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"By combining science with religion, the existence of God and immortality of man's spirit may be demonstrated like a problem of Euclid."— H. P. BLAVATSKY

THEOSOPHY AND MODERN SCIENCE

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(Stenographic report of the twelfth of a series of Lectures on the above subject. These were delivered at the request of Katherine Tingley the Theosophical Leader and Teacher, in the Temple of Peace, International Theosophical Headquarters, Point Loma, California, at the regular Sunday afternoon services. Others will be printed in THE THEOSOPHICAL PATH in due course. The following was delivered on September 11, 1927, and broadcast, by remote control, through station KFSD San Diego—680-440.9)

FRIENDS: During the course of our series of lectures, entitled 'Theosophy and Modern Science,' we promised on a number of occasions more specifically to bring out certain Theosophical teachings, explanations of the scientific facts, rather, which we have been dealing with up to the present; and on each occasion, on each Sunday, when we attempted to bring out these Theosophical explanations, we found so many side-issues of thought necessary to consider, and each one important in its way, that we were in consequence impelled to deal with these side-issues before the others.

But now, this afternoon, we are going to take up the purely Theosophical line of thought, turning to higher and nobler themes than those with which we have been dealing. We have chosen, of course, those Theosophical doctrines which are explanatory of what we have been speaking about to you on the Sundays preceding today.

We promised first to explain to you what the Theosophist believes as regards the origin of the Primates, that is, the apes and the monkeys, from which creatures, as you know, the orthodox scientist derives the human stock in rectilinear descent, or ascent, that is to say, in a

straight line and in an alleged end-on evolution. We have in other lectures given the reasons why the Theosophist rejects these alleged ancestors of man, reasons based on the grounds of accepted biological science itself.

Second, we promised an explanation of the origin of the mammals lower than man; and, likewise, to tell you whence came the other great stocks — the Reptiles, the Birds, the Amphibians, and the Fishes, and all the great welter of invertebrate forms lower than the fishes.

We have pointed out that according to the Theosophical teachings, all these stocks of animate entities, all these living below man, sprang originally from the human stock, and we gave certain reasons why we felt compelled to accept these explanations as necessary, because, as a matter of fact, outside of the logical force of the Theosophical teachings themselves, we showed that they were based on the biological grounds of proof as given by the scientists themselves, yes, given by them as arguments for the evolutionary theory in the form first promulgated by Charles Darwin and faithfully followed by his admirers.

We pointed out, as preparatory to our study of today, just what was meant by the modern doctrine of Mendelism, a very interesting body of discoveries, which were first investigated and demonstrated by the Austrian, Gregor Mendel.

On Sunday before last, or was it indeed on last Sunday, we likewise pointed out certain extremely interesting scientific doctrines originating with the German professor, Dr. August Weismann, and we called your attention to the fact that when the doctrines of Weismann are properly understood, that is, when there is a clear picture of the method of that thinker held in the mind, we have some approximation to, some adumbration of, what the Theosophical philosophy teaches in so far as the origination of evolutionary stocks is concerned, as well as of the origin of variation, of specific variation, which our modern biologists say is the real method or mechanical procedure, if we can use that term, of the working of evolution.

We have pointed out in a former lecture that the human body is an exceedingly fascinating subject of study, in any consideration of the manner in which evolution works. Evolution, indeed, deals with it, but in a secondary or effectual manner, not in a primary or causal manner. I mean by this, that the human body merely reflects the various changes in progressive development which actually proceed on interior or causal planes.

We have already pointed out that evolution, as we use the word, means the unfolding, the unwrapping, of that which previously had been infolded and inwrapped as potencies in the structure of the cells of which the body is composed.

The human body on an average

is estimated to contain some twenty-six thousand billion cells! — an unfigurable number; and each one of these cells is a living entity, a physiological organ, with inherent capacities, inherent tendencies, each such capacity or tendency possessing its own inherent urge or drive towards self-expression. According to our teachings, this inherent urge or drive originates in the invisible entity from which it proceeds; because, unless there were some cohering power, some force of coherence working in the structure of the individual, no such thing as even a simple cell could exist; it could not even come into physical being or manifestation. It is held together and controlled by the invisible entity behind it, as I have just said.

A cell, as you know, is a living entity, composed mainly of protoplasmic substance; and it contains two general parts; a central part called the nucleus, and a surrounding plasm or protoplasm, which is commonly called the cytoplasm, which latter is the larger part of the substance of the cell itself.

You have also heard that in some of the lower creatures there exists a faculty of self-repair which the scientist calls the reproduction of lost parts, that is to say, that such a creature in our days, low in the scale of animate beings, if it lose a limb, a tail for instance, will reproduce for itself a new limb or tail. A certain kind of worm, well known to Zoologists, will, if divided into two, if cut into halves, become two complete worms in the following fashion: the forward end of the hinder half will grow a new head; and the hinder end of the forward half will grow a new tail.

But this cannot happen in our period of evolution with the entities standing higher in the scale of life; and on last Sunday we hinted at the reason for this, as given in our Theosophical teachings, and as more or less adumbrated or foreshadowed or intuited in the doctrines of Professor August Weismann; I mean that the cellular structure, the inherent tendencies or potencies of the cells belonging to the bodies of the higher creatures, have the possibility of following only that particular line of unfoldment or of growth, which the dominant entity of which these cells form the body, allows it to have.

It is a case where the individual *swabhâva*, as we Theosophists call it, or individual capacities or latent tendencies of the cell, are submerged by the overlordship or dominance, so to say, of the inner invisible entity which works through those cells; the consequence being that these, the cell's, own individual potencies, can express themselves, if at all, only when the power of the dominating entity is withdrawn; perhaps not even then if the submergence of the cell or native cellular potencies has been too great; in this last case they die.

Now in the lower creatures I have spoken of as possessing the

power of self-repair, the faculty of dominance or the dominant, as Mendel called it, is still weak in its control over the entire cellular structure of the body through which it works, and each cell composing that body, if left to itself — or perhaps if you could take such a cell out of the body of one of these lower creatures and give it appropriate food and environment — would have an exceedingly good chance of starting upon a line of evolution of its own, following its own inherent tendency or potency or urge, and thus bringing forth some new stock.

But as this case rarely now or perhaps never arises, the cells are impelled to follow the reproductive tendency of the limb only to which they belong. But so far as the scientists know, so far as we know, no injured limb, or no amputated limb, of one of the entities of the higher stocks, can reproduce itself in that manner and follow its own line of growth; nor, on the other hand, can the body from which such limb was amputated, reproduce a new limb to replace the old; the reason being, as I have just said, that the dominant entity overshadowing that corpus, that physical body, has in these higher stocks become so strong in its control over the cells composing the physical vehicle, that the individual or inherent tendencies or potencies of each of the cells of which that body is composed, have become completely 'recessive,' to use Mendel's term, that is to say, they are completely submerged and have become latent, sleeping.

We Theosophists divide the life-atoms, as we call them, into two classes — those which are active, or alert and working, which we call kinetic; and the others we call latent or dormant or sleeping life-atoms. Each of such atoms is a 'soul' or rather the vehicle of a soul — not necessarily a human soul, but a soul of its own type and kind, so to say, of its own genus and family and order.

Let us now turn for a few moments to a consideration of a few interesting facts in chemistry. In former studies we have pointed out that the physical atom of chemistry is now known to be a miniature solar system, consisting of a 'proton,' as it is sometimes called, which is the nucleus or the atomic sun, and of smaller bodies circling or whirling with vertiginous rapidity around that central nucleus, and these latter bodies are called 'electrons.' We have further pointed out that atoms, like everything else, have their life-cycle, and at its end follows a course of slow disintegration or decay. We know that this is the case with the so-called radioactive bodies, such as uranium and thorium; and we know that with this disintegration of the structure of the atom, the nature of the atom changes — this process of decay actually being a transmutation of elementary chemical substance.

Each of these protons or nuclei,

is, so say the chemical scientists, a body, a corpuscle of positive electricity, and each of the electrons is a corpuscle or minute body of negative electricity.

All matter — both the living and the so-called inanimate is ultimately builded up from atoms, each one of which, as both Theosophy and modern science teach, is a miniature solar system, each one possessing vast and incomputable capacities for change, which is evolution towards growth or retrogression, as the case may be, but in any case evolution, that is, the bringing out or evolving or unwrapping or unrolling of that which is lying in it seeking expression.

In many cases this evolving, this bringing out, of the inner tendency, potency, or capacity, is inhibited by various circumstances; and in such case, the atom or the cell, as the case may be — for the cell copies the general scheme of the atoms of which it is composed— falls under what we Theosophists call the Law of Retardation, and must abide its time until its own cycle for growth comes. But if its cycle be one under the action of the Law of Acceleration, as we call it, it begins to grow in progressive development, always bringing out that which is within itself, that which is lying latent within it, as potency or tendency.

Evolution therefore actually is self-expression. It does not proceed in a haphazard manner, but according to the inner urge or drive of the more or less conscious invisible entity or soul, which is the factor seeking to express itself through its vehicle or vehicles, as the case may be. Its doing this is what we call evolution. It is in the very small that we should seek for the unriddling of this riddle of evolution, for the solving of the problem of what it is that causes growth, and particularly expansive or forward or progressive growth.

Pause a moment and try to realize that in the infinitesimal lie the roots of the world we see around us. The cell is formed of protoplasm; this protoplasm consists mainly of four chemical elements, carbon, nitrogen, oxygen, and hydrogen, occasionally with some trace of other chemical elements. Each one of these cells, as you know, is composed of what the chemists call molecules, which are the smallest theoretic parts into which protoplasm is divisible; and each such molecule in its turn consists of a number of atoms of the four main chemical elements above named, combined and working together, each such atom, as said before, possessing an incomputable capacity for change and growth, being in very fact a dynamo of forces.

What man dare say that he can place a limit upon the capacities hid in the atom, of which we are only now beginning to know a little of its real constitution?

Of the twenty-six thousand billion cells which compose the body of man, each one is an infinitesimal

focus of cosmic forces, a channel through which they pour forth into manifestation on our physical plane. Each one, again, possesses its own individuality, which is called *swabhâva*, and in necessary consequence follows its own path of growth or its own line of activity.

Yet, as I have said, in the cases of the entities of the higher stocks of the anmate kingdom, it follows again of necessity the gripping and controlling drive of the dominating entity, the soul, which aggregates and holds these atoms together, thus providing the vehicle through which that dominating entity can work or express itself. Yet each one of these little cells, composed as it in its turn is of still smaller bodies, the atoms, each one, I say, is a biologic infant at school making ready now to take its place in future ages as the prepared vehicle enshrining the spiritual drive of some still higher and nobler entity, although itself goes ever upwards, higher and higher forever. Endless is time; endless is growth.

It is in the very small that we must seek for the unriddling of the riddle of the origination of species and stocks. Pause a moment again and allow your attention to dwell upon the picture of the working of some of these forces, infinitesimal as they seem to us, yet so powerful that our physical universe is builded out of them.

You know that our modern scientists talk very much of vibrations, and they give the vibrational rates of various kinds of waves, and of what not, such as electric waves, and heat-waves, and light-waves, and ultra-violet rays, and of X-rays; and of multitudes of other rays as well, we Theosophists say. These hard working researchers are now beginning to get some true knowledge — thanks be to the immortal gods! — of what these rays really are. They are now more and more, as time passes, inclining towards our ancient Theosophical teachings, that these 'rays' are not mere movements in or of a hypothetical ether.

What is a 'movement'? A movement *per se* is nothing because it is an abstraction. There can be no movement without a thing that moves. It is the moving thing that provides what we call movement. Movement is not a thing in itself. Similarly there can be no vibrations without something which vibrates.

Each one of these so-called waves, teaches Theosophy, is the activity of some minute entity, some infinitesimal body, never mind at the moment whether it be a low body or a high; the point is that the moving or vibration is produced by the action of some entity. These minute bodies vibrate or revolve, as the case may be, at a rate which we can estimate, but which is beyond human imagination to conceive of or fully to figurate or follow with the brain-mind.

For instance, as given by our

great physicists, the vibrations of electric waves,—which, by the way, are the lowest, the grossest, and most material of the five kinds of vibrating forces which I have here listed on paper in my hand,—range up to three thousand billions a second. Heat-waves vibrate in a range from three thousand billions to eight hundred thousand billions a second. Light-waves vibrate from four hundred thousand billions to eight hundred thousand billion times a second. Ultra-violet rays vibrate from eight hundred thousand billion times a second to five million billion times a second. X-rays vibrate from four hundred million billions a second up to six billion billion times in one second.

In order to facilitate an understanding of these unfigurable numerical quantities, I subjoin them in columnar form:

VIBRATIONS	PER SECOND
Electric Waves	up to 3,000 billions
Heat-Waves	3,000 billions to 800,000 billions
Light-Waves ...	400,000 billions to 800,000 billions
Ultra-Violet Rays	800,000 billions to 5,000,000 billions
X-Rays	400,000,000 billions to 6,000,000,000 billions

The X-rays, as you probably know, are chemical light-phenomena which our chemists and physicists have discovered as produced by the so-called γ-rays of uranium and thorium. There are three so-called 'rays' given off by the atoms of these elements in their disintegration. First, there is the α-ray, which is the proton or a part of the proton of the atom. Its penetrating power is but small, yet in it resides most of the radio-activity and most of the chemical and physical properties which the atoms of these two chemical elements exhibit.

The second class of rays which our chemists have discovered, are called the β-rays, which are electrons or atomic planets expelled from the atom. Their penetrating power is stronger than is that of the α-rays.

Then come the third class of rays called the γ-rays, which are, or which give off, the X-rays. Now, we may, if we please to follow the chemists' terminology, call these three classes of radiating force, 'rays'; but, as I have just said, they are — or most of them are — actually particles expelled from the atom, and it is their passage through intervening matter which produces the phenomenon of light, which has caused them to be called rays.

Are uranium and thorium and radium the only radioactive substances in the universe? We say no. The teaching of Theosophy is that all matter is radioactive.

Our scientists up to the present time have found only a few chemical substances whose radioactivity they can trace and measure with some degree of approximation of accuracy—such as uranium and thorium; but please remember that, as I have just said, the teaching of Theosophy is, and has been for many

years — long before radio-activity was ever discovered — that all matter is radio-active; but the radio-activity of some matters is so subtil and fine that the instruments and the coarse methods of research of our investigators have not yet been able to detect it.

It is in this radio-activity, emanating from the bosom of the atom, that come all the forces and matters likewise which build our physical universe, through the passage from the invisible to the visible and vice versa — another mystery, wonderful, imagination-provoking, and of the deepest interest to any thoughtful student of the physical structure of the world in which we live. It is these forces, passing from the invisible into the visible, which infill the cosmos with its energies, and which, in consequence, give our body its life and vitality, which vitalize the cells of which the body is composed, constructed as they are of these radioactive atoms.

Let us never forget that the universe is one vast organism; there are no impassable barriers between body and body, between mind and mind, between entity and entity, all of them being children or offspring, that is coherent parts, of that vast organism of the cosmos; and in consequence having and containing and manifesting in the small all the potencies and powers and energies and forces that exist in that organic universe. The offspring is a repliça, a copy in the minute, of the great; the offspring is the microcosm or little world, copying in all respects the Macrocosm or Great World, of which it is an inseparable part.

It is along the lines of these forces and energies pouring forth from the heart of the universe ultimately, that proceed the psychic, the astral-vital, yea, in the higher beings also the intellectual and spiritual powers and qualities which man, as well as all other entities great or small, do manifest.

With this introduction we may perhaps see a little more clearly what was meant when, on a former Sunday, we said that man was a microcosm of the Macrocosm, a little world of the Great World; the small, as I have said, being in all respects and in every way a mirror of the great.

Man being a child of the universe, being a part of that universe itself, he has in him everything, every force, every potency, every power, every capacity, that the Macrocosm or Great Universe has, of which he is an inseparable part; he, as an entity, in his turn is a Macrocosm to the cells which compose his body, for they are a part of him, and, therefore, have everything in them which he has in him, albeit it may be latent or dormant or sleeping, and not yet kinetic.

Each of the cells of which his body is builded has everything in it that he has. Such potencies may be latent, they may be sleeping or dormant, as I have said, but they

are there, and when the environment be fit and appropriate, when the barriers have been worn down through evolution, or rather cleared away by the working of the inner drive, then these potencies, these capacities, manifest this inner urge or drive for self-expression; and behold! something new is produced — a new variety, a new species: it may be destined indeed to develop a new stock.

It all depends upon two factors in the biologic equation: an inner urge expressing the inherent potency or capacity with a free path and uninhibited by barriers; and, second, an environment fit and appropriate as a field for their expression.

Hence, when we have said that man is the repertory, the magazine, the storehouse, of all the animate entities on earth, what I have just said is what we mean by the usage of these terms. He has everything in him that he can ever in future be; and these potencies await the time and the place for their coming forth into manifestation. The process is 'evolution' or self-expression.

When we said further that man gave birth to all the animate creatures below him, what we have just now said is the key to what we then meant; for, in the beginning, the roots or seeds of all the animate creatures below him existed in him as latent or dormant or sleeping things.

Please remember that we are speaking of man's physical body at the present time. We do not mean that these animate creatures below him formerly existed in his soul or in his spiritual nature; but we do mean that they were sleeping elemental entities in his nature and derived from him as their parent. They took the manifold and many various forms and shapes they had and have, because these most fitly manifest the particular kind of energy expressing itself in each and every case.

Now, friends, please listen carefully: we are now going briefly to glance over some long-forgotten pages of Natural History, explained by some of the more secret teachings of Theosophy. As this is not a medical lecture-hall we cannot enter into minute details but I beg your most earnest thoughtfulness and consideration of what will be said, Theosophy being, as we have pointed out so often, the synthesis or union of Religion, Science, and Philosophy, and our present subject of study is along the lines of scientific thought. Nothing that the mind of man can conceive of as native or interesting to man can be, as Epictetus the Roman so nobly said, alien to the Theosophical thinker.

It is the teaching of Theosophy that evolution — or unfolding, unwrapping, self-expression, progressive growth — proceeds in cycles both large and small: each great cycle or great Tidal Wave of Life, which sweeps over our earth, lasts

on this planet Terra for scores of millions of years; and each such Globe-Round as we call such a Tidal Wave of Life, during the course of its manifestation or activity, gives new birth to numerous great stocks of beings, ranging from those elemental entities beneath the mineral up to man and including the quasi-divine entities beyond him.

Each of these great stocks from the man downwards — there are seven in all — produces beings of its own kind, of its own capacities, each having its own inherent drive or urge or tendencies; in other words each such great stock, a Root-Race or a Stock-Race, as we call it, having its own individuality, much as a man has, or as a tree has, or as a flower has, or as a beast has, or as have all the inferior stocks below man.

The first of these great Races which appeared on our earth during the present Globe-Round or great Tidal Wave of Evolution, was in its beginning a race of astral entities, ethereal, invisible they would be to us in our present state of gross materiality.

As time passed, and as the cycling race circled downwards farther into matter, seeking self-expression in the material world, this First Race grew more solid, but it remained ethereal even to its end. It had no human shape such as we now understand it. Each of the individuals composing it was an ovoid or egg-like body of light, luminous, pellucid, translucent. These individuals had neither organs nor bones, and they were sexless, and reproduced themselves by fission or division into two.

Have you ever considered the gelatinous structure of the jelly-fish, a medusa for instance? It may be to you perhaps a hint of something still more ethereal, still more luminous, and translucent, than it. Life builds houses for itself of many forms and kinds, nor are bones and organs necessary for the templing of the vital entity.

When millions of years had passed, the Second Great or Root-Race came into being. This Second Root- or Stock-Race was less ethereal than its predecessor, the First Race, for the races following each other in time grew constantly more material, more solid, more opaque, down to the Fourth great Root-Race.

The Second Root-Race reproduced itself by a method which is still represented on earth among some of the lower creatures, that is by budding or gemmation. Even as the individuals of the First Race had separated off from themselves a large portion of their body — which was that race's method of reproduction, as said — this large portion growing to the size of its parent, and duplicating it in all ways, so the Second Race reproduced itself by what Zoology and Botany call 'budding': — a swelling appeared on the superficial or outer surface of the body of one of these entities; this swelling grew in

size, and as it grew became constricted near the point of junction with the parent-body, until at length the bond of union became a mere filament, which finally broke, thus freeing the bud, which then grew into another entity in all ways like its parent.

This Second Race, as I have pointed out, was more material in physical structure than was the First, but it still was more or less translucent, although growing more opaque because more dense with the passage of every one hundred thousand years of its long life-cycle, which comprised many millions of years.

Towards the end of this Second great Stock-Race, which at about that period became still more viscidly gelatinous and filamentoid in structure (although it was still more or less ovoid in form), this race even then began to show some vague approximation in shape to the present human form. Its filamentoid structure likewise covered and guarded deeply seated nuclei within it, which were condensations of the general cell-substance. These nuclei, by the way, were destined to develop in the next race into the various organs of the body; while the filamentoid structure was, in its turn, destined to develop into the various physiological reticula or net-works of the next Race, such as the muscular system, the nervous system, the system of the blood-vessels, and so forth.

When this race had run its course, lasting for many millions of years, then the Third Stock-Race came into existence, still more physical than were the First and the Second which had preceded it, and constantly thickening, the gelatinous substance of the Second Race having become flesh, but flesh still more delicate, thin, and fine even than our own of the present Fifth Race.

Let me add also that, like the First Race, the Second had neither bones nor flesh (therefore no skeleton), nor organs (therefore no physiological functions of any kind). Its circulations such as they were, and they did exist, were carried on by what may be called osmosis combined with magnetic attractions and repulsions—for lack of better words to express the process — working in this fashion in the body-substance.

With the incoming of the great Third Stock-Race or Root-Race, the filamentoid structure of which I have just spoken, thickened or condensed itself, and became, as I have just said, the different parts of what is now the human body; for instance, this filamentoid structure as it condensed, separated itself into the muscular system, the reticulum or net-work of the nervous system, and also into that of the blood-vessels; the inner filamentoid parts becoming cartilaginous, which, as the Third Race traveled along its cyclic period, finally became bones; while the nuclei, which I have spoken of as existing in the

body-substance of this Second Race, and which in that Race then were merely adumbrated or foreshadowed organs, became in this Third Race the true organs of the body of the Third Race, such as the heart, the lungs, the brain, the liver, the spleen, and so forth.

The method of reproduction of this great Third Race was in its beginning androgynous or hermaphroditic. The First Race, as I have said, was sexless; the Second was asexual; and the Third was androgynous or double-sexed. All antiquity believed that man's remote ancestors in far past times, were double-sexed, and pointed in proof of this to certain physiological remnants, now non-functional in one sex but fully functional in the opposite sex, and vice versa. The androgynous human creatures of this Third Root-Race reproduced themselves by the laying of eggs.

Do you realize, as I pointed out on last Sunday, that even today the human ovum is an egg, albeit microscopic? Mankind first reproduced itself by fission in the First Race; then by budding in the Second Race; then, in the beginning of the Third Race, of which point of its evolution I am now speaking, reproduction was ensured by an exudation of vital cells, issuing from the superficial or outward parts of the body, and which, collecting together, formed huge ovoid aggregates or eggs.

This method of reproduction is alluded to in our archaic books by the term 'Sweat-Born,' meaning not that this Race reproduced itself by sweat literally, but by an exudation of vital substance or cells which issued from the body in somewhat the same fashion that sweat issues from the sudoriferous glands, or the oily substance of the skin and hair issues from the sebaceous glands.

As time passed and the condensation of the bodies of the individuals of this great Third Root-Race became greater and more pronounced, this exudation of vital cells slowly passed from the outward or superficial parts of the body into the inner parts, becoming localized in certain organs, which the process of evolution had been slowly forming for that purpose.

This same method of reproduction in its general line is Nature's way even today in our own Fifth Race, only it now takes place, as I have already said, within the protecting wall of solid flesh and hard bone, which wall Nature has builded about the reproductive functions of our race for its greater safety. But essentially the procedure is exactly the same as it was in the beginning of the great Third Root-Race.

As time passed, during the life-cycle of this great Third Root-Race, reproduction by egg-laying by the parent died out or passed away, as a method of propagation. In view of the coarsening or thickening or condensation of the fibrous or filamentoid substance which then composed the human body, Nature built a protecting wall around this

function, as I have said; and whereas formerly these drops of vital fluid were exuded from nearly all parts of the body, as was the case at the end of the great Second Root-Race, more and more as time passed they localized themselves in a functional part of the organism which was the root of the later reproductive organs: these vital drops collected together and became the egg in which the human infant incubated for a few years, and finally issued from it, and began life safely, walking and moving even from the opening of the shell, much as a chick does today among us, which is a still living example of the old method.

Such was the method of reproduction in the great Third Root-Race at about the mid-point of its evolutionary course. Then towards the end of this Race there occurred the most marvelous and epoch-making event in the history of humanity; and this was the infilling of the unselfconscious humanity with mind and its godlike powers.

The First Race, though physically conscious, was yet mindless in a sense, that is to say not self-conscious as we understand it. Its consciousness was somewhat of the nature of a man in a deep daze or a profound day-dream. The individuals of that race had, as yet, no mental or intellectual or spiritual self-consciousness.

Nor have indeed the beasts today. All spiritual, intellectual, or psychological faculties that men possess are latent in the animals below him, but in them they are still non-functioning. In man only, at the present time, has the godlike gift, nay, I mean the godlike function, of self-conscious thought been awakened. That awakening will come to the animals below man; but, as I have said in a previous lecture, because the door into the human kingdom is now closed and has been closed for many ages, this awakening by them to human consciousness can come no longer in this period of planetary evolution; and the animals will attain to it only in the next planetary manvantara or evolutionary great cycle, hundreds and hundreds of millions of years hence.

Nevertheless in a few of the higher animals, that is to say in the anthropoid apes, the divine powers of self-conscious thought are beginning to function in very minor degree, the reason being that, as I have already explained, the anthropoid apes are an exception in the evolutionary development of the stocks below man, for they have a strain of human blood in them, which like everything else is inevitably destined to work out its own inherent capacities. Their minds are dormant, but it is hoped, among a certain school of great Theosophical thinkers, that the monads now indwelling in the bodies of the anthropoid apes will have developed a true human psychological apparatus of self-expression, in other words self-consciousness,

before the present planetary manvantara or great planetary evolutionary cycle is completed.

As I have said, towards the end of the Third Race there occurred the Awakening of Mind; and this happened very largely by the incarnation in these now ready human vehicles, of godlike beings who had run their race and had attained quasi-divinity in far past preceding planetary periods of cyclic evolution.

Whence came mind? Have you ever thought of it — of its wondrous mystery, of its power, of its illimitable possibilities, of its inherent connexion with self-consciousness? Does any sane man believe that self-conscious mind comes from what the old school of materialists called dead, unvitalized, unimpulsed, unurged matter alone? Thanks be to the immortal gods, that insane conception has largely passed away, as was inevitable because it was intrinsically as illogical as it was irrational.

Very few of the thinking men of today have no conception of some kind or other of the nature of self-conscious mind. The conception may be perhaps vague and inchoate; but it does represent some striving towards a rational and satisfying explanation of this most wondrous part of the constitution of man. Their longing to reach some explanation of what is to them the problem: Whence came mind and consciousness, whence came self-consciousness? must in the very nature of things find an answer, because that longing is an intuition of reality.

These godlike beings projected, by hypostasis (to use the technical term), sparks, as it were, of their own full self-consciousness into the childlike humanity of that time, thus awakening also the latent native mental powers then dormant or sleeping in the recipient humanity.

Then, at the end of the Third Race, there followed the great Stock-Race which we call the Fourth, which was the most material of all in its physical development — that Race in which matter reached its climax of evolution, its highest point of unfolding. All the powers of matter were then functioning in every direction, but spirit was correspondingly in obscuration.

This Fourth Race lived its millions of years and produced some of the most brilliant civilizations of a purely material character that this globe has seen; and finally it passed away in its turn, giving birth to us, the great Fifth Root-Race, to us, who are still men of flesh and bones and organs, still retaining the old method of reproduction, which nevertheless is destined to pass away in its turn, giving place to a newer and a higher method.

Yes, sex is but a passing phase, and the next great Race will see its end. As the First Race was sexless, and the Second was asexual, and the Third androgynous, and

the Fourth fully sexual, we, who have barely reached the middle of our own cycle, we, I say, who took over the last method of reproduction from the Fourth Race, will in time follow another method of reproduction far nobler and far higher, more akin to the nobler instincts of our hearts and minds.

Before we conclude this afternoon I beg your consideration of a few remarks which it seems very necessary to make here as being the explanation that I promised to give to you in former lectures, of the origin of the mammals and of the Vertebrates below the mammals and of the Invertebrates below the Vertebrates. You will remember that on many occasions I stated that all these sprang from man — from man who is the most primitive, the oldest, of all the great stocks of animate beings on earth. I beg your close attention.

Let me therefore say that as regards the animate entities below man: according to Theosophy, the progenitors of the lowest animate beings sprang from man in the preceding Great Tidal Wave of Life or Globe-Round - that is to say, all the Invertebrates, likewise the Fishes, the Amphibians, the Reptiles, and the Birds; and these creatures have descended to our own times, though evolving far less fast than the human stock has done because they are under the operation of what we call in Theosophy the Law of Retardation.

This law, as well as its twin, the Law of Acceleration, form a subject which is too recondite for satisfactory explanation at the end of a lecture. But briefly I may say this: the Law of Retardation operates on a stock or on any individual animate entity, when a more evolved stock appears on the scene. It is somewhat like the submerging of minor men in the individuality of a greater man — an interesting psychological phenomenon which all of us must have noticed in the affairs of ordinary life.

The Law of Acceleration, on the other hand, operates in the cases where an evolving stock finds the field free and without barriers or hindrances to the full expansion of its innate potencies, faculties, powers.

To return: The mammalians, however, came later than man, who of course likewise is a mammal; and indeed therefore are the mammal beasts mammals, because they sprang from the human stock during the Second great Root-Race and from the earliest part of the Third Root-Race of which I have spoken; and therefore necessarily must partake of the nature of their originating strain.

They were originally buds or offspring from the then mindless and imperfect human stock; but, as the human spiritual entity was not yet then dominant in the human bodies of that time, and could not fully hold in abeyance the vital potencies of the cells which composed those buds which sprang from

the bodies of early man, therefore each one of such bud-bodies or aggregates of buds immediately began to grow following its own evolutionary tendencies or inherent urges, each producing only that which it could produce, that which was inherent in itself; evolving, unrolling, unwrapping, its own inherent character or nature. This was the origin of the mammalia.

As a cell has an almost incomputable number of dormant capacities or inherent tendencies or seeds of growth — call them what you will — this will explain the origination of the various stocks of beings below man, remembering, however, that they all sprang from him in the early days of the mindless races.

The apes and the monkeys sprang from man likewise, but in another manner. The monkeys were born from the mindless human race, which, having no self-conscious mind, having but instinct and a vague and diffused physical consciousness, of which we have already spoken, allied themselves with animal beings who also originally had sprung from the human stock, though not manifesting the evolutionary tendencies for growth into humanity. The results of this shameful union were the simian stocks, the monkeys, and this occurred during the Mesozoic or Secondary Age of geology, probably during the Jurassic period.

Please understand that this occurred by and under the action of races of early man which realized not what they were doing. They were as irresponsible as little children, and had no moral realization of what we now regard, and justly regard, as shameful to the last degree.

At a later date, towards the end of the great Fourth Stock-Race, during the Miocene Period of geology, when the Fourth Race had already far passed its climax of evolution and was represented by many degenerate remnants — barbarians, savages, like the Andaman Islanders, and the Negritos and the Bushmen and the Veddahs of Ceylon today, descendants, degenerate children, of once great and noble ancestors — some of these degenerate Atlanteans or Fourth Race men, I say, repeated 'the sin of the mindless' with the simian stock then existing; and this second and still more shameful union originated the anthropoid apes. Hence it is small wonder that they resemble man, their half-parent, in so many particulars, even though that human half-parent was at the time but a degenerate savage.

Friends, the time for closing this afternoon has come. I could wish that all of you had heard the preceding studies which we have given in this Temple, and which we have done our best to set forth in clear and simple language. They will be printed in our monthly magazine, THE THEOSOPHICAL PATH, in serial form.

As regards any lectures which we may give on this topic in the

future, that is something which Katherine Tingley, our Leader and Teacher, will have to decide. The decision rests not with me. But before we part this afternoon, I beg you to bear one thing in mind. It is this:

Let me say that the Theosophist exacts no belief from any man; he lays his wonderful Philosophy-Religion-Science before you; he asks you to test it for yourselves; he is willing to render to you all the help that he himself can give, in order that you may more easily understand its profounder and more difficult parts; he urges you to study our books, to compare them with the changeable theories — necessarily changeable because growing — of our great scientific researchers, for whom, by the way, we have immense respect for the good work that they do in unveiling Nature's secrets.

We look upon the scientists as our best friends, just so long as they cling to the facts of Nature; but we reserve our right as thinking men and women to accept or to reject any scientific hypothesis whatsoever, if we honestly feel that it be not a true explanation of the facts of Nature and of Being. We respect those theories, but respect does not necessarily mean an extending of sympathy to what we feel and in many instances know to be a false statement of facts based on a lack of full knowledge.

BEAUTY'S GESTURE

M. G. GOWSELL

AS from earth's ooze and circumstance
The lily bloom has birth,
So our dire travails each enhance
The sum of Beauty's worth.

That pain may wear away the veil
And let the Light flow through,
Is why the hidden Fates assail
False hopes we hold too true.

That this is so I have no doubt,
For Beauty tells me so:
A Truth you seldom hear men shout,
Though sorrowed hearts may know.

International Theosophical Headquarters,
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AFTER DEATH — WHAT?

T. HENRY, M. A.

IN *The Outlook* for May 23, 1928, appeared the following:

"In England an endless controversy was stimulated when Sir Arthur Keith declared that medical men could find no ground for believing that the brain is a dual organ, a compound of substance and spirit. Sir Arthur is President of the British Association for the Advancement of Science, and his statement brought a prompt retort from Sir Oliver Lodge, scientist and spiritualist.

"Said Sir Oliver: 'I think the brain is an instrument used by the mind. They apparently think the brain is the mind. I do not look at it that way. The brain manifests the mind, but that is not the same thing as being the mind. A violin manifests Beethoven, but it is not quite the same thing as being Beethoven. If you smash the instrument, of course, the mind cannot manifest itself. That is all right, and what scientists know about the brain and the way it acts on muscle and nerve is all good.

"'It is all a part of the machinery, and they know a terrible lot about the working of machinery. But there is something more to be said than that. Anybody can point out how a typewriter works, and you cannot get it to go unless it is properly connected and in good order. But that does not explain the sense or meaning of what comes out of it.'

"Sir John Sutton, surgeon, then came to the side of Sir Arthur Keith.

"'True, absolutely true,' he said. 'Death is the end of all. My experience is that all of those who have studied the subject scientifically and deeply have come to the same conclusion. Once, reviewing a book of Flammarion's, I wrote:

"'In the dim future do not seek to peep,
Trying to fathom things obscure and deep.
Youth often laughs at death, but old men weep.
Wise men know death to be an endless sleep.'

"'Endless sleep — I cannot put it better than that.'

"So the question stands as before — with two irreconcilable answers."

Commenting on the above, we would say that much confusion of thought is betrayed. Terms are undefined and loosely used. To deny that the brain is a compound of substance and spirit implies that someone must have said that it is such a compound. Just what was meant by the statement? The word 'substance' is here evidently used in the sense of 'material'; and the implication is that the other alleged component of the brain — 'spirit' — must be something unsubstantial.

Further, it seems to be implied that the brain differs from other organs and other material bodies in being thus compound in its nature: that is, the brain is not merely matter or substance; it is also spirit. Medical men, then, have been unable to find any evidence that such is the case.

We are not surprised. If there is anything else in the brain, which is not in other organs, how *could* medical science discover it? If they should proceed by the method of physical examination, it seems that the only thing they could discover would be matter, substance. But if they are studying the mind and analysing the nature of consciousness, as revealed in their own person and as manifested in the actions of other people; then it is not easy to see how a special case can be

made out for the brain rather than for other organs or structures.

We must of course agree with Lodge that the brain is an instrument of the mind; but we are compelled to think that it is not the only instrument. The mind acts through other organs, and through the body in general.

But is this a fact to be established by anatomy and physiology? Is the mind to be found by the gram, or to be separated out by fractional distillation, or left as a filtrate or residue in a crucible? Will the medical brain-analysts be able to get substance in one beaker, and the other constituent, 'spirit,' in another beaker? It sounds rather like analysing the steel and brass of an auto in search of gasoline, or trying to find flame in a candle-end.

The comparison of death with sleep is not very apt for the writer's purpose; on the contrary, it is far more appropriate to ours. Sleep is a state wherein some of our functions indeed cease from activity; but others keep alive — very much alive. The body is comfortable to the last degree, and we are aware of it and enjoy that comfort. Some say that sleep is the happiest experience we know. Moreover, the stoppage of the sense-impressions and of certain activities of the mind which predominate when we are awake, sets free the mind to another order of consciousness.

It is true that the majority of people have not yet learned how to transfer the memory of that sleep-consciousness to the waking state; but nevertheless it exists, and we do obtain vague impressions of it through the channel of the dream-state, which is a sort of intermediate passage-way. By this analogy, then, death should be a state in which the mind is still more liberated, and the consciousness thus enabled to function on a still higher plane.

Moreover sleep is terminable; waking and sleep alternate and beget each other. It is so with all states, whether human or cosmic: alternation is the rule. Nothing is perpetual. An 'endless sleep' is a conception altogether contrary to experience and to what we infer from experience as to universal law.

But the argument that most appeals to ordinary people is that, except on the hypothesis of immortality, one's whole philosophy of life becomes absurd and untenable. Given the existence of a reflective, thinking, self-conscious mind, and we have to predicate its essential immortality, or otherwsie we reach altogether unacceptable conclusions. The universe becomes purposeless, life meaningless, all endeavor futile.

This alleged scientific viewpoint is just a particular way of looking at things, of formulating things. The ones who hold it do not actually frame their conduct in accordance with it; they live most of their time in another world, the same world as their fellows. They

act and talk and think like other people, and practise (Heaven be praised!) those homely virtues for which their 'scientific' philosophy provides no sanction — and which cannot be discerned on the filter.

OPPORTUNITIES

GERTRUDE W. VAN PELT, M. D.

"This Opportunity will never come again."— KATHERINE TINGLEY

THE ABOVE quotation is a sentence which is true not only for the grand occasions of life, but for its every moment. It is the teaching of Theosophy that the universe exists but for the experience of the essential souls.

Matter, and all we see and hear, is often described in the old philosophies as illusion. The meaning is that the phenomena of earth are impermanent. They come and go. There was a time when the earth was not. Gradually, it emerges from subjective into objective eixstence, and in the aeons to come it will as silently and mysteriously be withdrawn. This process is poetically described as the outbreathing and inbreathing of Brahmâ. Not only in this sense is objective life an illusion, but while it lasts it is not what it seems to be to the senses of man. It is indeed an illusion thrown upon the screen of time for the experience of the soul. Therefore every moment of that time is an opportunity.

The soul's instrument or vehicle lives, moves, and has its being in matter, and the task before it is to overcome this illusion; to raise the lives which compose it; to acquire an understanding of it; to see through it into the Reality from which it has sprung; to work its way through the confusion and find the Light.

Every moment the soul is in contact with its great deceiver, which may also be said to be its great teacher and its pupil; so every moment furnishes an opportunity. Whether we have so dealt with this great illusion as to bring upon ourselves sorrow or joy, humiliation or adulation, ignorance or great knowledge, success or failure, friends or foes, the opportunity is there to use these conditions as means to pierce it; to make a rift in the clouds; to approach a little nearer to the Reality.

Counter-currents of strength stir to activity every faculty in human nature, which is as it must be, for each faculty (the mind included) as it is evolved, becomes another instrument of vision. Yet it is not, as one might fancy, through great learning, mental acumen or power, that the Great Illusion is conquered. Rather, we are told, it is

'the pure in heart who see God.'

All the religions in their sacred beginnings have taught that the real obstacles lie within the lower, personal nature of man himself; in his passional nature, full of selfish desires and strong in its false sense of separateness. It is these that have to be regulated and worked through, until finally at the end of the long journey, each man finds *Himself*, the object of his pilgrimage.

Evidently this is not an easy task. Legends and symbols have been given from the beginning of time to indicate the seriousness of the undertaking. The story of Prometheus is one such, which with many others have filled the air of every age with beauty, inspiration, and ideals.

In this venture, time seems as nothing, for the ancient records show us to be now only a few million years or so beyond the half-way mark of the human journey on earth, with uncountable eternities behind and before us. There must be layer upon layer of fog to be penetrated. When one fog is dispersed, as it were, another of different density, of different color, appears before the soul. Every victory brings its joy, and when the face is set toward the East, every failure arouses healthful determination, so that the whole pilgrimage is a delight. Only when the face is turned the other way about, do disappointment, misery, and discouragement follow every act.

In this materialistic age, the claim of true religions that knowledge is to be attained primarily through moral conquests, is held in contempt. But Theosophy has brought back to our western civilization the evidence of reason and logic lying deep in religions, and has justified their essential teachings. No one need now grope in blind faith, but with a restatement of the ancient records regarding the facts of life before his mind's eye, he may tread his path with a firm step.

Those who have allowed themselves to be enervated by the lethal atmosphere of doubt as to the wisdom of altruism and the value of the age-old moral teachings, which have been held of late to be impracticable, can now clear the air for themselves. They can assure themselves that the moral law stands over and above any physical law, reinforcing it actually, even when it may seem from careless observation to clash with it.

It is impossible to imagine any situation in all the long journey through eternities, which does not offer its own opportunity. Every combination of circumstances, or the apparent absence of them, stirs to action certain qualities in man's undeveloped and mortal nature, so that every moment becomes an occasion to learn, to conquer, to endure, to clarify the nature.

The wheel of fortune may have brought to the surface vanity or discouragement; anger; complaisance; obstinacy; any or all of the

adverse qualities which lurk in the undeveloped side of human nature; or one of the legion-host of temptations which beset the man who has not overcome them.

All these are the true obstacles to progress and to insight. They all belong to the myriad forms of selfishness, which is the real hindrance to vision and which, when it is absolute, means absolute blindness -- for such a one never sees beyond his own small prison.

No one then need complain of lacking opportunities in life, could he only understand the value of those he has, and which, if used, would quickly begin to clear the air and bring happier and brighter circumstances. Unfortunately the road to progress has been in this age painted to man's fancy, in the outside circumstances rather than within the nature of man himself. But it is the Outside which is shaped by the Within, instead of the reverse.

Nature never repeats herself exactly. The next opportunity has its own coloring or elements, never quite like any that have passed. And is this strange? What can we know of the multitudinous influences which crowd space? Is it likely to be the empty thing that the Illusion presents to our senses?

The microscope uncovers a world of which otherwise we would not have dreamed. Color stretches perhaps indefinitely on both sides of our spectrum, and sound continues above and below our range of hearing, who knows how far? Why then should space be empty? Theosophy declares that it is not; that, on the contrary, every point in this boundless universe is teeming with life. Its nature being utterly beyond human experience, it must be beyond human imagination. Fortunately no doubt for man's sanity, his consciousness is keyed to but comparatively little at a time, until, in the vast eternities to follow, he grows strong enough to grasp earth's entirety.

The moment we open our minds to the potentialities of this immensity, we get a hint of the infinite possibilities of combinations in its elements. Even the seven notes of our scale defy limits. Then here, on this revolving sphere, are we likely ever to find a second time just the same grouping of phenomena? Are we even ourselves ever twice the same?

And when we expand our minds beyond the little ball we live on, and see it turning forever into new areas, following its guiding star, our sun, over regions never passed before, as our sun, in turn circles *its* guiding star -- a greater, remote, unknown, and yet known-to-be center -- where shall we stop? We -- part of an inexhaustible unity which never began and never will end. Is it reasonable to suppose that any one can escape the influences of this compact space in which all are bathed, and against whose denizens we momently brush, as we, they, and all, move on to destiny?

THE "INFERNAL SPARK"

A musician once, on arriving late for a gathering of friends, excused his tardiness with the explanation that while making his preparations a composition presented itself to his inner ear. Such an opportunity it did not occur to him to neglect; for, said he, "had I failed to record it, it would never have come again."

Certain it is that we live in a world of wonders — wonders that we take for granted, and opportunities that we let slip.

THE "INFERNAL SPARK"

H. TRAVERS, M. A.

"WE have heard a good deal about the divine spark, in which animals do not share, in man; what about the infernal spark, in which also they do not share?"
— Dr. A. SHADWELL, quoted in *The Observer*

NOT HAVING the context of this remark, we cannot tell what use the speaker made of it; but we will endeavor to answer the question with which the remark ends.

What makes the essential difference between man and the animals is man's possession of Mind. We spell it with a capital initial, because we use it here in a particular sense. Animals have mind, but not Mind in the sense in which man has it. The difference is too well known to need definition; it is not a difference of degree only but of kind: between the most intelligent animal and the least intelligent man (provided he is not an idiot) there is an unbridged gap. The human Mind has not evolved from the animal mind.

The possession of this Mind gives man a link between the elemental nature and the spiritual nature; the animal, lacking this particular link, manifests the elemental mind-nature only.

The remark just quoted illustrates well the fact that the Mind in man has been called both his Savior and his Tempter — Lucifer, the Light-Bringer, also made a synonym for the 'Devil.' Was it not Prometheus in the ancient myth who brought to man this critical gift? Was it not the 'Serpent' in the Garden who aroused man to a sense of his own independent power?

The story of the evolution of worlds and their denizens, of the drama of man, and of the origin of his human Soul — all this is a very long story, and cannot be told here. The practical point is that man *has* this prerogative and cannot explain it away or abrogate it; so he must

face the fact and find out how to use the faculty.

Truly the spark can earn the epithet of infernal, if allowed to become the servant of the passions. Who ever heard tell of a wicked animal? (It would seem, though, that pet animals can borrow from man a ray of intelligence, *and* some depraved habits; but this is temporary and accidental.) It is the wedlock of evil passion with intelligence that makes wickedness. It is the element of self-consciousness that makes the difference. Self-consciousness is the characteristic quality, or rather the very essence, of the human Mind. It is a creative power; it can transform, it can originate.

There is no 'Devil and infernal regions' from which man derives temptation to evil. Or is this Devil, this Hell, an invention, corresponding to the invention of a personal God? It would seem that man, in his absorption with his lower nature, forgets that he has a higher nature, and attributes the influence which comes from his higher nature to another being, which he calls God; and that, similarly, he has invented a Devil to take the responsibility for his mistakes.

Thus it might be said that there is no devil outside of man himself. But it must be borne in mind that a source of evil is constituted by the vast aggregate of evil thoughts generated by depraved human minds; and that this can influence us if we allow ourselves to be susceptible to it.

Man is able to act contrary to his own will and contrary to his own sense of what is right. He is impelled so to act. How convenient to pretend that the responsibility is not his, that he is tempted — 'the Woman tempted me,' or the 'Devil' tempted me! How convenient to shift the blame of our perversity on to an infernal spark!

Study yourself and your friends, and you will find plenty of instances of this subterfuge. You wish to satisfy an unjust desire; your conscience objects; and you gradually work yourself into the belief that you have been constrained against your will. One might imagine two boys in a school, one 'good,' and the other 'bad'; the bad one doing the evil and getting the punishment, and the 'good' one getting the benefit but going scot-free. Or a 'good' man with a bad wife, letting her do the things he would like to do if he dared; and she sharp enough to see what he really wants.

Is it not apparent that our sense of evil implies a knowledge of what is right? Or how else could we judge a thing to be evil? The very word 'infernal' means 'lower'; and the lower is subordinate to the higher. The 'infernal spark' derives its vitality by stealing; and, if not fed, it cannot continue. It therefore seeks to allure and to vampirize. Understanding its game, therefore, we are armed to defeat it.

INDIVIDUALITY AND PERSONALITY

H. T. EDGE, M. A.

WHY DOES a dying Roman emperor take so much anxious care to leave the affairs of his realm in good order so that there may be as little trouble as possible for those who come after him? What is it to him what happens after he is gone? He will not be there to see: he is perhaps a man who thinks death ends all and who has no belief in immortality. Why does even a cruel selfish treacherous ruler feel such anxiety about his sons and take so much trouble to insure their good conduct and prosperity after he has gone (utterly and forever, as he professes to believe) from the scene? In a word, why do we, one and all, act as though life were continuous, taking an interest in what will happen long after we are gone, starting new enterprises right up to the day of our death?

It is because our instincts and intuitions are truer than our reason. These instincts and intuitions take but little account of the mere personality. The personality is an insignificant thing: if your own personality seems important, notice how trivial seems to you the personality of another. The reason why we meet such disappointments in life, and often give way to the feeling that life is an enigma and a cruel farce, is because our false philosophy has accepted the personality as a valid object of worship, thus leading us to attempt the impossible.

The personality has its proper place. It represents one of the necessary phases of our evolution. With too little of it, man would be stagnant and unprogressive, living in a sort of communal society with fixed habits. This is one extreme; the other extreme is over-accentuation of the personality.

The important practical point is to recognise that my personality must make obeisance to something greater, which is yet *myself* — and, mysteriously, *not myself*. This process of recognition is called *finding the true Self*.

It has been said that we climb on stepping-stones of our dead selves; and there is not one of us but can say that he has left behind many personalities which he once mistook for himself, but which he now sees to have been fictitious like the delusions of a dream. Similarly we may infer that what we now take for ourself is also a delusion, destined sooner or later to vanish in a fuller light.

We all, recognising the inadequacy of our unaided intellect, the delusive guidance of our desires, wish for help and light from some

surer source. Whatever religion or non-religion we may profess, we must equally seek within ourself for that light; for our own faculties are the only possible medium between our mind and any source of light beyond it — even should the light come through the words of another or through the printed words of a book.

We claim to believe in evolution, growth, progress; and the question comes whether we shall wait for some external power to effect our evolution or help ourself by utilizing the powers with which we find ourself equipped.

It is said that we must raise the self by the Self; which means that, dissatisfied with our present condition, we aspire towards a fuller life and thus 'hitch our wagon to a star.' All religious teachings are (in their origin and essence) injunctions and methods for invoking to our aid the higher potencies that reside within our own nature.

'Personal immortality': we may find eminent men of science proclaiming their belief in it, and giving their explanation of its nature, in the light of their scientific philosophy. They say that, when the body decays, there is still an inner body left, made of 'ether,' through which the 'person' can continue to maintain existence. But such thinkers have not studied deeply the psychological questions involved.

What *is* that which we call personality, and for which we thus claim a perpetuation after death? It is made up of a great number of constituents, whose union depends on the existence of the physical body; and which would fall apart when the physical body disintegrated, thus destroying what we know as the personality. In a word, there would be a psychal change equal at least to the enormous physical change. Mr. Smith without his physical body would be a very different creature in every way from Mr. Smith with it.

To imagine that so great a change as the loss of the physical body produces no equivalent change in the nature of the being tenanting it, is not reasonable. The alleged evidence for this is illusory. His master's voice does not prove his master's presence, nor even that his master is alive. A simulacrum of a deceased personality is readily formed out of the materials afforded by the ritual of a séance.

But we pay too much attention to after-death. Why must we wait till then for liberation? Or can we feel sure that one who has not obtained liberation here and now would attain it even then? What are we here for? Deeply ingrained religious ideas have inoculated us with the notion that this life is nothing in itself, but is merely a preparation for a future life. These ideas are passing, however, and people are realizing more that religion should be an affair which teaches us to use aright *this* life. To attain immortality, from this point of view, would mean to shift

our consciousness from its personal center to a higher center — not to lose our individuality, but to master our personality and escape its limitations.

The process for doing this is to hearken to the leadings from above, and thus to permit our thoughts and actions to be governed from that higher center. It is thus that we build up the higher and immortal part of ourself, so that we die not with the death of the body.

Immortality—yea; but not *personal* immortality, unless one uses the word personality in a far broader sense. Theosophy distinguishes sharply between personality and Individuality, as is explained in *The Key to Theosophy.*

"Him that overcometh will I make a pillar in the temple of my God, and he shall go no more out . . . and I will write upon him my new name."

A CYCLE OF SPLENDOR

H. T. P.

IT was a season of sorrow,
My soul sought the ultimate goal;
Ah, is there ever a morrow
When cycles discontinue to roll?

My soul, enraptured by duty,
Controlled by the essence of love,
Enthralled with the spirit of beauty,
Caught a glimpse of the glory above.

Ah, surely, a cycle of splendor
Brings in an endless tomorrow
With a breath, oh, so touchingly tender
As to banish the knowledge of sorrow.

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SOCIAL SAFETY FIRST

LYDIA ROSS, M. D.

A RECENT editorial in the *Seattle Post-Intelligencer* claims that 'Dope-Addicts are Disease-Carriers,' and says:

"The connexion between addiction to narcotics and health has not received sufficient general attention.

"It is known that the effects of dope on its users are physically, mentally, and morally deteriorating at rates of speed which are slower in the case of some drugs than of others, though always appalling.

"In the case of the two forms of addiction now most common and most rapidly increasing — heroin and cocaine — this deterioration of the victim is cruelly swift, certain and complete. The sturdiest bodies are wrecked in a few months; the strongest wills and consciences are shattered almost as by a Borgia poison.

"But the peril to health is not confined to the addict. Every addict, by reason of low vitality, becomes a potential and usually an actual carrier of disease.

"Were society interested in this subject only from the selfish standpoint of the physical protection of its members from infections, it would be justified in doing its utmost to put a quarantine on the illicit traffic in narcotics."

Here is much food for thought. The addict, as well as the dope, is not only physically, but mentally and morally, a deteriorating influence. For 'misery loves company' so well that addicts too often spread the contagion of their habits to associates. It may be done as a gesture, in order supposedly to relieve another's tedium or pain or sorrow or anxiety. But the false sense of relief experienced, lures one on to repeat the dose at the next time of need, mayhap when the depressing reaction of the drug sets in.

Then, as each dose draws upon the reserve-forces of body and will, the victim's resistance grows less and the drug-lure grows stronger. And shortly the new habitué is spreading the devastating habit to others.

Dope plays a large part in our alarming annals of juvenile crime. Even today's 'flaming youth' would stage less spectacular scenes of banditry, murder, etc., without the artificial strength and reckless daring which dope arouses to action. For the drug overdraws the checking account of mental and physical forces, while inhibiting the moral impulses. This abnormal output of energy results in a depleted mind and body, bankrupt for ordinary reactions and normal impulses.

Society is challenged, not only to cut off illicit drug supplies, but to recognise and deal with the influences which make for the potential demand. Aside from degenerate vendors secretly creating a market for their demoralizing wares, the general social conditions today leave the highly-organized modern nervous system disturbed, unstable, and thus prone to seek artificial

poise and power by these methods.

Whereas rhythm is the normal state of the nerves, the prevailing keynote of life has become a jazz of restless, uncertain, unsatisfied seeking. The desire for thrills of speed, of change, of gain, seen in all ages and classes, narcotizes the satisfying sense of inner selfhood. Self-analysis is out of the reckoning, and dependence upon externals is the order of the day.

Everywhere the science of things is adding new forces and light to enrich life. But the dual forces of human nature, on the inner field of consciousness, remain unknown, undisciplined, and vaguely out of tune with the activities of mind and body. Even the disorders of consciousness — mental and nervous diseases — steadily increase while improved hygiene lessens the filth-diseases in the environment. Man is finding out new truths about everything but himself.

Religion and science alike fail to offer an adequate philosophy of life. The late debates between Fundamentalists and Modernists offer no conclusive arguments. At most, they give but fragments of a continued story of the incarnating soul's purpose on earth.

Meantime, from the real Self within, comes the strong, silent urge to add the soul's finer forces to balance the overbearing mental and material gains in evolution. But our materialistic age interprets this inner urge into strenuous, restless pursuit of more freedom and license to explore the resources of earth and air and sea, and to run the gamut of sensations. This absorbing pursuit includes the search for some one or some thing to save us from the effects of overdoing in body and brain. And the rapid pace narcotizes the voice of conscience and of common sense which warns that one must finally reap whatever he sows.

Medical science seeks new germs as scapegoats for the man-made monopoly of insanity and disease. In pursuit of new serums, it reverts to the lower animals in order to get life-blood for the vitiated human stream. The public, in pursuit of ready-made health, instead of physiological living, is doped with the theory of germs as causes and serums for cures. Only a saving minority recognise the ubiquitous germs as nature's scavengers in disease, and that the unclean animalized potency of serums, most likely disperses symptoms by subtilly storing the essential wrong throughout the body-cells, rather than expelling it in nature's ways.

The general restlessness and uncertainty show in the educational world. Homes and schools have external aids to knowledge as never before. Yet the young are not trained to find in character-building the wisdom to solve the unfolding problems of life itself. Progressive schools give selective and practical courses that equip for business, etc. But brain-mind ability and manual skill make a one-sided human

character, without the conscious balance of soul-selfhood.

Failure to recognise human evolution as a triple process on the planes of body, mind, and soul, leaves the alienists at a loss to define and classify cases of insanity. The young degenerates who aim to stage 'the perfect crime' prove too well that the mentality is but an instrument used by the higher or by the lower nature, and it is not the real Self.

The illicit traffic in drugs is one of the inter-related evils of the day which challenge society to claim the poise and power which belong to the human birthright of divinity. It was known of old that nature 'made man upright'; but for ages humanity has been doped with the confused teaching of half-truths, and has sought the support of 'many inventions.'

At last, the ancient truths are at hand for those who would awaken to that self-knowledge which is the key to all life. It was with foresight of today's problems that H. P. Blavatsky brought to the West the message of Theosophy, as "the science of life and the art of living."

Dope is a many-sided question for the individual and society to answer with the living truth of how to handle it.

JAN PIETERSZOOM SWEELINCK, THE DUTCH BACH

GRACE KNOCHE

JAN PIETERSZOOM SWEELINCK (the name is spelled in six or seven different ways, but this has the authority of the master's own signature) was born in 1562, a time of terrible pressure in his native land, but also of courage and high hopes. The brave Netherlanders were fighting for their freedom, and while independence from Spain was felt to be inevitable, and many felt it near, the sky was still dark and overcast. William of Orange was working and fighting to found the Republic that he never lived to see, and while the undaunted, determined Dutch could see that light was dawning and that it could not be long before they would be free to follow conscience in religion and civic affairs both, there was everything to try their hearts.

But liberty and liberalism were words to conjure with at just that time, and the very air was pregnant with great things. It was an era of intellectual reform, and thus, inevitably, a time of testing and transition, with new things in the making and old things passing away

though not without some struggle in the passing. It was, in short, such a time as every century sees during the latter years of its span, though not always so marked in its contrasts, nor so early in developing them.

It was typical, however, for the last stages were being passed on the long road to a greater freedom, not only in governmental things, but in art, in music, in the drama, and in literary expression and style. For centuries burst into flower as rose-trees do, and it was just at the dawning of a glorious burgeoning time that Sweelinck, 'the Dutch Bach,' appeared. Not to know his period is not to know him.

The United Provinces at that time had won a place level with the great nations of Europe, and Amsterdam was already the literary center of Holland. Coornhert, classicist, dramatist, prosewriter and the first great Dutch humanist, had traced a brave, luminous path.

Filips van Marnix, later, Lord of St. Aldegonde, a leading spirit in the war for Dutch independence and the close friend of William of Orange, composed the *Wilhelmuslied*, the national hymn of Dutch liberty. Van Marnix was a man of fifty when he wrote that hymn, Sweelinck was a child of six, but it must have had its effect, with other liberalizing forces, upon the opening mind of the boy.

Closer in point of time, however, were many and brilliant lights — it was truly a Golden Age. There were Roemer Visscher and his famous and brilliant daughters, Anna and Tesselschade, in whose salon at Amsterdam the new school of thought found first its *métier* and form. It was due to the House of Visscher that beauty and melody, art, music, poetry, and the study of antiquity rose to a position in general esteem equal to that already held by the literary and the utilitarian, for Amsterdam was a strong commercial center as well.

And it was out of this Amsterdam school, mainly, that the great contemporaries of Sweelinck came. No commentary on the musician could leave these other names out, for they were all part of the same mystic tapestry of time that just then was being woven with golden threads.

There were Cornelissen Hooft the dramatist and historian —Motley declared him the equal of any historian in Europe; Joost van der Vondel, "the greatest of all Dutch writers" (Gosse); Huygens, diplomatist, poet, and an intimate factor in the salon of the House of Visscher, and others of influence less wide.

Jacob Cats, head of the Middelburg school which rivaled that of Amsterdam, was writing his essays and poems; Grotius and Spinoza, although their immediate influence was quite different for they wrote little in Dutch, cannot be left out.

Then comes Franz Hals, the greatest figure in the history of Dutch portrait-painting with the

single exception of Rembrandt, who, however, was some twenty years his junior and did not have to cut so pioneer a path. Hals is notable besides as a sharer in the struggle for liberalism, for we find him a member of the military guilds and also of the Chamber of Rhetoric.

Dutch music, mainly concerned with psalms, hymns, and simple lyrics, was waiting for the developing touch, and that it found in Sweelinck of Amsterdam.

Sweelinck was the greatest organist, the greatest music-master of his time. Called the 'prince of musicians' in his lifetime, he was mourned by the poet Vondel after his passing as 'the phoenix of all music.' As the 'Dutch Bach' he has always been known, for he was the principal inventor (if the term may be allowed) of the organ fugue which Bach later carried to such perfection and astounding heights. That in itself would have marked him as a liberal of liberals for it showed a drastic independence of the conventional contrapuntal forms in which compositions for voice were cast, and which dominated the whole field of composition.

It was Sweelinck who put Amsterdam, musically speaking, 'on the map.' Crowds flocked to hear him play, and musicians, young and old, came from all over Europe to study with him. Melchior Schild of Hanover, Heinrich Schedemann of Hamburg, Jacob Schulz (called 'Praetorius'), Seiffert of Dantzic, Scheidt of Halle, and others almost as great in other nations, were among his pupils, and it was because of their high standard and exacting demands that no nation in Europe has today so many beautiful organs dating from that (to us) remote period.

In Germany, as the list of his pupils shows, Sweelinck's influence was preponderant and they form an unbroken line connecting him with Bach, whose mind and classic ideals so much resembled Sweelinck's own.

Sweelinck's compositions fill some twelve imposing volumes and definitely place him at the musical apex of his period — or rather at the meeting-point of two periods, a high point always when opposing tides lift their crests in so great and forceful a meeting of the waters.

Like his predecessors he was a constant writer of church-music, year after year composing new works for the Protestant rituals. The twelve volumes therefore are made up of his organ-music, of psalms, of 'Rimes Françaises et Italiennes,' chansons, and anniversary compositions of various kinds. He set to music the Psalms of David in a masterly series, which filled four books.

Succeeding his father as organist at the famous Old Church of Amsterdam, Sweelinck gave the best of his life to the task of lifting church music to a place of musicianship and beauty which it had not occupied before. His mastery of counterpoint was such that no subse-

quent musician equaled him until Bach appeared more than a century later, and it gave him a position, musically, that he will hold as long as music is 'architecture invisible,' demanding solid knowledge and constructive mastery and skill.

One wonders what he would have said of the modern phase of lunacy known as 'futurist music' or 'jazz.' Probably what his notable fellow countryman, Professor Daniel de Lange, said when asked what he thought of 'jazz music': "Jazz music? I do not know it. I have understood that you have something that is called 'jazz,' but jazz *music* — there is no such thing!"

The portrait of Sweelinck which appears with this article is from a large medallion presented to the Isis Conservatory of Music by Professor de Lange when he came to Lomaland to take up his duties as Director of this Conservatory. There is a striking resemblance between the strong face of the sixteenth century musician and that of the one who bridged the nineteenth and twentieth centuries in Holland and in America both, with the same effort and ideals. Take away the cap and ruff (inevitable in portraits of that period) and the two men might be brothers. Their life-work was also very similar.

Like Sweelinck, Professor de Lange was the son of an organist; he also did his great work in Amsterdam, not only as Founder-Director of the Amsterdam Conservatory of Music, but as music-critic for over thirty years on the leading Amsterdam paper, *Nieuws van den Dag*.

Godowsky, the great pianist, who visited him in Lomaland, said upon the occasion of a visit to Lomaland made later, after Professor de Lange had passed away: "His writings set the keynote of music-criticism throughout Europe. All the critics copied him, and any artist coming to Holland knew that his failure or success there would depend upon the judgment of this distinguished writer and musician."

Both men made an impress of high spiritual import upon European music, though along slightly different lines, for Professor de Lange was a 'cello virtuoso as well as organist, and his great work was done as voice-teacher and conductor. He was famous throughout Europe as a conductor of Bach's *Passion-Music*, and where Sweelinck's organ-recitals drew students and musicians to Amsterdam from all over the continent, in the sixteenth century, the Amsterdam Easter-Festivals, under the conductorship of Professor de Lange, drew them as widely in the nineteenth.

The names of both were household words wherever, in their respective periods, music itself was known. Both were composers, both were single in their devotion to the classic and the pure, and both upheld and expressed in their music the highest Theosophical ideals.

Thinking of the great Dutch master, so musicianly, so fine and strong and determined, so courageously pioneering new and higher paths in music more than four centuries ago, words written in tribute to Professor de Lange, our beloved Lomaland music master, when he passed away in 1918, come to mind:

"What splendid word for you shall yet be said? . . .
Not such as you may rest. Swift the years fly;
You shall return, ere many seasons go."

THE EDUCATION OF LLEW LLAW GYFFES

KENNETH MORRIS

A BOY was born in Tathyl's Caer of old
Whose birth sent wondrous quiverings up of flame
Through the ringed planispheres that cry the Name;
And Don's son, Gwydion, from his starry hold,
To give him fosterage, into Gwynedd came;
And mortal-guised dwelt there; — nor late nor soon
Told his bright fosterchild what wonder-strewn
Domains were theirs beyond the path of the moon;
Nor that the boy, ere earthborn, had held sway
O'er sapphired solar cities from his throne
Midmost the Sun, nor that the fostersire
Ruled the sidereal regions from his caer
Whose towers soar spaceward from the Milky Way;
Nor gave the boy a name, nor wore his own.

Herding King Math's kine these two dwelt: their round
Skep-shaped stone cabin on that holy ground
Which is between Lake Llydaw and the gloom
Of purple Wyddfa. There he, wise and gay,
Daily would tell the child enchanted tales
That quickened the green mountain growth to bloom,
So wonderful they were: tales that were told
In high Caer Wydion or Caer Sidi of old,
Anent old journeyings 'twixt the Stars and Wales,
And proud things done in those Arfonian vales
By knighthoods only anointed eyes behold. . . .
And oft the mountain storms grew calm and listened,

And the Star-Regents waived their royal glories,
And leaned from their gemmed thrones to heed his stories,
And their drooped topaz scepters earthward glistened
Whilst through the dusk of eve and paling blue
He, mingling magic in the mountain dew,
Struck his high harp, and set the valley burning
With wild, long chords that rose and died down slowly
And drenched the hills and the gray evening wholly,
And ran and rippled o'er the fern, and turning
Vaunted and shouted midst the rocks, and thundered
On the inaccessible crags; and paused, and falling
Swooned o'er the lake; till the stars, hearing, wondered.
And when he sang, magical voices calling
Set the still air of evening quivering, throbbing;
And the shy folk of the warrens, white tails bobbing,
Loped through the dusk to hearken, listening, stopping;
And the quiet mountain kine would cease their cropping,
And lift shag heads, and stray towards him, dreaming
In some dim vision that came stealing, streaming
With those wild harpnotes from the strings his fingering
Waked such strange fire in with its rippling passing.
And in the blue night the dark waters, glassing
The trembling stars, lay calm,— the night wind, lingering
Above the bracken-fronds, fell pondering, pondering,
Hushed by those fingers that went twinkling, wandering
About the harp, and that deep clear voice winging —
Soaring and falling — round the enchanted mountain
Until dawn made the east a fiery fountain,
And Gwydion with low laughter stayed his singing,
And slowly silence grew on the startled air. . . .

So sped the years. The little lad grew strong,
So nourished day by day with story and song,—
Strong, and fairer than mortals are. His hair
Caught the sun's fire, and shone with ruddy flame;
Kingly his bearing, proud his eye: a mien
That sure was mothered by some mighty queen,
Fathered by god or hero; — and yet it came
Never into his mind to wonder at all
Why he went nameless, or what name to call
His fostersire. He had no need of a name,
Nor thought of his descent. Day after day

He roamed the precipices pendent far
Above the lake, where only the eagles are,
And grew most comrade-hearted with the Star
Of Day, his own star,— saw the gleam of pinions
Where through their blue empyreal dominions,
Dim silver-winged, the sleepless Dragons sweep;
And night by night midst the high crags he lay
And heard god-voices from the Milky Way,
And constellations, singing; and mused deep
Upon their dignities and state: could cry
For each his incantation, name by name —
Lordship by dragon lordship, flame by flame —
Invoking in the sky
Those who are kings, and those whose glittering spears
Ring round and hold the incursive deep at bay,
And those whose harps ring bardic, night and day
To guide the motions of the journeying spheres.
Also his fosterfather gave him store
Of mountain wisdom, and the Druids' lore,
And practised him in the Nine Games, and skill
To outrun the unstumbling wild goat on the hill,—
And know the secrets that the sage bees croon
In the dim coolness of their chambered hives,—
And what untamed imagination drives
The goblin wind cloud-herding round the moon,—
And what cold cogitations 'neath the lake
The dumb fish ponder when the moonbeams wake
Dim ghostly glimmerings through their noiseless deeps,—
And what high reverie the eagle keeps
In his crag citadel,— what bright thought gleams
In the June dewdrop on the reed,— what dreams
Brood through the woodland when the bluebells bloom,
Hanging their dark heads, thoughtful, in a gloom
Of purple silence,— what mirth takes the hills
When they laugh daffodils.

One evening, when the lake was half aflame
With gold, and half a violet dusk, he came
With swift steps to the cabin,— in his eyes
Sadness and indignation:

—"Soul," he cries,
"I may not bide here worthless any more,

Suffering this great shame on Llyn Llydaw shore!"

—"Dear, fickle is boyhood! In thy deed, what shame?"

—"To have no known lineage, and to bear no name."

—"Well, well! Who said thou art nameless?"

—"In the vale
A faery lady told me all the tale,
How that Arianrod Ren ferch Don hath sworn
That none shall ever give me a name but she,
And none else make my birth and lineage known."

The Herdsman laughed. —"Bide thou in peace till morn,
And thou shalt go questing Arianrod Ren
Through the vast world."

—"And thou, surely, with me?"

—"Hard is thy case, opposed to a Child of Don."

—"Hard were my case, if I went forth alone;
But thou art eloquent—"

—"Pitiless her breast,
And calmly immutable till the stars wane."

—"Yet were she moved at Wizard Gwydion's hest."

—"Sayest so indeed? But what art thou to him?"

—"He leadeth mortals to the portals dim
Where the Nine Elfin Princes watch the flame,
And the unnamed in the Cauldron come by a name."

—"All this the fairy told thee?"

—"Yea, in truth;
And I know well that all she told was sooth."

—"The Doniaid have their palaces afar.
We shall be parted for a year and a day."

—"Or in Eryri wilds their cabins are.
I think not he I seek is far away."

—"Thou art exorbitantly inflamed with youth
So to contend with them who, star by star,
The Whirling Mansions in Caer Sidi sway."

—"Most brother-hearted, one with me in delight,
Night on night, light after light they stray
Through the blue darkness down to the dark deep.
So silver-mirrored in my spirit sleep
All the Stars that flame and wander afar,
I think we are of one kindred, I and they."

—"What more know'st of this Gywdion?"

—"That his might
Runneth, a subtle flame, through day and night.
Here is his likeness in the heavens: A sheen
Unstable, jewel-luminous, with rayed plumes
Rainbowed and peacock-hued, and glimmering blooms
Wrought of fire-dust — mists golden, opaline,
Shot through with violet glow and beryl green
And shadowed with deep glory of iris glooms,—
Plays through the vastness round about his throne;
And from the midst his world-beholding eyes
Gaze laughter-laden into the vast unknown:
Through all the blue sun-wandered fields of the skies
Gaze laughter-laden: for with his alder-wand
Studded with druid gold, he hath his way,
And maketh old-time haunted deserts gay,
And on the sea-gull's wing, or hartstongue frond,
Writeth what secrecies are known beyond
The shadow of night, the sapphire beauty of day;
And where uprise the thousand walls and towers
Of stiff-necked cities he will pass, and lo!
White-shining quietudes of waters glow,
Or wildernesses gay with mountain-flowers —
Silent lands, where no feet come and go.
And he hath beauty and wisdom, and strange might
To cast his spells on men and beasts and birds
So that they work his will, and speak his words.
And now he fills these hills with dream-delight,
And wardeth, as I think, these quiet herds
From all mischance and ills of faerie;
For he hath put his splendor of godhood by,
And taken semblance of mortality,
And dwells in Arfon."

Long the Herdsman laughed.

—"Thou art made bard and fool by a fairy's craft!
Caer Wydion flameth far off in the sky.
Seek thou some other of the Doniaid Powers!"

—"Aid will I have from none but him and thee."

—"The smith Gofannon dwelleth by the sea;
On high Pen Gannion rise his smithy towers."

—"I have heard of him: how that the midnight flowers
Into strange blooms of beryl, orange, blue
Where his spark-torrents stream the darkness through.
He will be over-busy with steel and flame
To heed who goeth named or with no name."

—"Amaethon's pleasant caer is in the meads
Where Hafren wandereth through the water-reeds.
Seek thou Amaethon southward."

—"He hath care
Of whatso fields feel the keen ox-drawn share
Cut thorough. He must heed the young green corn,
That no mist harm it at the birth of morn,—
That no blight hurt it at the noon,— no dew
But feed and comfort it when down the blue
The silver spearheads of the planets shine.
How should he turn to heed a need like mine?"

—"Gilfaethwy hath his caer in Ynys Mon—"

—"Gwydion I seek, of all the Children of Don."

—"Thou art importunate. Indeed, indeed,
Will none else of the Immortals serve thy need?"

—"Indeed, indeed I told thee. None else knows
Where the fire 'neath Ceridwen's Cauldron glows.
Thither he guided many of old who came
Seeking the Threefold Wisdom, and a name."

—"Well, go thou forth at dawn; but I must bide
With the king's herds here on the mountainside."

At dawn the boy went forth, and made his way,
Day after day, gay-hearted, singing, lone,
Through Arfon, Lleyn and Eifion, Meirion, Mon;
But not on all the mountains, summer-gay,

Nor where birds sang midst the green forest-foam,
Nor in the clover meadows where bees roam —
By no bright shores nor quiet-watered vales —
Might he hear news of Gwydion. In all Wales
No word would any white-browed Druid say
But, with head-shaking, "*In the Milky Way*
He hath his flame-built caer,— west of the Bear
West of the Harp of Arthur; seek him there!"

Then he took thought: There is none knows, said he,
This side the eternal sea;
But in the far isles of the western foam
The Wise and Mighty of old time have their home;
There will I seek. . . .

Nigh on the brink of night,
When the pale sea ran pearl and primrose-bright,
He came down to the Malltraeth. In the bay,
At nine waves from the gleaming margin, lay
A ship like that glass bark, Prydwen, that bore
Taliesin Benbardd o'er the seas of yore
When he went forth with Arthur. Ghostly fair,
Rubied and frosted in the darkening air
'Gainst the sunk sun, it lay, and held his mind
Musing . . . and as he mused, a little wind
Blew seaward from the sand-hills, and he heard
Borne past, the sudden vague twitter of a bird,
And saw a speck fly forth, and on the prow,
'Gainst the wan sea, green wren-wings, unconcerned.
And a voice spake, —"Loose thou thine arrow now!
And set his heart pulsing, and turbulent fires
Consuming thought in him. His fostersire's
Surely the voice, the tones were; yet —

He turned;
Came one dark-mantled toward the desolate shore —
One of unknown, mysterious visage, o'er
Whose young or ancient forehead fickly burned
What seemed a crest of stars, and waned away
Almost ere seen.

— But loose thy shaft," he cried,
"At yonder wren!"

The boy glanced o'er the tide

Confused and hesitant,— wholly loath to slay
The Druids' bird.

—"Wherefore should I—"

Uprose

Upon the word that winged atomy,
And fled, and was lost singing o'er the sea;
And,

—"Wherefore?" said the other; "nay, who knows?
Birds there be many, and birds; and secret things
Wandering through the world on druid wings
Oft o'er this waste of waters come and pass.
And who should loose a shaft at yonder wren
And neither miss nor harm her, surely his name
So swift of mind were he, so subtle of aim —
Should gather fame and be acclaimed of men.
Yet give me news: why seek'st the ship of glass
And the world's rim? What lures thee forth to roam
Beyond the Brython and the white sea-foam?"

—"Beyond the sea, beyond the Brython, gleam
Green Faery Islands where the Great Dead dream."

—"Wide is the flood, with many islands strewn,
And wizard caers heaped up half way to the moon.
Whom seek'st thou in the Green Isles of the Blest?"

—"Tidings of Gwydion son of Don I quest."

—"Aye," said the other; " 'neath the moon or sun
I have heard rumors blown of such a one."

"Know you where those Gwerddonau Llion be?"

—"There is no wave I know not in all the sea."

—"Into those realms may any mortal pass?"

—"None, but with me in yonder ship of glass."

—"I would go forth with you."

—"Perchance; yet none
Goes, in my deed to God, save a king's son,
Or craftsman with his craft, exceedingly skilled."

—"King's son or slave's son, none knows if I be;

Craftsman I am, and well-skilled, certainly."

—"What craft is thine?"

—"A bard's. I know to build
With consonance and assonance and rich rhymes
Such song as men found meet in the olden times."

—"Bards there be many, there beyond the sea.
Wouldst need a better craft, cam'st thou with me."

—"I can build ships."

—"Canst mold frail glass to form
So that its beauty should outride the storm?"

—"Or houses."

—"Canst congeal the light of noon
To builders' beams, and with the dews of June
Dropped in the morn from meadowsweet or reed,
Glue beam to beam?"

—"What craft would serve my need?"

—"Crafts there be many, that the Immortals use:
Kingly and pleasant crafts, which whoso knows
Should be made welcome whereso the flood flows
And the Islands of the Blest burgeon afar
Timeless and griefless.—"

—"Pray you give me news
What craft were best?"

—"Or those God-Dragons are
Who herd the stars westward."

—"Were it but known
What manner of craft would serve me best—"

—"Mine own
Is noble as none else is. Making shoes—"

—"I can make shoes."

—"Such as the Tribe of Don
And all the happy Immortals wear, who dwell
West of these waters. Many a subtle spell
Hath he to whom this subtle craft is known;
For these are shoes that tread the unstable seas

Or the sheer precipice; that leap as far
As from the Pole Star to the farthest star
In Arthur's Harp; — speed o'er the tops of trees
Or wind-brushed meads, and bend nor twig nor blade."

—"Unknown to me, indeed, how they are made.
Yet, might the art be learned– "

—"Indeed, indeed
I am grown weary, wandering far and wide
Alone, hither and yonder o'er the tide;
And for thy songcraft's sake, to while away
My saddened hours, when I would fain be gay,
I am disposed to teach thee, wouldst thou heed
My precepts—"

—"Yea would I!"

—"Heed then, and learn
This first branch of the art!"

A sudden turn,—
A reaching into the air,— an outstretched hand
Shaken; and at a little rhyme he sang
The indrifted jetsam, quickening, quivering, sprang
Into a coracle. Therein they passed
Lightly the nine long waves; and came at last
Into the ship; and straight thereon the boat
Crumbled to tulse again, lolling afloat;
But for the ship, — like unto one that slept
And wakens startled, at their weight she leapt
Forward, and spattering beryls at her breast
Sped toward the dim blue beauty of the west. . . . .

And the tale tells how, when 'twas morn,
Those two, of all their beauty shorn —
An old, squat cobbler,— an uncouth
Large-limbed, red shock-maned, ill-clad youth —
Landed by Queen Arianrod's hold,
With leathern rolls inlaid with gold,
And all such gear as cobblers use;
And how the queen, desiring shoes,
Came down to them there by the sea;
Nor knew she Gwydion in the one,
Nor in the other, her own son
Whom none, fate was, might name but she,

Nor she, of her own knowledge and will.
And whilst the cobbler plied his skill,
The wren lit down, as yestereen,
Where on the wavelets tossed afloat
Their little hide-clad wicker boat,
And preened her wings; and how the queen
Saw the lad make his arrow sing
'Twixt the thin legs of that winged thing
Hurtless, and skim from wave to wave,
And leave the druid bird to preen
Her wings as erst; — and marveling
Cried, "Llaw Gyffes a'i tery ef
Dy Lew" — thy lion with sure aim
Strikes,— and so gave her son his name.

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STALACTITES AND STALAGMITES: SOME OF NATURE'S SECRETS

ROSE WINKLER, M. D.

"UNDER the blue of heaven in the free air we can always find that which is akin and most intimate to ourselves, and a friendliness in every green and growing thing, and the New Life, which is the God-essence, everywhere."— KATHERINE TINGLEY

IT WAS a rare and glorious day in April, and the air was redolent with the aroma of the blossoming sage-brush, the delightful fragrance of the sweet heliotrope, the perfume of the honeysuckle, and numerous other sweet-scented blossoms.

Upon the verdant hills of beautiful Lomaland that roll away in terraces and canyons down to the grandly picturesque and rocky shore of the Pacific, the fine, imperceptible shower of fiery, life-giving rays of the cycling sun o'erhead penetrated every atom of the fair earth and the sparkling deep-blue sea; revitalizing the air with new life whose energizing vigor helped the quickened desire to take in long refreshing draughts of rarefied ozone and tempted one to taste and drink of its very essence. Nature's matchless beauty, profligate in the disposition of her charms, led me to 'inquire of the earth, the air, and the water, of the secrets they held for me.'

How Nature's unfathomable secrets hidden in the wealth, glory, and invisible essences of earth,

water, and sunlight, pleaded for recognition and more intimate acquaintance! Thus, pondering upon the harmonious interaction of Nature's chemical elements, ensouled by living entities, imprisoned in their physical garments and functioning in the soil, in the water, in mineral, vegetable, and animal life, the sparkling fresh atmosphere held the attention and stirred the imagination, leading one presently to personify these well-known elements of our globe in the hope of making a few of Nature's secrets somewhat easier of solution.

"There is but One ELEMENT in nature, and at the root of it is the Deity; and the so-called *seven* elements, of which five have already manifested and asserted their existence, are the garment, *the veil, of that deity*."
— *The Secret Doctrine*, I, p. 460

In fancy, daring lightly to push aside the ethereal curtains of the stratified air: behold, there was the fair-browed, aerial intelligence, the radiant goddess of the air, robed in diaphanous, interlacing folds of exquisitely tinted rainbow hues; ablaze with the life-essences that gleamed and sparkled like jewels through the enmeshed gases and compounds constituting every molecule of her vitalized being. Her wavy, glittering-gemmed hair floated lightly away to the most remote frontier of the world, gracefully held in by a diadem of air-composing substances with the flashing oxygen, O, as its central light-star that radiated its life-supporting, electric-blue rays to all life — whether in the air, the water, or in the earth.

On either side were mounted the shining nitrogen, N; water-vapor, H_2O; carbon-dioxide, CO_2; and smaller burning flames of inert gases, such as argon, A; helium, He; neon, Ne; krypton, Kr; Xenon, Xe; and traces of hydrogen, H; hydrogen peroxide, H_2O_2; and ammonium nitrate, NH_4NO_3 — all living entities ensouling their scented, ethereal substances, and bearing upon their breasts their names in jeweled, abbreviated letters, known as symbols.

"The whole Kosmos is guided, controlled, and animated by almost endless series of Hierarchies of sentient Beings, each having a mission to perform."
— *The Secret Doctrine*, I, p. 274

Everywhere and all about us is abounding, indestructible life, and 'Hierarchies of sentient Beings' ensoul every particle of an element, whether organic or inorganic. And beyond, and farther away than any eye could see, stretched the pulsating, briny, deep-blue sea, and on her swelling waves of sea-green foam rose the luminous spirit of the deep, the goddess of the sea, richly robed in clinging drapes of billowy blues and violet, silvery, sea-foam greens and indigo, every molecule glittering with the fire of life. Her royal crown and massive girdle were gorgeously studded with the essences of flaming gases, sparkling, crystalline compounds, and flashing metals. Her surging, shining robe of blue billows purled

along the extreme shores of her golden, earthy bed and lingeringly caressed and suckled with her essences the islands, coral reefs, and kelp-beds set like rare jewels on her fair bosom.

Every molecule composing her fluidic body not only contained the elements of the air, but was saturated with infinitesimal particles of the compounds of sodium, Na; potassium, K; calcium, Ca; magnesium, Mg; and other metals; also the Halogen group or the salt-formers, namely, chlorine, Cl; fluorine, F; bromine, Br; and iodine, I; and other compounds and salts, or metals including copper, Cu; zinc, Zn; manganese, Mn; silicon, Si; iron, Fe; aluminum, Al; nickel, Ni; and cobalt, Co; which latter are commonly found in plant- and sea-food. Therefore, we can readily understand that sea-water is essentially a mineral water.

"Every drop of water generates its physical infinitesimal Infusoria."
— *The Secret Doctrine,* I, p. 146

But water, H_2O, as it occurs in nature, always contains more or less matter derived from the rocks and soils with which it comes in contact, including micro-organisms that develop into different specimens of animal life. Even rain-water, which is the purest natural water, contains dust-particles and gases dissolved from the atmosphere. Water, which covers nearly three-fourths of the earth's surface, is one of the most potent agencies in working geological changes in the earth; and it forms about seventy per cent of the entire weight of the human body. It also acts as a solvent upon various ingredients of the food, liquefying and rendering them capable of absorption.

As many of the elements are called gases on our material plane, they hold in subjection the charge of life or energy, which, in each, if suddenly liberated, would explode the element. Science, aware of the energy locked up in each atom, calculates upon the power that could be harnessed if it were possessed of the secret of its release. It is obviously true, that if the gases of the atmosphere or of the ocean could be suddenly liberated, the earth would disappear and the explosion would reverberate throughout the cosmos. The greatest impediment to its discovery is selfishness; and if the altruistic motive be lacking for the employ of such power for the benefit of humanity, it may never be discovered, until the age for such knowledge and its right use is at hand. H. P. Blavatsky says:

"The world so far will get but that with which it can be safely entrusted."— *The Secret Doctrine,* I, p. 561

"It will be at its appointed place and time only when the great roaring flood of starvation, misery, and underpaid labor ebbs back again . . . — and the pitiful cry for bread, that rings throughout the world unheeded, has died away."
— *The Secret Doctrine,* I, pp. 563-4

The rock-ribbed, golden earth, enriched and made fertile with all

the identical chemical substances that permeated the air and the water, bedecks herself with forests green and fields of golden grain, orchards and gardens bountiful and fair, furnishing the life-giving and blood-making nutriment for the life-supporting and tissue-weaving fabrics comprising the bodies of all animal and human life. Does not this interblending and interlocking of all the chemical substances ingested with our foods, prove that there is a very close alliance between man and Nature, and that the overbrooding spiritual life, the 'God-essence,' pervades and unites all and passes everywhere unaffected and unimpeded?

"But the Occult doctrine . . . says: Not only the chemical compounds are the same, but the same infinitesimal *invisible lives* compose the atoms of the bodies of the mountain and the daisy, of man and the ant, of the elephant, and of the tree which shelters him from the sun."— *The Secret Doctrine*, I, p. 261

Having glimpsed a few of the secrets of the air and the water, we will now turn to the mystery of the chemical formation of the *stalactites* and the *stalagmites*.

The majestic spirit of the earth beheld the approach of her fair sisters, and with her compassionate heart went forth to greet the fair-browed goddess of the air, whose filmy, shining draperies fluttered caressingly about the brilliant, blue-robed goddess of the sea, and permeated and girdled by the spirit of life, they moved together in rhythmic harmony to the subterrene caves underneath the layers of limestone and sandstone rock, onward to the famous Mammoth Cave, in Kentucky, and thence to the Luray Cave, in Virginia, the latter said to exceed the former in almost every particular.

Overawed by the beauty and mystery of their formation, and pausing to listen to the magical harmonies of the majestic rippling streams that rolled away deep down below the floor of the crystalline caves, the spirit of the earth said to her lovely sisters:

"I have sought for the best explanations taught in the text-books of Chemistry and that written by the celebrated chemist Liebig and others," and then the spirit of the earth proceeded to demonstrate to her fair sisters, by means of chemical equations, the reactions that take place in the formation of *stalactites* and *stalagmites* in the fairyland caves underneath the earth's crust.

"First of all I should tell you," said the spirit of the earth, "that carbonate of lime has two important properties, the power to absorb and evaporate water and carbon dioxide, which will be manifest in the chemical equations as the reactions reveal the formation of this fairy-palace. Now limestone rock, forming the roof of this cave although containing impurities, has for its basis carbonate of lime or calcium carbonate, whose formula is $CaCO_3$. This form of lime is insoluble, but Nature by the action of water, H_2O,

and carbon dioxide, CO_2 upon it, has made it soluble by changing it into the acid or bi-carbonate of calcium whose formula is $Ca(HCO_3)2$. The following equation explains it: $CaCO_3+H_2O+CO_2 = CaH_2(CO_3)_2$. As has already been said, the reaction of water and carbon dioxide upon the insoluble calcium generate the soluble bicarbonate of calcium, whose formula is $CaH_2(CO_3)_2$.

"This soluble lime drips or percolates through the cracks, fissures, orifices, or apertures in the rocks, widening them through long geological ages into caves."

"Where do the water and the carbon dioxide come from?" said the fair sisters.

The spirit of the earth replied: "The rains saturating the soil, and the carbon dioxide taken from the decaying organic material, or from the air, together dissolve the limestone as demonstrated in the above equation.

"While the drops holding the lime in solution fall from the roof of the cave, and, in the process of falling evaporate more water and part with some of its carbon dioxide, the gradual coalescing of the falling lime-drops forms the pendulous masses or hanging columns of lime, or icicles of stone, called *stalactites*. The drops holding lime in solution as they fall to the floor continue to evaporate more water and part with more carbon dioxide, and harden into the formation of pointed mounds on the floor of the cave, called *stalagmites*.

"The reactions in the following equations show the soluble calcium bicarbonate parting with water and carbon dioxide, leaving it in the process to become the insoluble calcium carbonate, $CaCO_3$."

$CaH_2(CO_3)_2 = H_2O + CO_2 + CaCO_3$

or $CaH_2(CO_3)_2 = H_2CO_3 + CaCO_3$.

Thus the three sisters discussed on their departure the same process active in the formations of the caves and grottoes on the floor of the ocean's bed, including 'columns,' 'statues,' 'curtains,' 'organs,' and other beautiful forms found in the characteristic scenery of caves.

"And how can you explain the mystery of their different forms?" inquired the fair sisters of the spirit of the earth.

"Probably by the time that we shall meet again, this seed-thought left with you may help you to solve that question, from the fact, that the formative hand of Nature, or the morphological elements present in every micro-organism, equivalent to the plan inherent in the ensouling entity in every atom of chemical substance, or drop of water, is followed in molding, or unfolding and evolving their various and special formations," replied the spirit of the earth, as they parted to preside again over their own particular realms.

THEOSOPHICAL FORUM

THEOSOPHY AND "CHARACTER"

QUESTION: WHAT does Theosophy teach with regard to what is called 'character' in human beings? Is 'character' created by God when He creates the soul of every child coming into the world; or, if this is not the case, what is the origin of 'character,' which, as I understand it, is the real human being?

ANSWER: Yes, 'character' is the real human being. The teachings of Theosophy on this point are very clear and precise, and it requires only some small amount of study and reflexion in order to understand those teachings clearly. They are not difficult.

Character is the essential human being, as this questioner implies in his query. Theosophy does not teach the 'creation' of children at or before birth, and therefore of course does not teach that a man's character is created before or at his birth. 'Character' is the essential human being expressing itself in the environment of the world which we are in. It is the resultant of all the powers or energies or talents of the essential human being considered as a whole. We say that such a man has a great character; that such another man has a character not so great; and that such another man has a weak character or one of small capacity.

Have you ever stopped to ask yourself why these differences exist; why, if 'God,' who is supposed to be all-wise and all-good, created them? Why should 'he' create one man with a weak and vacillating character, and another man who stands forth from the midst of his fellows, clothed not merely with genius, but with almost inexhaustible streams of spiritual and intellectual energy flowing from him and manifesting as character? Why should there be such differences as between a Buddha and a Jesus, and some desperate criminal or some weak and flabby character, on the one and on the other hand?

These are things that exist, and to say that 'God' created these characters is to say nothing at all, because it leaves our sense of justice unsatisfied and our sense of love and harmony outraged. If 'God' be all-good, nothing can issue from the hands of such a supposititious creator except something that is all-good; otherwise we should have to say that 'God' creates evil, which is contrary to the hypothesis. If 'God' is all-wise, then we should be thrown back upon an unsolvable mystery, which is equally unsatisfactory as an answer.

It has been said before, along these lines, that in view of the im-

perfection and the evil in the world, 'God,' being all-good and all-wise, cannot be all-powerful to permit such things to exist; or, on the other hand, being all-powerful, cannot be all-good and all-wise to permit such things to exist. You see, therefore, that this leads us into a perfect tangle of contradictions, which is one and perhaps the main reason why Theosophists reject it.

'Character,' as I have said, is the essential man, and has evolved forth from the inexhaustible fountains of the human spirit through the natural process called by Theosophists Reincarnation, which takes place strictly according to another Theosophical doctrine called Karman, which is an operation of Nature and may be briefly described as the *doctrine of consequences*, or perhaps it may be more popularly called the 'law of cause and effect.'

To say that character is 'built up' by reincarnation is a popular way of putting it, and as such may pass currency in a merely popular sense. It is not, however, a quite accurate method of stating the facts. 'Character' is not so much 'built up' by reincarnation, as evolved forth by the changes which repeated births on earth enable the entity to advantage itself of.

You see, a human being, according to Theosophical teachings, is not a unitary entity. His constitution is composite, or compounded of seven principles, derived it is true, all of them, from the highest of them all, but yet expressing themselves on six planes below this highest, and therefore each one of such principles has its own part to play, its own field of action, and of necessity therefore differs in quality, if not in essence, from all the other five derivatives from the first and highest or Essential Self.

It is evolution that brings forth character: that enables the powers of this Essential Self to express themselves more fully with each life that supervenes. Evolution is fundamentally progressive *self-expression*, therefore.

This explanation is very necessary in order to avoid the popular idea of evolution: that it is a mere adding of experience to experience, or a brick to a brick, so to say, unto the edifice called 'character.' This would form merely a heap, and not a living entity. The Theosophist uses the word evolution in its etymological sense, strictly so; that is to say, as being an *unwrapping* or *rolling out* or *unfolding* of latent powers, faculties, capacities, existent in this Essential Self.

Hence, the only difference between a Buddha or a Jesus on the one hand, and some poor, miserable, weak, prosaic mortal on the other hand, is that in the former case and in all others like it, the divine powers and energies of the Essential Self have been more or less evolved forth, and express themselves in such beautiful and noble characters; and in the second case of mere imperfect mortal human beings, those divine faculties are

still more or less *involved*, *infolded*, and *unexpressed*.

Do you now understand what 'character' is? A noble character is the expression of the inner God, and the nobler the character, the nobler and fuller is the expression of the inner God. It is the teaching of Theosophy that there is no limit to the possibilities of growth, of evolution, and therefore no limit to the possibilities of growth in grandeur and splendor of character.

How we all admire a noble man or a noble woman! And how we all pity one whose will is so flaccid and whose mentality is so limited that the impression he makes on the environment in which he lives and on his fellow human beings, is practically negligible!

But here I feel bound, indeed impelled, to enter a caveat, a word of warning, lest my words be misunderstood to signify that all strong characters are necessarily highly evolved in the sense that I have outlined above. This is not so. There is another possibility which I have not yet alluded to, and while it is very infrequent, exceedingly rare in human life, it nevertheless does exist as a possibility; and indeed the annals of history show us a number of such humans.

I refer to characters which are strong, which are powerful in will and penetrating in mind, which have made a deep and in some cases comparatively terrible mark on environment, and therefore on history, but which in no sense of the word are expressions of the diviner Essential Self within. Such characters are evil, strong in evil, powerful in evil, and the results produced arise from the fact that the entire forces of these (fortunately rare) human beings have been concentrated into one point alone, that of purely selfish and thoroughly egoistic self-seeking.

It is indeed fortunate for the human race that this type of men is almost as rare as 'blue moons,' as the French say; yet they have existed, and doubtless some few of them must live on earth today. I could cite a string of names taken from history as examples of these two classes, the strong characters: the godlike, and the demoniac. But it is not necessary, and I refrain.

Even the Christian New Testament recognises this possibility when it speaks of entities strong in evil, doers of spiritual wickedness; for that is actually what it is: it is a misuse of natural powers and of spiritual and intellectual energies for positively baneful and evil ends.

I fancy that the test, or at least the best test, by which to judge one class of character from the other is this: A man of godlike nature is selfless; his heart is filled with compassion, an impersonal love, for not his fellows alone, but for all that is; and his life is sweet and pure, his instincts are impersonal, and wherever he moves and whatever he does, there is left behind a sweet aroma of impersonality.

Whereas, on the other hand,

those characters whose whole energies are concentrated upon self and directed to selfish purposes, callously disregarding the thoughts and feelings of others, whose nature in some extreme cases is so warped that they take positive pleasure in the infliction of suffering and pain — these, I say, are characters of the second type of which I have spoken, and can truly be called demoniac in character. Their destiny is, by operation of Nature, as fearful as the destiny of the others, the godlike ones, is sublime in beauty and grandeur. — G. DE P.

MATTER AND FORCE

QUESTION: I HAVE read in THE THEOSOPHICAL PATH with a good deal of interest, certain lectures which have been given at your Headquarters, in which lectures the speaker said a good deal about matter and force as being 'fundamentally one.' I do not understand what he means fully, although it seems to be more or less concordant with modern scientific teachings. Will you please help me by explaining the Theosophical teaching as regards this point a little more clearly than the lecturer was able to do?

ANSWER: I suppose that this questioner is alluding to the lectures given in our Temple of Peace here at Point Loma, California, on the general subject 'Theosophy and Modern Science.' These lectures were delivered during the course of the spring, summer, and autumn of last year, and as the lecturer is the same as the writer of this answer he may perhaps say that an adequate understanding of his meaning may be gained by reading these lectures as they are printed *seriatim* in the pages of THE THEOSOPHICAL PATH.

However, the following may be of some assistance to him. It is quite true that such is the teaching of Theosophy. And it is likewise the teaching of ultra-modern science: force or energy, on the one hand, and matter or substance, on the other hand, are fundamentally one, for the following reasons; — and I will follow the scientific line of thought in making this explanation rather than the religious or philosophic, for I fancy that it would be more clearly understood.

What we human beings call 'matter' is a composite or aggregate of vast hosts, so to say, of minor particles called 'atoms' by the chemists and physicists; which in their turn are composed or built of what these same chemists and physicists call electric charges, respectively known as protons (and electrons) at the center of the atom, and electrons in various orbits, if more than one, circling round those protons. The protons are particles of positive electricity,

and the electrons are negative electric charges, or particles of negative electricity. Therefore, as electric energy is thus shown to be as corpuscular as what is popularly called matter, it is at once obvious that matter and force, or energy and substance, are merely names for two grades of the same thing.

Electricity is a force or an energy, but it is also corpuscular. It has body and substance and place, which are the qualities or attributes of what we call matter; also, therefore, electricity is either energy or matter according to the manner in which we look at it.

The Theosophist extends this thought to what he calls spirit and substance, spirit being the fountain or origin of energies, and substance being the underlying source or fountain of what is called matter. If this matter is subtil or ethereal, it is an energy. If the same thing be looked on or considered as substantial, then we may call it substance or matter.

Yet should it come to the question of a choice of terms as to which of the two, energy or matter, is the originant of the other — and this question might readily arise in the mind of a careful thinker,— then a Theosophist decidedly prefers to say that spirit is root or fountain of substance, or, what comes to the same thing in our physical world, energy or force is the originant of what is commonly called matter.

We can look upon matter as being equilibrated energies, forces neutralizing each other, so to say, and each holding other in more or less stable equilibrium, producing what to the physical sense appears to be matter. But it must not be supposed that this equilibration or stabilizing or neutralizing is in any sense at all a stopping of the incessant and continuous movement of energy or forces; because it should be obvious to anybody that it requires, so to say, a constant expenditure of energy in order to neutralize another equivalent energy.

If this questioner has ever played at the popular game of 'tug-of-war,' he will realize that the two groups of men or boys holding the respective two ends of the rope must keep a steady and constant straining pull; and this shows clearly that if the forces are nearly balanced we have, as it were, an equilibrium or an apparent stoppage of movement; but this takes place at the cost of a constant expenditure of energy. I wonder if this figure makes my meaning clearer?

Energy by itself, very naturally, is never annihilated. It is constant movement, in constant strain, so to say. Could it be imagined as stopping absolutely or ceasing its inherent activity, it would no longer be energy, but would be annihilated, which is impossible.

Thus, then, energy may be looked upon as etherealized or subtilized matter; or better, matter, as I have already said, may be looked upon as energy, or energies held in

more or less stable equilibrium by the work of other energies. Two energies of equal strain balance each other, and this balancing of energies or forces is what we mean when we speak of matter.

How different these views are from the ideas of less than a generation ago when nobody knew what energy was really and nobody knew what matter was really; but believed that something called energy was supposed to arise out of matter in some incomprehensible manner! 'Life' in those days was a tabooed word. People then did not realize that life is but a form of energy—or, as the Theosophist would liefer say, it would be much more accurate to observe that energy, all energy of whatever kind, is but the manifestations of cosmic life.

Life, therefore, is at once energic and substantial, and we have but to pursue the thought farther and to press home the argument more fully, immediately to understand that consciousness must in very truth be the noblest form of energy that the cosmos or universe contains. It is, therefore, also substantial but of a substance or matter not of the physical material world.

And finally as a concluding remark, and it is an important one, please bear in mind that when the Theosophist speaks in this general fashion of energy and substance or forces and matter, he never limits his meaning to the physical material world which surrounds us; and which is but the garment or outermost sheath of inner and invisible worlds. He means, rather, the entirety of all the energies and substances or forces and matters visible or invisible, and wherever they may be, which infill and motivate the operations of the Boundless All. — G. DE P.

NEWS FROM THE ARCHAEOLOGICAL FIELD

OBSERVER

DR. SVEN HEDIN'S exploring expedition in the Far East has at last been heard of, and all is going well with it. Dr. Hedin recently left it temporarily and went to Berlin to purchase necessaries for the continuation of his important researches. He says he is well satisfied with the results of his journey through the Gobi Desert, where many archaeological discoveries have been made and valuable work done in mapping extensive regions never before charted. The expedition suffered many hardships; great snowstorms and sandstorms were encountered and the members often went hungry for weeks.

The Chinese authorities insisted that he should take a number of

Chinese scientists with him, which added an unexpected financial burden, but it does not appear so unreasonable in view of the fact that the expedition was about to explore Chinese territory.

The Roerich Central Asian Archaeological and Cultural expedition has also been heard from after a long and alarming silence. It also suffered great trials, but seems to have done valuable work. The results of both these expeditions are looked forward to with lively anticipation.

ACCORDING to Mr. Hyatt Verrill of the Museum of the American Indian, Heye Foundation, who has been busy exploring in the interior of Bolivia and Peru, there are hundreds, even thousands, of ruined temples, forts, cities, and cemeteries in those regions that have never been studied or even seen by white men. He believes the material lies waiting there which will decide the problem of perished races in the far past "who reached astounding heights of culture and civilization, and vanished and were forgotten." He says:

"At any moment astonishing discoveries are likely to be made which may completely upset our ideas about prehistoric man in America. Within the past three years two immense prehistoric cities have been discovered in Peru, close to the thriving port of Pisco and the sea, and my own discovery of an undreamed-of civilization of extreme antiquity in Panama, was another proof of how little we know of these early American races."

It has been mentioned several times in these columns that one of the difficulties in unreservedly accepting the theory of migrations from China or India to the western coast of America by the Pacific is that no trace of the wheel has been found in ancient America, either carved on the monuments or mentioned in documents. Yet the evidence of such an immigration from Asia -- where the wheel was known from great antiquity — is very strong. Mr. Verrill has discovered something which may prove a factor in the argument in favor of Asiatic connexion, but may prove something of greater importance.

At Tiahuanaco, the prehistoric city near Lake Titicaca, Bolivia, he found two stone circular slabs like wheels, each more than six feet across, with centers pierced for axles. They appear to be of the same type of excellent workmanship as the cut stones of the ruins, and there is no reason to believe that they are early Spanish grindstones for grain. No tradition of Spanish mills exists in the neighborhood of Tiahuanaco, and the climate is so severe in this region — more than twelve thousand feet above the sea — that nothing capable of being ground can grow there. One of the wheels was partly buried under fallen stones of the cyclopean masonry characteristic of the ruins.

Mr. Verrill suggests that the wheels were used to transport the gigantic blocks of building stone from the distant quarries. The

mystery of the method of moving the thousands of enormous stones has never been solved, but the discovery of these wheels may throw light on it. It does not help much, however, in the problem of immigration from wheel-using Asia mentioned above, because the ancient carvings or writings which indicate Chinese or Indian origin are probably far later than Tiahuanaco, and if the people of the ancient pre-Incan empire employed the wheel as indicated by these circular stones, all knowledge of it was lost and not revived again until the coming of the Spaniards.

It is unfortunate that so much of the finest pieces of carving on the most ancient monuments at Tiahuanaco has been used by the Indians and others for general house buildings, and by government contractors for railroad filling, but there is still a large proportion of the ruins very incompletely explored, and there may be great discoveries to be made underground.

Mr. Verrill found that the enormous stones had been originally locked together by metal staples and bolts. The grooves are still visible. Some of the staples were made of silver and have been very thoroughly looted, but there may be some hidden under the débris. In regard to what he calls "the beautifully cut grooves and holes which held the staples" we are again confronted with the old, unsolved problem — How could certain prehistoric carving in hard refractory stone have been done by 'primitive' savages who had — according to theory — no sharp metal tools, but had to scratch with inefficient flint implements?

Mr. Verrill faced this problem in Panama where he found quantities of prehistoric carving on very hard stone, and he said he was compelled to conclude that iron and perhaps steel has been known far earlier than science has been able to discover specimens.

Iron may have been a rarity and the stone implements the ones used for all ordinary purposes. Iron rusts away rapidly but the stone tools last without much degeneration for ages.

A MOST ingenious method of accurately obtaining the dates when some of the extinct Indian peoples of the Southwest flourished is being carried on by Dr. A. E. Douglass, Director of the Steward Astronomical Observatory, University of Arizona.

No one who looks at the rings in trees can fail to notice that they are not always regular and that some are thicker than others. The surprising fact has lately been discovered that the yearly growth of trees exhibits a rhythm in harmony with the fluctuations of the sunspot periods, which average a little more than eleven years. A Canadian observer has also shown that similar periodic solar cycles are marked in the rings of trees

which grew before the glacial age, perhaps three hundred thousand years ago.

Not only is the sunspot cycle shown by the tree rings, but so are climatic changes, such as dry or wet seasons in the regions affected,

Dr. Douglass is working at the great 'Apartment House' at Pueblo Bonito, New Mexico, which once held more than two thousand inhabitants, and is estmated to have been abandoned about 1000 A. D. He is trying to establish the exact date of the building by an examination of the rings shown in the ancient tmbers still remaining intact in the ruins, which cover a period of three centuries.

He has invented an ingenious drill which removes a core of the wood for careful study. Each piece is searched for the impression of individual years already known by wood from other sources.

While the tree-ring record from the days of Pueblo Bonito is not absolutely complete in Arizona, Dr. Douglass is working hard to make it so, and then to confirm it by comparison with the record of the giant California Sequoias, which runs back without interruption for several thousand years.

During his researches, Dr. Douglass found a striking coincidence which conclusively confirms the sunspot period in the tree-rings. From 1660 till 1720 the tree-rings indicated no sunspot cycles, and it is well known to astronomers that a strange dearth of sunspots prevailed during that period of sixty years!

So far as has been ascertained the rings on the wood of the Pueblo confirm the estimated date of its abandonment, which had been ascertained by the style of implements and utensils found there.

THE DREAMER'S VISION

AXEL JÖRGENSEN

"THERE is in man a power to see the invisible, to hear the inaudible, to know the unknowable, to enter into the non-sensuous and the spiritual; but this power lies in many a man dormant. Glimmerings of light come to him, glimpses of the invisible are afforded to him; but for the most part he walks by sight. . . . He must be born from above. The power to see the invisible must be awakened. He must be lifted out of his lower self, out of a lower realm into a higher realm.. Then he sees what he did not before see; he understands what he did not before understand. He finds himself in a world of which before he knew nothing, although it was all about him."— LYMAN ABBOTT

THE WORLD called him 'a dreamer,' hence his associates were few, his friends fewer. He was a lonely and lonesome stranger, whose search after some mystic quest had taken him through many lands and finally brought him to another hemisphere.

He was a lover of Nature, of

art and of music. As a very little child, when anyone played, his favorite position was sitting on the floor, at the feet of the performer, with eyes closed, intensely listening.

As a boy, when he and his father took their evening walk together, these walks often led them to the top of the hill, crowned by the astronomical observatory. Resting upon one of the benches on this hill, he and his father would for hours contemplate the grandeur of the universe and the magnificent beauty of its constellations.

The vastness of the heavenly expanse, the mysterious silence which spoke so loud, impressed his soul with awe; but also with peace, with harmony, and with divine universal love. In his young heart he felt a feeling of benediction, a realization that, though infinitesimally small, he also was a part of the great scheme of the Master-Builder.

* * * *

Years passed, and the child became a youth; his studies finished, the indefinable longing for something—unknown — became stronger, and started him on journeys far from the land of his nativity. The beauty of Nature, the magic of music and artistic color, the charm of the history of past ages, called him with irresistible force.

The achievements of man in art and science, the works of the master artists in music, painting, sculpture, and architecture, beckoned him on and on, from land to land. The age-gray cathedrals, the art-galleries with the works of Rembrandt, Raffael, Rubens, and Michelangelo, held him spellbound by day; while the tone-poems of the great master-composers delighted his ears at night. With sympathetic eyes he viewed the lake of Starnberg, where the benefactor of the great Wagner had dreamed of Lohengrin, the mystic knight; and finished one span of earth-life. . . .

Leaving the old continent with its ancient, medieval history and its present civilization and mode of life behind, the quest urged him on to another hemisphere, a land of fresh woods and pastures new.

* * * *

For a time, dreams and visions had to give way to stern realities; the process of fitting into new surroundings and conditions, coupled with unsatisfied longings and wants, brought him to the narrow ledge of the precipice; below him yawned the abyss with its unfathomable depth and darkness; far above he beheld the mountain heights, shrouded with hazy mist. The psychological moment was at hand.

He knew of the critical moments, the nascent states, when the composition of matter is subject to transformation into something totally different from its original state. It dawned upon him that the laws of material chemistry ran parallel with the laws of the highest alchemy; that the baser metals of the human constitution could, by the aid of a great universal formula, in course of time be changed

by man's own efforts into pure gold.

The moment for decision had arrived; should he turn back to the plains and the valley, whence he had come; live the life of the valley, give up his dreams, stifle his visions, and endeavor to be satisfied? A thought flashed into his mind, a vivid memory of Observatory Hill in the land of his birth, thousands of miles away, where he first experienced the feeling of universal unity. Once more he felt himself surrounded by the mysterious impressive silence. At that moment, he felt the handclasp of an unseen friend.

He faced the steep, narrow, and stony trail which wound its way up the mountainside, and started on his lonely journey. Thorns tore his body, time upon time he stumbled and fell; often the trail seemed completely lost. He felt and heard the ridicule and the contempt of some of the people of the valley, saw the fingers of scorn pointed towards him; but with unshakable faith and determination he pushed onward.

* * * *

In his laboratory, where he was principally engaged in the study and creation, composition, and blending of colors of various tints, hues, tones, and shades, the seven primary colors, corresponding to the musical scale, always stood out bold and clear.

Colors as well as music affected him in various ways and manners, according to the rate of vibration. Often he would lose himself in the study of this; thoughts would flash into his mind; certain color-combinations would call forth the memory of strains and passages in the musical compositions of the great tone-masters.

In his visions he saw the day when the genius of man should split the white light of day into the seven primary colors, and by the assistance of inventive chemistry, transfer, combine, tone, and shade these, and make them permanent for the needs of humanity. By the aid and employment of musical tone-vibrations, he beheld symmetrical designs and patterns of marvelous beauty and purity.

* * * *

As an attentive listener to orchestral renditions, the symphonies of the great masters reflected tone-paintings of beautiful colors and designs. The human emotions, love, joy, sorrow, pain, anguish, passion, courage, faith, hope, and life and death, all were audible and visible as tone-colors, changing continually, with a rapidity which only the inner senses of the invisible self could perceive and follow.

Beethoven's Fifth Symphony, the 'symphony of Fate,' transmuted itself, through its passages of heartache, suffering, pain, despondency, sternness of fate, courage, and final triumph into a great kaleidoscopic color-drama.

The 'Pilgrim's Chorus,' from *Tannhäuser*, the 'Processional of the Knights of the Holy Grail,' Chopin's 'Funeral March,' the over-

ture to Mendelssohn's *Midsummer Night's Dream*, the symphonies of Schubert and Tschaikowsky, became audible and visible color-expressions of spiritual aspirations, soul-evolution, birth, death, and immortality, romance and realism; reflecting the great woes as well as the sublime dignity of human life, carrying the soul to the mountain peaks, piercing the misty veil surrounding the true and the eternal, for the beholding of beauty and harmony, purity, truth, wisdom, and divine love.

"God spoke, and through the soundless realms of space
The keynote of created music rolled;
And time felt harmony within its hold,
The pulse-beat of eternity's embrace.
The Infinite in finite hearts we trace,
As ages strike the chords by Love controlled;
The earth is vibrant, and with rhythm untold,
All sounds in Nature's orchestra find place.
● Sound! Thou art the echo of a word
That broke the primal stillness by command,
An echo, through whose strains our souls have heard
A promise of the choral raptures grand,
That, voicing love and praise, forever rise
In Music's natal home beyond the skies."

The concert came to a close, the audience hurriedly filed out of the auditorium; but the dreamer still remained in his seat. He felt as if transferred to another plane of being. Suddenly he realized that he was left alone; he arose and walked slowly out.

The mental atmosphere of the city, consisting of the vibratory thoughts of its inhabitants, hung over it like a multicolored haze. Also here was recorded the aggregate, compound thought of its population, graduated in depth and intensity, of various colors and tints. As the night drew on, and as the population gradually entered into the state of sleep, the haze became less intense and perceptible.

The dreamer went to his room, and in the peaceful silence of the night, meditated upon what he had heard and seen.

* * * *

It was springtime. Nature, the greatest of all mothers, had broken the seals of her winter tomb, and stood in all the sublime purity and freshness of her resurrection.

The night was still, the sky a mass of constellations. The city was quiet, its population in the embrace of sleep, the twin-sister of death.

The dreamer left his room, crossed the murmuring, slowly-flowing river, and chose a path running through the forest, towards the eastern heights. Coming out of the forest, he selected a place on the highest elevation where an unobstructed view of the eastern sky and earth was to be had. At the foot of a lonely pine-tree he sat down upon a rock, viewing the landscape to the far line of the horizon, and the starry firmament above.

Silence — Supreme Silence, was everywhere.

As he looked upon the sky with its myriads of luminous stars and planets, the feeling of awe and reverence again swept upon him.

Face to face with infinite space, with inflexible law and order, he beheld the universe in motion. He thought of the time, when by purity of life man's inner senses should be so developed that he would become enabled to hear the divine harmony of the universe.

"We have not heard the music of the spheres,
The song of star to star; but there are sounds
That Nature uses in her common rounds,
The fall of stream, the cry of winds that strain
The oak, the roaring of the sea's surge, might
Of thunder breaking off afar, or rain
That falls by minutes in the summer night;
These are the voices of earth's secret soul,
Uttering the mystery from which she came."
— ARCHIBALD LAMPMAN

Far out, on the line of the eastern horizon, a star of unusual brightness, larger than any other visible, was rising — Venus, in all her beauty, the herald of the dawn.

The impressive silence was pierced by a cock's clarion call. Then again all became still.

The dreamer's thoughts went to the ancient city of Thebes, outside of which the colossal statue of 'Memnon' called upon the dawn. But the great silence, the impressive peace, quickly checked any wandering thought.

A great event impended; the air was stilled, as if expectant of some mighty birth or sacred ritual.

Suddenly a breeze swept the foliage of the trees; a bird was heard chirping in its nest,— Nature stirred in her slumber.

* * * *

In the east, one faint silvery ray of light arose perpendicular above the horizon — the One, the Unity. This was quickly followed by an angular ray on each side. The Trinity was formed; the Three became Five; the Five became the Seven.

From silvery white, the color changed rapidly through delicate pastel-shades of Gold, Salmon, blushing Pink, fiery Orange, and Red. A purplish haze, slowly graduating into Turquoise, fringed the rays. A marvel of visible beauty, a marvel of heavenly symphony,— as yet inaudible to human ears.

With slow, majestic dignity, a disk of Golden Light arose above the horizon.

Eternity had given birth to a New Day.

* * * *

A field lark fluttered from its nest in the brush, circling upwards in the air; it warbled a song of Joy and Praise to the 'Creator.'

It was Easter Morning; the Morning of the Resurrection.

"THE psychological mistakes of the past are still upon us. If we are to drink from the fountain of happiness we must learn to know the false from the true."— *Katherine Tingley*

"MAN IS AS YET UNBORN"

HERBERT RITTER VON KRUMHAAR

(An Address delivered before the William Quan Judge Theosophical Club, Theosophical University, Point Loma, California, June 24, 1928)

THIS SAYING recalls to mind the words of the German philosopher Nietzsche:

"Man and his realm have not yet been found"; or, we might perhaps say: "Man has not yet found himself."

We are also reminded of these sayings of the mystic poet Novalis: "As yet there is no art." "Man has as yet no conception of philosophy."

The work of Novalis, fragmentary as it is, reveals a very wonderful understanding of Universal Life; and the words just quoted testify, I think, to the belief of Novalis that no art or craftsmanship of any kind can exist separately by themselves. They are but patterns of varied aspect and design, that are woven upon the underlying principles of their originators.

In this way, regarding all literature and art as an involuntary manifestation of their author's creed, we find that, with the exception of some inspired works, nearly everything is based on the principles of separateness, and of egoism.

There is the evidence of an individualism where everyone is, so to speak, his own personal god, instead of a conception of unity where the outer self seems to melt away, to be absorbed and exalted in the Higher Universal Law.

If we compare such a conception, as it has been expressed, in different words, by the sages of all times, with the general attitude of the world today, then we may indeed feel that 'man is as yet unborn.'

Apparently some of the so-called 'primitive' peoples of the earth, which were despised and abused by the old materialistic civilization, have retained a far deeper sense of unity.

A young German explorer who was traveling on the South-Sea islands belonging to the Dutch Government, had become very much interested in the native music, produced by the Gamelan orchestra, and one day he questioned a Malayan chief about the prominent composers of his people.

The native smiled a little indulgently at the European notion of personal fame, and explained that these melodies arose from the people, as the echo, the expression, of their souls. If any one man was more highly gifted to serve as their mouthpiece, that was no claim to personal distinction for him. His

memory remained alive in his work, though his name or personality might be forgotten.

Another time, the same traveler heard by chance that one of his native carriers was a skilful wood-carver. He asked him about it, and the man only demanded to be relieved of his ordinary work for a fortnight, which would give him time to do some carving for his employer.

The result was a bowl of the most delicate workmanship, which had been carved from a coconut. The shell had been pierced and transformed into a thin pattern of lace-work, comparable with Chinese carvings in ivory. It seemed impossible to create so fragile an object out of such crude material.

There were, I believe, five different groups in delicate bas-relief, depicting scenes from the lives of the gods. The intervening space was filled by a tiny pattern of leaves and branches, with the background cut out between each of them. The whole effect was supremely artistic, while each detail, perfect in itself, seemed to fit in and to contribute to the harmony of the composition.

When the work was done, the man asked nothing better than to return to his ordinary job.

In this impersonal workmanship, where art had not been separated from nature but seemed to grow almost unconsciously out of it, I felt a resemblance to the art-work that is done at Lomaland. Here we can see in every detail of work that is done by the children, or by the older students, what we may call an unconscious manifestation of the spirit of unity. And it is from here, as we all hope, that this spirit will spread, ever increasingly, throughout the world.

THE EDUCATION OF SWEDISH SCHOOL CHILDREN

[Reprinted from the *Swedish American Line Radio Bulletin*, No. 27, Tuesday, June 12, 1928]

WHEN the Swedish public schools are let out in the summer, the children will clamber on board so-called 'school trains,' comprising sleepers, dining-cars and day coaches, to be taken from one province to the other, thereby gaining an intimate understanding of their country. The government, with the co-operation of the Swedish Tourist Association, spends large sums annually on these free school trips, which extend from the south of Sweden to the Lapland mountains.

In this manner children of mountaineers and woodsmen in the north receive a real and lasting picture of the fertile plains of the province of Scania in the south, or the rock-bound coasts to the east and west, while youngsters reared on the farms

are brought face to face with the majestic virginal forests and the towering mountains of the north.

Stockholm is, of course, the final Mecca of these youthful travelers. Filled with historical relics of bygone days, bustling with life and activity, the capital stirs the imagination of the country child, and on his visit during the summer vacation, he is able to complete the image he has created for himself of the city, as taught in class.

Special school inns will soon be erected along the roads in beautifully situated or historically interesting parts of the country. Such regions are the Åre district in Jämtland, picturesque Dalecarlia, the romantic island of Gothland in the Baltic Sea, and Lapland, with its midnight sun, glaciers and reindeer herds.

The training in Swedish gymnastics is a vital factor in the educational program of Swedish children. Last year three thousand boys and girls assembled on the extensive drill-grounds of three historic Swedish regiments, at Ljungbyhed in the southern province of Scania, participating in a voluntary mobilization for physical culture. Five hundred teachers were in charge. The boys were assigned to the camp of an old infantry regiment and the girls to that of a no less famous cavalry unit, and by the free use of the army's equipment from tents and cook-houses and rolling kitchen, the expenses were limited to about seventy-five cents a day for each child. Visitors from all over the world were present at this rally.

But the children are also taught about foreign countries, and these, too, are visited by groups of students, chosen from schools in various parts of the country. For three years in succession an exchange of Swedish and German children has taken place during the summer vactions. The groups are limited to some two hundred pupils of either nationality, and the stay abroad covers about four weeks. Great benefits have been reaped by these intercourses which have taught the children of two nations better to understand and appreciate each other. Similar exchanges will take place this summer.

Radio has been added to the curriculum of the Swedish schools. For a number of years lessons in English have been broadcast, as well as lectures on various scientific topics, with excellent results. Ambitious plans are made by the government's board of education to widen the scope of the school radio service to include more subjects and to reach remote places which are so far out of the sphere of the main broadcasting stations, on account of the limited power of the receiving instruments.

The children's love for good music will in the future be given an impetus by the introduction of phonographs in the Swedish schools, if present plans materialize. Swedish orchestra leaders and other authorities on music are enthusiastically supporting this idea. The art of great singers may thus be enjoyed and the presentations of symphonic works studied with benefit by pupils who might never have an opportunity of hearing original renditions.

The educational possibilities of motion-pictures have also been taken

into consideration by the school authorities. The catalog on pedagogic films in Sweden comprises today not less than 1,800 numbers, and new pictures are continually being added to this list. In 1927 an approximate number of three million children witnessed pictures of this kind.

Theaters and operas are other means by which education in Sweden is made interesting. During the past term special school performances of popular operas and comedies filled the playhouses in Stockholm with youngsters. Among the plays produced were works by Shakespeare, Strindberg, and Björnson. Old Swedish plays from the eighteenth and early nineteenth century were also revived.

The study of foreign tongues has always occupied an important place on the programs of the Swedish schools. Foreign born teachers are frequently hired or such pedagogs employed as have an intimate knowledge of the tongue they are to teach and have lived abroad for a number of years. During the study hours no Swedish is spoken, except when explanations or discourses on the grammar are made.

The Borgarskolan, a people's high school in Stockholm, recorded for last year a great increase in the number of classes in foreign languages. Not less than 45 classes in English were attended, 19 in German, 28 in French, 7 in Spanish, 5 in Russian, and 7 in Italian. The number of pupils attending these classes rose during the year to about 2,200 which means an increase over the preceding year of nearly 700 students.

THE DRUID STONES

R. MACHELL

(Continued from the July issue)

THE SUBJECT of Captain Barker was unpleasant to Arthur, and he rose to go. Beatrice looked serious; a cloud seemed to have fallen on the day. He begged them to come over to Lowthorpe soon for tea; he was not going away before the Rowton meeting, and his mother would be so pleased.

They promised, and he went off across the fields in a mood that was unusual with him; he was contrasting the atmosphere of Shareham with that of Byham Cottage, and it made him uncomfortable to think that he had been so much at home in a house where the tone was so different; though in just what the difference lay he could not think, being accustomed to take the world as it came without too many questions or comparisons. He had asked only to be amused, and saw nothing particular to object to in his acquaintances at Byham Cottage, though, to be sure, there were none of the men of his own set there and no women at all, and the play was certainly high.

This Mrs. Maynell was really

quite a stranger to him, while Barker's antecedents were not much clearer; still he could not see that there was anything wrong about them all, for he had never seen or heard the slightest impropriety, in fact Mrs. Maynell was rather a fastidious person, he thought.

But the contrast with Beatrice in her own home was startling as he saw it today, and he decided that he would drop Barker as soon as he drew clear of this affair in which he was so involved, for Barker had arranged his bets on the races at Rowton. Arthur did not wish people at home to know that he was plunging so heavily, that is, so heavily for a mere boy dependent on a moderate allowance. He did not know that in reality Barker had used his, Arthur's name and credit in order to cover his own speculations as well, and that everyone interested in betting knew that he was backing 'Roanoak' heavily at the coming meeting.

Suddenly he remembered that he had not looked at the morning paper, which he had taken from the other mail for Lowthorpe at the station, and had put in his pocket. He sat on a stile, lit a cigarette, and opened the paper at the racing-news, to see with surprise that Roanoak had dropped in the betting to the place of an outsider; what could that mean? He was nervous today.

He walked on, turned into the road, and saw Jenkins riding a young horse in a leisurely manner, as if he were waiting for someone. When he saw Arthur he came up quickly and produced a paper, a later edition that he had just got, and held it out without a word. Arthur took it, and read his fate. Roanoak had met with an accident and was 'scratched' for all engagements.

That was all; but it seemed as if the bottom had fallen out of his little world, and he was dropping to unknown depths. Things had gone so smoothly and easily so far, that reverses of this kind had not caused him to 'turn a hair' hitherto, but now he was utterly staggered.

He pulled himself together quickly and questioned Jenkins, who said that he had been to Byham to see if by chance Captain Barker was there, because, he explained, he wanted to show him the colt he was riding. The Captain was superintending some changes in the stables for Mrs. Maynell, and was likely to be there, but instead he found Styles, who seemed in a very good humor and who was just leaving the cottage.

At another time this would have seemed odd to Arthur, but now it had no interest for him except to remind him that instead of being able to count on his winnings at Rowton to redeem that bill, he had now to find the means to pay his losses, which would mean a good deal more than he could raise at short notice.

He felt he must see Barker, and, as he was not far from Byham, he would drop in and ask Mrs. Maynell if the captain was likely to be over this evening. He wanted to talk to someone and did not want to go home just now, so he nodded to Jenkins and turned down the lane to the cottage.

Mrs. Maynell was delighted to see him and received him kindly, saying, in answer to his questions, that Captain Barker had promised to

come over and see the stables either today or tomorrow, and she thought he might possibly come later. She had a telegram in her pocket that would have justified an even clearer statement, for Barker had 'wired' that he would come to dinner.

She gently drew Arthur out, and induced him to tell her his troubles. At first he made light of it, but when he saw how sympathetic she was he told her just how he stood, and about that bill for two thousand pounds which Styles held. He said he could not of course think of letting his uncle become liable for such a sum, and yet he did not know how to raise the money himself without his father's help; the estate was not entailed in him, though he was heir to the baronetcy, and would inherit a share of his mother's property; he could not raise two thousand pounds on that unless his father backed him, and that he would never do.

Mrs. Maynell was deeply touched at his distress and was most anxious to know all about things, particularly about that bill; she asked if Major Coulter was a particular friend of Barker's, and Arthur had to confess that on the contrary his uncle did not seem very well disposed towards him at present, and then it occurred to him as strange that Barker had been so confident of influencing his uncle and that he had succeeded so satisfactorily.

Mrs. Maynell looked serious, and was silent for a while. Then suddenly she asked: "Have you just come from Shareham?"

Arthur received a shock that again brought up the contrast between that house and this. He began to hate the low-roomed luxuriously furnished cottage, with its atmosphere of excitement and intrigue; and yet what intrigue could there be? It was simply a prejudice, he thought, and he rejected it as unjust to his hostess who was so sympathetic. He admitted that he had lunched there, and was walking home when he got the news of the accident, and just called to know if he were likely to see Barker today.

She watched him closely, and saw his change of expression and his involuntary glance around the room; she read him like an open page, and a look of pain crossed her face, followed by one of cold decision, as if she had accepted her fate.

She asked if he would come round after dinner and see Barker, or should she tell the captain that Arthur wanted to see him.

Arthur chose the former, as he knew that Barker was not much liked at Lowthorpe; though there was nothing known against him; he was a gentleman, and a good rider, but no one seemed to know his family or connexions or anything about him before he joined his regiment: a serious objection in such a conservative society as theirs, and the man himself failed to carry his credentials in his face as some men do.

So Arthur went home and dressed for dinner as usual, but was evidently not in his usual spirits. His father meant to have a serious talk with him, but having allowed his irritation to subside, he did not relish the prospect of an unpleasant interview, so decided to await a more favorable moment, as he put it to himself, by which he meant a moment

when he was sufficiently angry to be violent; violence is the weak man's substitute for strength.

That he could be a friend and counselor to his son had never occurred to him; that he had any such duty never entered his mind; he had sent him to a good school and had given him private tutors when necessary; it was their duty to form his character, and a man must choose his own friends. He had given him a good allowance, and paid his debts at Oxford and since then on more than one occasion; what more could be expected of him?

The younger sons were given clearly to understand that they must keep themselves when they grew up, must choose professions and stick to them; but the eldest son was naturally the heir to the estate, and he must be able to uphold his position in a proper manner: a somewhat vague kind of career, and not quite a sure one either, for it was in the power of his father to cut him out of his inheritance and leave it to whomsoever he willed.

Arthur had failed to pass the examinations necessary to qualify for a commission in the army, and had gone into the yeomanry, in order to persuade himself he was doing something and also for the fun of the thing; besides, the uniform was really very handsome. This yeomanry-business was a mere farce, and was regarded chiefly as an amusement and an opportunity for social gatherings, dances, etc., given by the officers during the ridiculously short period of the annual training, when they went into camp.

Beyond this the young man was free to waste his time in any way he chose; yet his father was seriously disgusted by his frivolous life, at least he said so to himself, and to Arthur when he was sufficiently worked up to say anything at all about it; at other times he merely snorted and stalked out of the room in an imposing manner, which was meant to convey the impression that he was with difficulty restraining a flood of eloquent admonition.

As to his mother's influence, it was wholly indulgent and conducive to self-indulgence in the family. So long as they were happy, all was well in her eyes. But her idea of happiness was so shortsighted that she could not see any possible evil results from using that which made life pleasant at the moment; consequently all discipline that might tend to strengthen character by self-control, was abhorrent to her nature which sought the sunshine of life and basked in it.

She had no faintest conception of the complex nature of human beings, nor of their inherent possibilities for good and evil, and frankly looked upon all such things as mere Sunday-talk, which was all right for sermons but which had nothing to do with life. Her idea of the sunshine of life was just such as one might expect from those elemental beings we meet with in fairy-tales and folk-lore, who are friendly to humanity and free from malice, but who are not human, and who cannot understand man's complex nature, his aspirations to higher worlds, his plunges into lower depths, his doubts, and fears, and hopes, his regrets and longings, in fact his essential humanity.

Such women are often beautiful, amiable, charming and attractive, but to some they appear to be indeed but human forms inhabited by beings of the kind referred to rather than by a human soul; others might say that in them the merely human-animal soul was awake, and both the higher, the divine, and the lower or subhuman, souls were dormant. These women are dangerous from their very ignorance of evil. They cannot warn nor protect their children from dangers they know nothing of themselves.

So Arthur was dependent on what light came to him from his own higher nature for his moral guidance through the dangers with which his parents' unconscious neglect had strewn his path.

(To be continued)