in the country which is without them. Health and longevity are at a minimum in cities. It is good that machines should be perfected and human drudgery saved, but attention must be paid to the needs of man, or else machines will rule man instead of man having machines to minister to his wants.

Official medicine has very perfect appliances which it employs in its treatment of disease. It has thousands of luxurious sanatoria and well-equipped laboratories. But despite them all, disease not only shows no decrease but increases day by day. The reason is that medicine neglects the principle of Protagoras, that man is the measure of all things.

Ancient medicine was based upon the human organism, and though it was far from perfect, it did nevertheless concern itself with the human organism, instead of playing with therapeutic instruments. Though it was less developed than modern medicine its results were in no way inferior. They were not better, but they were not worse.

It is tragi-comic, but true, that many therapies are used to-day simply to enable the many appliances which have been invented to be employed. In all these therapies the human organism is a negligible quantity. It is essential for medicine to return to the principle that man is the measure of all things.

The next principle is the principle of isolation. All that exists exists in constant correlative motion, always moving together in one totality. We often talk about laws or principles and only take two or three factors into consideration. We do it invariably when we talk about law, because a law is simply the establishment of certain correlations between several factors. We isolate the factors from the totality. We make an abstraction of them and assume that no other factors exist. This process is called abstraction because it is absurd to suppose that a point can exist by itself. Everything exists in the totality. No factors exist separately; they are connected with the whole. The sciences make abstractions and treat them as the reality. We must not fall into the same error. The scientists take their observations of an abstracted part and apply them to reality. They are then surprised that reality does not accord with their laws. When the external reality contradicts their abstract laws—a contradiction caused by failure to apply dialectics—mystic doctrines appear and there is derisive talk about the bankruptcy of the sciences. It is not the sciences which are bankrupt, but the impotent methods of the scientists. Nor does the present economic crisis mean the bankruptcy of humanity, but simply the failure of an inefficient system.

If we make abstractions in scientific research we must

make them consciously. They must not be regarded as realities, because reality is much more complicated and complex. They are simply instruments to aid understanding of the underlying reality. Reality is one and indivisible.

No factor in the totality is negligible. If a factor is too small or too weak at a distance, nevertheless it may become very important when it is nearer to us. If a factor is very distant we cannot afford to neglect it, because it may be so powerful that it affects us notwithstanding. We can only neglect those factors which are both weak and distant. We must take all other factors into account.

Official meteorology, for instance, thinks that forces in the galactic system are too far removed from us to have any role in our meteorology. It considers only sun, moon and earth. The meteorologists forget that despite their great distances the galactic and ultragalactic systems have great influence upon us. Their failure to take them into account makes them incapable of understanding meteorological phenomena and of forecasting them. They make an abstraction and decide that sun, moon and earth are separate from the rest of the universe. They ignore a very distant but very powerful factor.

The astrologists make the opposite error. They claim that the distant planets have much more influence on man than the most immediate factors in his natural environment. They imagine that the influence of distant planets directs and determines the course of human life more than the nearer factors in the atmosphere, hydrosphere, lithosphere, etc. The meteorologists and astrologists represent two contrary extremes. We must not fall into either of these errors, which are the errors most often repeated in all the sciences.

Factors may be classified into the four following classes:

(1) The group of most important factors—comprising those factors which are both strong and near. These have to be taken into account before all else.

(2) The group of very near but weak factors—near both in time and space.

(3) The group of distant but strong factors. This and the two preceding groups must always be included in our calculations.

(4) The group of factors which are both distant and weak.

The fourth group of factors may be disregarded, but they must be disregarded consciously. We must realize that the factors exist and neglect them intentionally, because of our consciousness of their insignificant value. A change in time or space or in both may make these erstwhile insignificant factors of importance. Similarly, factors of the first three groups may become insignificant and fall into the fourth group according to our progress in time and space.

This is a very important methodological principle; the weakest point of most therapeutic systems is their neglect of it.

Flowing from this last principle is the principle of succession of degrees of importance. The four classes of factors have to be grouped after a certain method. Before we embark on any practical work—whether scientific or therapeutic—we need to group all the factors according to their degree of importance, regarded from the standpoint of both time and space. When we have established the order of these factors, how they follow one another according to their degree of importance, then we must apply them in the same order. This method enables us to use more factors than other systems which do not make use of methodology and correlative dialectics. And in spite of the employment of more factors we shall need less effort than other systems using one-sided factors. They expend more time and labour simply because they fail to use dialectical methods. Dialectics is the theory of the practice, and not the theory of the theory as it exists in the official sciences.

The next methodological principle is that of thesis, antithesis and synthesis. The formulation of this law is as follows. First, there always appears a thesis; afterwards there appears its opposite—antithesis. Finally, after the struggle of the two opposites, appears the synthesis which makes peace between them and which contains them both in their widest form. In the evolution of human culture there are two tendencies. The first is the primitive tendency towards synthesis: to see the complete whole without occupying itself directly with the component parts of which the whole is composed. All great philosophies and religions of the past were based on this tendency, the tendency to see everything as one great totality. The parts do not matter, only the whole. Zoroastrism, Brahmanism, all ancient religions, were synthetic, as were also the great Greek philosophic systems before, and even after, Socrates. They seek to give a general concept about the world and about life. They do not study the several parts in the laboratory or make scientific experiments; they do not analyze the various little correlations, but are satisfied to give a general view of the world and of life. All these synthetic cultures represent thesis in the evolution of human culture.

Then comes antithesis at the beginning of our age and there is a great revolution in human culture. Men no longer occupy themselves with the totality. Scientists and laboratories appear and each science occupies itself with one section of knowledge, singled out for study. Each concentrates its study on one definite problem and researches on every part of it. Other scientists concern themselves with other parts and other problems. This tendency marks the beginning of a vast and important work. A great ant-like work begins in which stone is added to stone, till gradually the foundation, and at length a whole great structure, is built up by the labour of many thousands of workers. The immense structure of modern

science has been erected by the diverse analytical work of many scientists and laboratories. This tendency is termed the analytical tendency; it consists not of building a great synthesis of the whole, but of tearing down and analyzing countless little parts separately. Modern culture is analytical, while ancient culture was synthetic.

But there is a further difference between the two cultures. Ancient culture was hypothetical—it was just a series of suppositions—and was not proved by observation and experiment. Modern culture, on the other hand, is scientific and empirical; it is based on observation and experiment. Ancient culture is thesis and modern culture is antithesis. And now in our day we are beginning to see a still greater revolution than that at the beginning of our age. Through this revolution comes the synthesis, which has both thesis and antithesis within itself and welds them into a higher and completer expression.

We are beginning to see that synthesis is absolutely essential, that without complete synthesis we shall become lost in the mass of parts. We may have the most precise and complete sciences, but unless we harmonize them into a complete whole they will be most unsatisfactory. It is necessary to harmonize and co-ordinate the results of the different sciences. If we do not, we shall have a heap of stones, but not a building. The stones are very necessary, for without them the synthetic building could not be built. But the small individual researches are not enough; a synthesis is needed to complete them. There is at the present time a rebirth of the synthetic tendency in human culture. The first form, the thesis, having passed into its antithesis, is now being transformed into its more perfect form—synthesis. The actual form of the synthesis is different from the synthesis of ancient culture. The ancient synthesis was a synthesis without analysis. It was a great totality without precise knowledge of the parts. The lack of knowledge of the parts engendered contradictions which brought about the antithesis and modern culture. But the new synthesis is based on precise knowledge of the parts. It is a superior and more perfect form than the synthesis of antiquity.

There is no contradiction between the ancient and the modern synthesis of the sciences. The modern scientific synthesis, in general, proves the ancient synthesis, just as modern knowledge of the atom proves the ancient theories held about it, and modern astronomy proves the astronomic theories of the Hindoos, Persians and Egyptians. The modern synthesis is simply a much more precise form as the result of experimentation. In antiquity the only experimental mechanism was the human organism itself—the human mind and the human organs. Since the human organism and the mechanism of the universe are in affinity, the ancient synthetic theories were correct. Now the present age with its precise apparatus comes and proves and supports the ancient synthesis. There is no contradiction between ancient and modern culture. In modern times, in the age of analytical

research, scientists expected to find many contradictions between the newly-born experimental sciences and the ancient world concepts. Any contradictions that did appear were caused by each scientist viewing the problem from his own particular standpoint in connection with his own special science and failing to consider all the results of all the other sciences.

The new synthesis thus vindicates the ancient synthesis and satisfies both the analytical and the synthetic tendencies in human culture.

Let us take one more example of the operation of the principle of thesis, antithesis and synthesis. There is generally apparent health in the organism. A person is regarded as healthy if he has neither pain nor pathological symptoms. Yet we find in practice that this so-called state of health is a virtual, latent state of disease, because the apparently healthy persons are liable to fall victims to disease. They are liable to become diseased as they do not live in harmony with natural law. The latent disease which we call health is thesis; then appears the manifested disease instead of the latent disease—this is antithesis. Later, harmonious life re-establishes health, awakens and reinforces the vitality of the organism, and so creates a state of vitality and true health, in the place of merely apparent health or latency of disease. This represents the synthesis of health and disease. Between the health of a revitalized organism after disease and that of an organism before disease, there is a very great difference. The first health was only seeming—was imperfect. The second is true health—is perfect.

We now come to the crown of the methodological principles—the derived principle of the optimum. The principle of the optimum is the principle of the best. The best form of all human activities is that form which secures the best results with the minimum sacrifice and the least expenditure of time, labour and money.

If we have a text which we wish to impress upon our memory so as never to forget it, there are two ways of learning it. We may neglect the principle of the optimum and memorize it part by part by constant labour day after day as they do in official institutions. This method causes great loss of time, energy and health. A few simple rules of psychotechnique will greatly facilitate the task. If we divide the material proportionally with the logical sequence of the contents; if we then mark the most salient points in the text to serve as a continuous guiding thread, and if later we work with the best possible distribution of time, so as to save energy, the results will be more satisfying. We shall save time if we make pauses for rest. Our physiological energy will be sustained better in this way and we shall learn more, although working for a shorter period of time.

The best form of individual state is health and the best form of individual life is longevity. Every little affair of life has its

optimal form. A writing table has an optimal form. There is an optimal diet, an optimal form for breathing, for sun bathing, and so on.

If we concentrate our attention on all the objects that surround us we can always better them up to their optimal point. If we observe all the activities of life we can also see ways in which to better them. For every existing thing, every process, every human action, has its optimal form. And every theory has its optimal form. We must strive for the optimal form of everything that exists.

The principle of the optimum thus leads to its companion principle—the principle of every-sidedness. The principle of the optimum has its greatest value when it is applied universally in everything. We may say that the optimal form of the principle of the optimum is when it is every-sided. The ideal is the best in everything. A single Greek word "Paneubios"—all-good-life—expresses it succinctly. The principle of the best in everything in life.

This principle is the foundation and aim of all the sciences and also the basis of therapeutics. In this way medicine becomes one branch of the universal science of "Paneubiotics" which embraces all theoretical methods and all practical applications of all processes in the entire cosmos, in man and in society. Therapy is one part of the whole and not merely an individual isolated science as the official medical world supposes. Just as it is necessary to define the position of man in the universe, so is it necessary to define that of medicine in human culture. In view of the fact that health is an indispensable precondition of cultural effort of any kind, we can say that medicine is the most essential of all the sciences. Without health and life nothing is possible for man. Man is the measure of all things. Medicine must therefore use the findings of all other sciences and make them its servants. At the present time, when medicine is passing through the most severe crisis of its history, when it is in danger of losing its whole authority, and when thousands of disillusioned beings are beginning to desert official medicine, it is imperative that the authority of medical science should be saved. It is imperative because the crisis is not a crisis of the whole of therapeutics, but a crisis of bad and antiquated methods, and it is certain that medical science will emerge from it in more perfect form. This great revolutionary period in medicine may last many years. But in spite of all the chaotic symptoms of this great transformation, we must never lose faith and belief in the rebirth of a new medicine. Now all the sciences are filled with contradictions. What is the cause of them? It is the great problem of the day to discover their cause. Only then can we eliminate the cause of them. For this we need method.

The sciences use the static method in ninety per cent of cases. They work on the principle that "A" equals "A." In only ten per cent of the sciences is dialectics applied. If the static method were applied in a hundred per cent of cases,

there would be no contradictions. Nor would there be contradictions if dialectics were applied in every case. But when dialectics is applied in some cases and the static method in others, an unending series of contradictions arises. This confusion of methods is the central cause of the crisis in contemporary science. The crisis will not be solved until the dialectical method is applied *in all the sciences and in one hundred per cent of cases*.

Method is the spirit of all science. The system is nothing but one part after another or one part upon another. Without a good method the whole system breaks and falls down like a house of cards. And this collapse is happening even now to human culture; a great crisis in the human sciences is upon us. It is the method which binds all together; it is like the human consciousness without which all the organs would be dead.

The best healer is he who has the best method, not he who has the widest knowledge. For it is possible to know everything and yet know nothing. It is not the quantity of knowledge which matters, but the method with which that knowledge is applied. Intuition will often help us to find the best solution in every situation, but our surest guide and beacon is methodology—the good method.

Those who have made the greatest discoveries in human science are not official scientists of great erudition. They have been laymen with no great learning and no wide knowledge, but who have had a natural tendency to observe phenomena methodically and apply method precisely. Beginning with Hippocrates and continuing with St. Germaine, Cornaro, Humboldt, Kneipp, Pasteur, Fletcher and many more, we find that those who have enriched medicine the most by their discoveries have not been official scientists with great knowledge, but simple human beings with simple natural minds who possessed tendencies towards right methods. It is more important to understand than to memorize. It is important to penetrate into the essence of the correlations of phenomena with understanding. Careful observation is what matters most. And whenever a concrete problem appears, it is important to find a concrete solution of that problem. It is not difficult; it is as easy in the practice as it seems difficult in theory.

A man who has little knowledge and arranges it with a good method will have better practical results than one who has one hundred times the knowledge but does not know how to arrange and concentrate it with a good method.

Montecucolli, the great military strategist, said: "For war one needs three things: money, money and money." Three things are needed in medicine and the sciences: *method, method and method*.

