FROM THE WATCH TOWER

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OR

SPIRITUAL DISCERNMENT

BY

SIDNEY T. KLEIN

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ADVICE

He who knows not and knows not that he knows not,
is a fool . . . . . *shun him.*
He who knows not and knows that he knows not,
is simple . . . . . *teach him.*
He who knows and knows not that he knows,
is asleep . . . . . *rouse him.*
He who knows and knows that he knows,
is wise . . . . . *follow him.*

Ancient Persian saying.

Nature

Is a wonderful book to the mind which is able to read it,—but—
It's a message of Love to the Heart which has learnt to divine it.

S. T. K.

FOREWORD

IN the opening Chapter of *Science and the Infinite* I undertook, by means of a Series of short Views through a window not hitherto unshuttered, "to lead those of my readers who had the necessary aspiration, patience and, above all, strenuous persistence, to a Watch Tower situated well above the mists and illusions of our ordinary everyday thoughts, whence they would find it possible to get a glimpse of a strange new country, and where those, who have by practice once attained to its clear perception, would be able to continue the study by themselves and thus get further insight into that wonderful region of thought which I have called 'True Occultism'; the knowledge of the Invisible which is the Real in place of the visible which is only its shadow."

From the number of appreciative letters which I received from a wide circle of readers—Clergymen, Scientists, Men of letters, Doctors and others interested in thoughts above our everyday life—it was very gratifying to see how strongly my little book appealed to the general reading public. I have thus been encouraged to publish, in the form of a Sequel, a further Series showing how all those "Inconceivables" with which Intellectualism has surrounded us, may be interpreted by means of the open View we get from our Watch Tower.

This power of understanding what is quite beyond the grasp of our Intellect, I have called "True Introspection"; it is what St. Paul rightly described as spiritual discernment, because we are thereby examining all difficulties by means of a conception which is unlimited both in Time and Space, namely, from the outlook of Omniscience and Omnipresence, instead of by means of our Intellect which is limited to the finite.

Before undertaking this Sequel I solicited from my readers the most difficult questions they could propound on the subjects dealt with in *Science and the Infinite;* and I have examined all these in the present Series, showing that, although in most cases a solution is quite inconceivable by means of Intellectualism, all difficulties, without exception, disappear when we look at them from our Watch Tower, namely, by the use of True Introspection. The following are some of the problems propounded; they may seem startling, but are all natural questions from the finite outlook of the Intellect which, among other restrictions, is unable to think of an effect without a cause or an end without a beginning:

What was the origin of God and what is the Reality of Being?—What is Life and what was its origin?—What is Death?—What is Evil and how comes it to exist in a world created and watched over by a Being who is Perfect and Omnipresent?—Where is Heaven situated,

what shall we find when we get there, and how shall we be employed for the rest of Eternity?—What is the Soul or Physical Ego?—What is our Real Personality and why have we no definite knowledge of it in this life?—What is the "Secret of matter" which you say is coming through to us from the study of the biology of insects?—How can you explain the persistence of Individuality of the Physical Ego, from childhood to old age, when every cell in the body and brain has died and been cast off many times in succession?—As Memory depends entirely upon the brain, which is destroyed at death, how shall we remember our dear ones in the next life?—If our existence in the Spiritual Life depends upon our Real Personality being nourished by the Good, Beautiful and True, and if without that growth in the knowledge of God there can be no life hereafter, how can the fate of the millions of children, brought up in the slums of the world, who never have a chance of gaining that knowledge, be

reconciled with the perfect Mercy, Justice and Goodness, which we allocate to the All-loving ?

In the following pages I am again basing my arguments upon two postulates. *First*, that Nature was made by Nature's God, so that I am able to examine the forces contained in phenomena as emanations from that God, and that the whole of the universe is the manifestation or materialisation of what may be called the Thought or Will of God. He is not subject to time, and that "Thought" must therefore have the aspect of being what we should call instantaneous ; it is only the finiteness of our outlook, under the conditions of time and space, which necessitates our looking at Creation as though it were a long line of events in sequence, spreading from Past to Future Eternity. *Second*, that our Real Spiritual personality is also not limited by conditions of time and space, and must therefore, as pointed out in *Science and the Infinite*, be Omniscient and

Omnipresent. It is by means of this unlimited outlook, this wider gaze from our Watch Tower, that we shall attempt to discern, in the following pages, certain problems which are inconceivable by the Intellect.

I have referred to God under various names, all of which carry the aspect of Infinite Perfection, but the name I have used most, because it implies the goal to which I have always tried to lead my readers, is that of the "All-loving." Throughout the world there is a sore need for comforting words, and I shall indeed be content if this little volume succeeds in carrying the same consolation which so many people seem to have derived from *Science and the Infinite.*

SYDNEY T. KLEIN

HATHERLOW, REIGATE

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FROM THE WATCH TOWER

I

TRUE INTROSPECTION

FOR many years past those who have had the power of looking beyond the "objective," beyond the mists and illusions of everyday life, have been watching, with wonder and expectation, signs of the approach of what may be called a great *mystical wave*, a steady awakening of sleeping humanity to the realization of the "value" of that which is invisible, carrying with it the knowledge that that which is visible to our finite senses has no "value" and therefore no existence apart from those senses. For three years past this wave has been retarded by the exigencies of strife among

nations and stress of mind in the individual, but it has not been stationary. As a wave in the sea, when it approaches land, becomes more and more perpendicular until it topples over and floods the shore, so has this mystical wave been steadily mounting up, and its mighty crest is even now ready to break and flood the hearts of Humanity, especially those who have been sorely tried, bringing in its train such love and therefore happiness as have never yet been experienced by the Race, as a whole, though at certain epochs of history individuals may have done so.

It is "from the Watch Tower" that I propose in the following pages to help my readers to grasp the meaning of the wider outlook which will be open to all of us when the *wave* breaks. Though every year is bringing with it material advance in our knowledge of Physics, the mother of the physical sciences, it is not in the domain of the Intellect that the wave of enlightenment is making itself felt. The advance in intellectual knowledge is indeed

seen to be useful only for strengthening the voice crying in the wilderness of the objective "make straight the way for that which is coming after"; because the greater the advance in knowledge the more one is able to appreciate the limitations of the Intellect and its uselessness for understanding that which can only be divined by the Heart. The ultimate cry of the true scientific investigator must always be—"He who knows most, knows most how little he knows."

In this opening chapter the reader is led to the summit of the Watch Tower; he there finds himself freed from the stultifying effect of being governed in all his thoughts and aspirations by considerations of the objective. He is able to look through a window not hitherto unshuttered and in a direction not before attempted, and in the subsequent chapters is made to witness how the Mysteries of the Universe, the hitherto unsolvable problems of Nature may be unravelled by spiritual discernment.

It is strange to find how many people have the erroneous impression that Introspection means "thinking about oneself," whereas it is the very opposite; in fact we cannot begin to make use of Introspection until, by realising the limitation of our physical Ego, we have succeeded in forgetting ourself so far that all our intellectual concepts and especially our pride in them, if we have any, have been thrust into the very background of consciousness.

We are living in a world of continuous and multitudinous changes, and without those changes we could have no cognizance of our surroundings, we should have no consciousness of existence; because our sense organs are limited by, and dependent for their very action upon, the two modes of "Time" and "Space," and as the very basis of motion is the time that an object takes to go across a certain space, so movement becomes necessary as the very basis of perception and therefore of conception, under our present conditions

of existence. By means of our corporeal senses and the instruments we have devised for increasing their sensitiveness, we receive these multitudinous physical impressions from our surroundings. By means of, what I propose to call, Intellection, we analyse and combine these impressions and thus steadily build up our personal knowledge of the physical universe; it is wonderful what strides we have made in augmenting that knowledge during even the last generation, but between the domain of Intellection and the subject of this little book, namely, Introspection, or what St. Paul called Spiritual discernment, there is so wide a gulf, that, though we are inclined to class them both as forms of thought, we shall see later on that the difference is so vast that it cannot be looked upon as a difference in degree but must be classed actually as a difference in kind. It is the difference between the finite and the Infinite, the visible and invisible, the physical and spiritual, or the shadow and

the wooden table of which it makes manifest to us only the form or outline.

The Intellect is, however, probably necessary for an introduction to Introspection, because it is by Intellection itself alone that we can understand that there is something much more wonderful entirely beyond its grasp;—the old philosophic command "Know thyself," as a preparatory step for gaining a knowledge of the Divine, did not mean "think about yourself" but "realize the limitation of your physical ego." It is only when that has been accomplished, when one acknowledges that the intellect is limited to the finite, that true Introspection can begin to help us to carry our thoughts beyond the narrow horizon which Intellection has drawn round about us.

With this in mind can we not see an explanation of the curious fact that in some cases, especially among the most highly educated, the attempt to use Introspection without fully realizing one's limitations, results sometimes in a morbid

state of consciousness, so serious in some cases that it may even for a time destroy the healthy exercise of intellectual powers. I have pointed out that this occurs especially among the highly educated, because, in the less educated, the mind has not yet reached the point when it is possible to realize the limitations of the domain of Intellection and has therefore felt no desire nor indeed power to go beyond that domain. The little schoolmaster is the happiest of the happy with no tendency to morbidness, because he thinks his intellect all-embracing and has no use for any higher plane of thought.

On the other hand, the super-highly educated is different, and from time to time one comes across examples of its victims. Let me give a typical case among this class. Some of us may have greatly admired the earlier writings of an Author of the highest intellectual attainments, but in later publications there appeared, every now and then, signs of what may be called "pride of intellect"

manifesting itself as "self-consciousness," which greatly interfered with our enjoyment of the beautiful thought he was trying to express: some time after this a mental breakdown with all the signs of an abjectly unhappy morbid state of mind was experienced, and I do not think it is difficult to understand the reason for this miserable outcome; this our typical case had great intellectual "possessions," and they continually obtruded themselves and frustrated his endeavours to advance his thought to higher levels by the use of Introspection: he was so firmly wedded to, and revelled in, his possessions on the Intellectual plane, that he became utterly unsettled and miserable at his failure to serve two masters; he was evidently in the same dilemma as the young ruler, who came to Christ asking what he must do to be perfect, and was told that, if he wished to advance in that direction, he must give up all his possessions. In the case of our author, it was not required that he should give up his intellectual talents but only

his pride in their possession, to realize in fact their limitations, and thus to become aware of a much more wonderful and helpful mode of approaching the conception of the Reality, quite beyond the reach of Intellection.

Let us now try to understand the path we have to traverse in order to realize that, in spite of the great strides we are making daily to increase our knowledge of the Universe, we can never grasp the Reality by our Intellect nor attain to the Infinite by our finite thoughts, however long and persistently we may pile up knowledge on the physical plane.

Realize that we can only look on the outside, namely, the forms of phenomena, in our endeavour to know the noumena or real inner meaning of our surroundings: let us take, as a simple example, the expression of thought, optically presented to us, in the writing of language; each letter has its characteristic form which we can examine in its different angles, curves and straight lines; we can draw up and

tabulate the mathematical equation for each of these different properties of form, and can design a single formula for minutely and truthfully describing the total concept of that letter from the outside, but we can never arrive thereby at its significance in the expression of thought; so also when letters are combined into words and those into sentences, the truth, which they express, is hidden from us unless we understand the inner significance of each word and can correlate those significances into a whole, and thus grasp what they contain and are meant to express. So in reading a book, the truths contained in sentences have to be combined to form the more complex truths of paragraphs, and those again to form the higher complexes of chapters, and only when these last have been brought together, can we gain a knowledge of the great truth which the book contains. It is thus we find ourselves situated in connection with our surroundings. By Intellection we only succeed in

grasping the outside forms, but when we have once realised that the intellect can carry us no further, we see the necessity of a fresh mode of investigation and have thereby gained the pathway—a difficult one at first, but ever becoming more easy of traverse with each step taken, which will lead us to see beyond the forms of phenomena, beyond the ordinary circumstances of our everyday life. Our first step is to gain a knowledge of the significance of the simplest forms, the letters of our analogy, and to use them for gradually understanding forms of higher complexity; we thus prepare the way for receiving the wonderful messages which the Absolute is persistently trying to bring home to our inner consciousness. These messages, as we shall see later on, all culminate in the one great Truth—*ὁ θεὸς ἀγάπη ἐστίν* (God is Love)—and teach us that we are one-with-the All-Loving. This knowledge gives us our consciousness of the Spiritual but, as pointed out above, the road leading thereto is a difficult one at first,

though every step forward moves mountains out of our path, and we must not be dejected because we experience, even in the very act of realizing this wonderful truth, a continual and apparently irresistible tendency to fall back into our mental attitude towards examining the outward forms of phenomena, the desire to analyse and even to synthesize the Spiritual by intellectual conceptions. The best antidote, for this feeling of dejection, is to recognize that we have here another proof that the human race is still in its infancy, that we are but children who soon get tired of sustained abstract thought and are ever longing to get back to our toys and picture-books. Although we are gradually getting to realize that this is a world of "make-believes," yet we, being still in childhood, find it more congenial and less straining to our little minds to pretend, for purposes of play, that those make-believes are realities, as children pretend with their dolls, wooden horses and other toys.

As we advance in recognizing that all phenomena are the presentation of the very *thoughts* of the Absolute, and feel ourselves gradually approaching the point where we can actually aspire to decipher their meanings, we acquire a certainty of belief in a number of truths which then become for us Axioms of Consciousness. With this step forward we are able to emancipate our thoughts from the nightmare of inconceivables, which overwhelm us, when we try to grasp what is meant by the "Absolute," the "Infinite," so paramount in philosophic treatises; we learn to substitute for these the ideas of "Reality of Being," "Infinite existence," "Omnipotence," "Omniscience" and "All-Loving," which have a real meaning for us because we have recognized their "form shadows" in our everyday life. I call them "form shadows" because, although the difference between the Infinite and finite is so vast, we are able to use these shadows, present in our consciousness, to gain a fleeting con-

ception of the Infinite, in the same way as children gain a knowledge of real animals by the coloured designs in picture-books.

Let me put forward another aspect which will help us still further to grasp the fact that the Reality is absolutely beyond the reach of Intellection. In youth Ideals of the Good, Beautiful and True are very limited, and may be graphically represented as short lines which converge together at our centre of consciousness. Now if we also represent our growth in knowledge of these Ideals as progress along a line of infinite extent, stretching from the finite up to the infinite, the position of the point, where our ideals intersect on that line, represents our highest power of conception at each stage of our existence. At first the lines, representing our ideals of the Good, Beautiful and True, were very short and their point of intersection therefore not far advanced, but, with the increase of our powers of conception, those lines become continually longer and intersect

ever further and further from their starting point, along the line leading to Perfection. These directions, or lines of thought, therefore tend nearer and nearer to acquire the nature of parallel lines, until, at last, they necessarily cease to intersect at that position where no further point of meeting is possible, because inconceivable by Intellection, and beyond which lies the Infinite which we call the Spiritual. As long as the lines intersected the Ideals were still finite and therefore conceivable, but beyond that the Ideals became infinite and therefore inconceivable by Intellection, and though the angular movement of the lines when passing from one to the other state is, in geometrical parlance, infinitely small, it can be seen that the difference of aspect has now become so vast that, as already pointed out, it cannot be described as a difference of degree but is one of kind, as different in fact as an object is from the shadow it casts; hence the impossibility of our finite minds ever being able to

grasp the Spiritual except as a wonderful inconceivable which, transcending our highest ideals, surrounds us on all sides, and ever makes known its presence whenever we realize the absolute finiteness of all concepts on the physical plane. Intellection therefore ceases to help as soon as it has enabled us, by realizing its limitations, to get possession of the password which will open for us the way into the domain of Introspection.

Now when straight lines, indefinitely produced both ways, cease to intersect in one direction and move through ever so small an angle, they immediately meet in the opposite direction, and, following our analogy, it will be seen that our first step into this new mode of perception at once places our inner consciousness, as it were, at this opposite point of intersection. It will be seen that, from this outlook, the lines of our conception of the Good, the Beautiful and the True never intersect, they are divergent and each, therefore, is now endowed with an ever

widening view in the direction of the Great Reality.

By the above illustration we can get a clearer understanding of the difference between Intellection and Introspection; the former can only examine phenomena from a finite standpoint, whereas the latter is bound by no such limitation, and we shall, later on, have examples of how the same phenomena may be examined by both methods. As already pointed out, our sense perceptions are dependent upon the appreciation of change or motion in our surroundings and must therefore be limited by Time and Space, the very conception of motion being based upon the time that an object takes to pass over a certain space, and we cannot conceive of movement which has not both of these modes in evidence. Our conceptional knowledge is based on perceptional knowledge, and the trueness of our conceptions of our surroundings is based upon the knowledge that we can bring to bear upon those perceptions, we can therefore never

think beyond the finite as long as we are living under our present conditions. This limitation, which few people have thoroughly recognized, surrounds us with mysteries which we cannot explain by Intellection. Take one example: infinite Space is absolutely inconceivable however long and persistently we may try to master it, but it is quite as inconceivable, and perhaps even more so, that space could be limited, and yet Intellection persists in maintaining that one of these two alternatives must be true, though it cannot conceive how either can be possible. It is only when we come to examine them by means of Introspection, as we shall do later on in the case of this and other "inconceivables," that we can see that neither is true, the whole difficulty arising from our failure to recognize that all qualitative conceptions, in this case greatness and smallness, are entirely dependent upon relativity for their presentation in our consciousness, and can only exist as illusions in a mind which

cannot think beyond the finite. We with our limitations are thus forced to postulate two aspects of the Universe; one of these is what is called the visible, finite or physical, which carries the appearance of reality to our finite senses, though it has no existence for us apart from those senses; and the other is that which transcends our utmost conception, which we call the invisible, infinite or spiritual. Under our present conditions we can only think of one finite subject at a time, and at that moment all other subjects are cancelled; we can therefore only think of points, in time and space, as situated beyond or in front of other fixed points, which again must be followed by other points; we cannot, by Intellection, conceive of a point in either so as to exclude the thought of a point beyond; we can in fact only think in the form of finite sequences; we cannot conceive beyond the finite so long as we are conscious of living under present conditions. With every act of perception by our senses, or conception

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... idea of immensity is an illusion, ... of the inconceivables with which ...tion has surrounded us; but I will ... before you another aspect which ... to exorcise this phantom in its ...on with the difficulty of praying. ... this fact: every atom in the ...universe is in such intimate con- ... that it actually pulls every other ...wards it. I have already shown* ... we call gravitation is a move- ... the line of least pressure, and that ... exerted between two particles ... is therefore a pushing rather ... pulling force, but in ordinary ... we say that matter attracts ... think for a moment what ... of gravitation means. Every ... every other atom and the ... instantaneous; no atom can ... moved without every other ... whole universe being at once ... by that displacement; ... continuous ... of the Moon

* [illegible]

by our intellect, we have therefore not only knowledge of the visible or finite, as far as Intellection can carry us, but we become, at the same moment, aware by intuition of the invisible infinite beyond. So by the use of Introspection, as soon as we have gained a knowledge of our physical ego with a clear comprehension of its limited modes of thought, we at once become aware by intuition of the invisible spiritual part of us beyond. The spiritual part of us is our real personality of which the physical ego is only the manifestation or shadow on our plane of consciousness; the two are both one indivisible entity, but we only have cognizance of the limited shadow in this life. We have many other intimations that our real self is far beyond the physical, for do we not all through life continually experience that our ideals and aspirations are always beyond what the physical or our earthly surroundings can satisfy?

Following on this we may lay down two

postulates, namely, that "Nature was made by Nature's God," and that "the Spiritual part of us, namely, our Real Personality, is akin to, is in fact a part of that Great Spirit." I have already shown* that, granted this, it is possible to place ourselves in such a position that by examining the phenomena of Nature we can actually feel that we are listening to, or having divulged to us, what may be called the very thoughts of the Absolute. The whole of Creation is therefore the materialization of His Thoughts, and we have in the forces of Nature not only the impress of His very essence, but the whole of the phenomena of the Universe is the manifestation of the Divine Noumenon; matter is therefore as divine as the Spiritual though not as real; it is His shadow or the outline of His very image thrown upon the plane of our Sensations. That wonderful power which is growing up within, or in intimate connections with each one of us, which we call our real

* *Science and the Infinite*, p. 77.

personality, being one-with-the Great-Spirit, is not only a part of this great creative "Thought," but is actually an active unit therein. By Intellection we can understand how our physical ego is actually able to materialize a thought by clothing it in physical language and, by its organ of speech, to launch it forth into the air in the form of hundreds of thousands of vibrations of different shapes and sizes, some large, some small, some quick, some slow, travelling in all directions and filling the surrounding space. Each of those multitudinous vibrations, though nothing but physical movement, is now an integral part of that presentation in finite material form on the physical plane, but by Introspection we can go much further; we can see that the whole of this process is the "Shadow form" of the process of Creation, an instantaneous Thought of the Absolute in the Spiritual World, which is presented to our finite senses in the form of movement or rills, of different rapidity, in that wonderful

mystery the Ether, which we classify as forms of matter and modes of energy. This will be further dealt with later on.

We are now in a position to consider those certainties of belief in truths which, in the process of sweeping away the Inconceivables with which Intellection has surrounded us, have forced themselves upon us through Introspection and thus become for us, as it were, Axioms of Consciousness.

II

THE REALITY, "THE ALL-LOVING"

THE only Reality is the Spiritual, the Here embracing all space and the Now comprising all time. Infinite energy, which we call the Spiritual, though invisible to us, is the cause of all phenomena surrounding us on the physical plane; these phenomena may therefore be looked upon as the thoughts or messages sent to us by the All-Loving. Matter, which is a movement in the Ether, is the visible form of those messages, as writing is the visible form of language, and those messages can only come to us in that form, as expressed thought can only come to us in material vibrations, because our physical senses are completely dominated, and therefore limited, by the two modes of time and space under which they act,

making movement or change necessary for their excitation.

We cannot progress in our knowledge of the Reality until we have recognized that it is not we, with our intellect, who are looking out upon Nature, but that it is the Reality which is ever trying to enter into our consciousness and make itself known to us by bombarding our sense organs with the particular physical impulses to which those organs can respond; and if we aspire to gain a knowledge of the Reality, namely, that which is behind the physical universe, it is clear that we must endeavour to weave those physical impulses into words and sentences, and thus learn the sublime Truths which the All-Loving, the Hidden which desires to be found, is ever trying to divulge to us concerning the Reality of Being.

As stated in the Foreword, one of the problems which have been propounded is "What was the Origin of God?" This is quite a natural question when propounded by those who, as already pointed out,

have not realized the limitations of the Soul or physical Ego, have not therefore ascended our Watch Tower and are not able to see beyond the finite outlook of the intellect.

On the plane of Intellection we are forced, by the very conditions under which thought is possible, to insist that every effect must have a cause, every end must have a beginning, because, under the limitation of duration, we are absolutely limited by the horizon of that which is existent in time, whereas, as we have already seen, to the Infinite there is no such limitation; all causes and effects, all beginnings and ends, are existent in the Now which has no duration. The above question could therefore only be asked on the supposition that God is subject to time limitation, from which it would naturally follow that He must have had a beginning and must therefore have an end. Having had a beginning we are forced, by Intellection, to the conclusion that there must have been a cause

for His coming into existence, and hence, from our limited outlook, the above question is a perfectly natural one. This will be clearer if we consider that under our present outlook we cannot help looking at time lengthwise, which necessitates a sequence of events, a succession of causes and effects, namely, all that we call "Becoming"; we can only think of one subject at a time and cannot look upon time in any other way; in fact our outlook is somewhat similar to that of an astronomer who is limited to looking along the optical axis of his telescope; he is practically confined to one dimensional space, he cannot at the same time look in any other direction. This subject will be dealt with later on when we examine the Spiritual Outlook; meanwhile we will consider another aspect of the Reality which is generally misunderstood.

We are very apt to think that all phenomena, surrounding us, are the result of certain blind forces which are working under certain fixed laws, and that the

World, having once been created, could go on by itself without the need of a God, we are prone to think of everything as an external work of the Creator, similar to a chair or a table made by a carpenter, and that, when once made, it can to a certain extent take care of itself, whereas the phenomena, we are looking at, are the actual processes in which God is working out His wonderful scheme of Creation, the result of His Will. Every leaf is the manifestation or materialization of some portion of that wonderful instantaneous "Thought" which we call Creation and which, owing to our limited outlook, we can only think of in the form of a long line of sequences extending from the beginning to the end of all time. This "Thought" is naturally progressing inexorably towards its final consummation, hence the invariableness of those forces which manifest themselves to our senses in the phenomena of "Becoming." We shall see later on, when we deal with the subject of "Life," that all these forces

emanate from the same source, namely, from that infinite energy which we call the Spiritual. God is immanent in every atom, in every plant or animal, though so small that it requires a powerful microscope to see them, in every Solar System of mighty planets and every star cluster throughout infinite space. All are the expression of His Will and all are progressing steadily forward to their appointed end in the wondrous scheme of Creation.

The more we investigate the workings of Nature, the more we become aware of the wonders contained therein and the sublime meaning of every phenomenon, however insignificant it at first appeared to us. Man alone, with his divine attribute of free-will, which he has inherited from the Fatherhood of the All-Loving, may retard for an infinitesimal time the intent of the Divine Will, but woe to those who try to fight against that inexorable power; if such a course is persevered with they must be swept into oblivion; there is no half-way house, you

must love God or perish. The Reality is the All-Loving, and Love, which is the essence of God, comprises all that is good, beautiful and true ; any action or thought therefore which is contrary or antagonistic to these, tends to retard the scheme of Creation and thus prevents God's love from acting upon us, it prevents us from being an integral part of that wonderful "Thought." Our very existence is therefore dependent upon what may be called God's thought of us and, if by our wilful antagonism to the Will of God we prevent His thus thinking of us, or, as it were, force Him to forget us, we perish absolutely and wither away as the grass of the fields. If, on the contrary, we are ever engaged in exercising that Spirit of love, which God has implanted in us, and which constitutes our real spiritual personality, then indeed we are calling down the blessing of the All-Loving on our actions and our life becomes full of contentment and happiness. Is there any joy so real as that which is experienced when you have

done a really good action for love's sake? The very fact of thinking lovingly towards the recipient when you are doing a kind action, and even when making others feel that you love and are therefore in sympathy with them, has a wonderful reflex action on yourself; it nourishes and therefore helps forward the growth of your real personality. The actual giving of money or assistance to others, however they are in need, can have no real fructifying effect, no existence, it is only the loving thought accompanying the gifts which bears fruit in the Spiritual life; gifts unaccompanied by love are mere wasted opportunity for doing good and have therefore the aspect under which we recognize sin, they are mostly the action of selfishness, the seeking for notoriety or worldly power, which have a disastrous effect upon all that is best and therefore real in our nature, it is starvation and therefore detraction from the growth of our real personality.

Whenever we look into the human

heart, in whatever part of the world the individual may be, except when for a time anarchy and selfishness has usurped the divine in man, there shall we always find that love comprises the appreciation of all that is highest, noblest and most valued in the aspirations of the human race; it is universal throughout the world, it is the greatest and most powerful factor in Creation, and as our highest ideals have their source in our real personality which is akin to, is in fact a part of the "Reality of Being," we cannot escape from the conclusion that the Reality is the All-Loving and that we are, as children, formed in His very image.

As the Creator is the All-Loving, it follows that love is the mainspring of Creation, bringing with it life, joy and peace; whereas its absence is, as we have seen in this terrible time of stress of nations, death bringing in its train sorrow, hatred and dire distress. We shall see this plainer when we analyse the subject of the Devil.

It is strange how greatly some people misunderstand the attitude of the All-Loving towards His children; if there is one thing that we may be absolutely certain of, it is that He wishes us to be happy, not miserable; it is for that very purpose that He is ever trying to come into our hearts to teach us to know and therefore to have the joy of loving Him and yet how many there are who think they are pleasing Him by getting morbid over the past, allowing themselves to be dragged down into a state of continuous moaning over their past sins of omission and commission; they seem never content unless they are depreciating themselves; their self-satisfaction is fed by pretending that they are much worse than they really are; they try in their self-vanity to think that God is pleased when they humble themselves down to the dust; they even become so self-righteous that they look down on those who are not showing signs of being as miserable as themselves; whereas God is ever trying

to come into our hearts and make us feel that we, as His offspring, are divine. To think continually of our past sins is to think of ugliness, it is wasting time and energy over spilt milk; whereas our best endeavours should be to confine our thoughts to the beautiful. We have in this world much to do and not too much time to do it in; we want all the energy and enthusiasm we can muster in the present for helping forward in a joyful spirit that which is real, namely, all that is good, beautiful and true, instead of wasting our thoughts and sighs on the unreal, namely, that which is bad, ugly and false; we want, in fact, to realize that we are *divine* and that our duty, as offspring of the All-Loving, is to use all our endeavours to act ourselves, and encourage our human brothers to act, up to that wondrous heritage, instead of trying to make ourselves feel that we are miserable sinners and that the All-Loving is not content unless we are not only unhappy but periodically telling Him that we are so.

I do not think that we can truly love God until we have, as it were, felt our *equality* with Him, as children to a Father; we must realize our divine origin, our oneness-with-the All-Loving, if we are to have Eternal life.

Those who have started on a wrong course in this life, and have at first closed the windows and doors of their earthly tabernacle to the entrance of the All-Loving, may be brought, by adversity or the approach of old age, to realize in time the utter loneliness of such a habitation, and will in that case, as I shall point out in a later chapter, experience even in this life a foretaste of the terror of the Valley of the Shadow of Death, to which their selfish life is leading them; but when they have once realized their error and have thrown open the approaches to their real self, so that the Divine influence may enter and teach them that the Kingdom of Heaven is within them, then indeed are they filled with joy unspeakable, which nobody can take away from

them, and can smile at those who address them as "you miserable sinner" and "if you are not miserable you are not religious."

True religion is that which helps us to know that the Reality is the All-Loving and prevents us from straying away from that Truth. Nothing that we can do will alter or lessen God's love for us; He does not punish us or make us miserable for our wrong doing. He pours out all the more love upon us; it is we who punish ourselves by not allowing that love to influence, namely, to flow into, our very being and make us happy; we are blinded by our wilful misdeeds and see not the joys which He is always holding out for us to take. The fact of being loved does not carry with it the intense joy which comes with the consciousness of loving; there is more joy in giving than receiving, and it is only when we attain to that state of loving and knowing, where all our desires are moulded in the form "Let Thy Will be done," that we

receive the greatest reward obtainable in this life, the knowledge that we really love God and are one-with-Him. This realization, which ever grows more intense with every fresh experience, is far beyond the comprehension of Intellection, it is one of the inconceivables which it has created by the limitation of its physical horizon; hence the difficulty many have in realizing what the Reality, Infinite Love, really means and how it can be possible to love a Being who is Omniscient, Omnipresent and Omnipotent; this difficulty, we have seen, vanishes when we employ the unlimited outlook of the Spiritual which, being independent of the limitations of time and space, is not confronted with the appalling aspect of "Immensity," as in the case of the Intellect. Let me once more refer to the difference of aspects in these two modes of discernment. The Reality is not limited by, and cannot therefore be *localized* either in time or space. Intellection insists upon there being separate points or localities in

time and space and will not allow us to conceive otherwise; it cannot grasp the fact that the Reality is not dependent upon duration and extension, in the same way as our " hobbling " thoughts require them as crutches for helping us to form a conception of the universe and our connection therewith. Introspection, on the other hand, enables us to understand how the Great Spirit cannot be said to be localized anywhere or any-when, as Intellection would have us believe, but that everywhere and always is God; in other words, the infinities of duration and extension are figments of our finite intellects, the Here comprising all space and the Now embracing all time in the Reality of Being.

III

"THE HUMAN BEING"

THE Human Being is composed of what is called Body, Soul and Spirit. The *Body* with its life is purely physical; it is built up of the same protoplasmic cell (the foundation of life-energy) as in the case not only of all other animals but also all plant life; it has no free-will of its own, its wish must always be in one direction, namely, in the form "Let my will be done"; it has instincts which are not wrong in themselves in a purely animal nature, but certain of them are made manifest, as conscious wrong, when they come in contact and therefore in competition with the Spiritual. The *Spirit* is an emanation from and an integral part of the Reality, and is our real personality; being purely spiritual it is not limited by space and must therefore

be Omnipresent, and being independent of time it must be Omniscient. It cannot be said to have any Free-will of its own, its desire must always be in the form "Let Thy Will be done," and all its ways are perfection; this is our Real Personality. The *Soul* is the shadow or presentation of our real personality on the physical plane of our sensations, under the limited conditions of time and space. It can therefore only think in finite words, requires succession of ideas to accumulate knowledge, is dependent on perception of movement for forming concepts of its surroundings, and without those concepts, on its plane of consciousness, it would have no knowledge of existence. It constitutes the "I am" of our consciousness, namely, that which I have called the physical ego, and has apparently only to do with the Race. As already pointed out, neither the Spiritual nor the Physical, the natures by which the Soul is surrounded, can be said to possess Free-will; they must work in opposite directions, but this competition for influ-

ence over our desires and actions, provides the basis for the exercise of man's Free-will, the choice between progression and stagnation. The Spiritual influence must conquer in the long run, as every step under that influence is a step towards the Real and can never be lost: the physical influence, the apparent steps in the other direction, which are not really wrong in a purely animal nature, are, in the case of the Soul-man, only negative or retarding and can have no real existence, except as a drag on the wheel which is always moving in the direction of Perfection, thus hindering the process of growth of the real personality. When the body dies, the mind or plane of consciousness, upon which the Soul, the "form shadow" of the Spiritual, is cast, disappears, and with it necessarily ceases the existence of the Soul as a manifestation, but it then finds its being in its spiritual originator; in other words, the self-conscious "I am" of the Soul, loses itself in the conscious "I am perfected in loving and knowing"

of the real personality. With this change all limitations and finiteness disappear, because, when the physical clothing is dropped, we attain to "Reality of Being," namely, the Spiritual of which our real personality is a part, and it is therefore unbounded by considerations of time and space.

IV

PRAYER

IN the ancient Egyptian religion, the Gods were always friendly to their devotees, they would do exactly as they were asked provided the prayer was addressed to them in a certain form of words; in fact if the proper formula was used the Gods had no choice, they were obliged to do what they were told. When an Egyptian died a copy of all useful prayers and other formulæ was wrapped round his mummy in the form of a long strip of papyrus many yards in length. This was called the "Book of the Dead," and, by having this buried with him, it was believed that he thus became possessed of the power to answer all the questions which would be asked by the different Gods who presided over the twelve great halls, which he had to

traverse, before he could get safely to the land of Amenti, where the good King Osiris reigned over all departed spirits; by means of these formulæ he also had the power at hand to make any of the Gods do exactly what he wanted, in case he got into difficulties. If one examines the printed prayers which have come down to us from the last fifty years, and indeed many which are being used even in the present day, one cannot help being struck by the likeness, between the confident and almost superior way in which the Egyptians requested their Gods to carry out their wishes five thousand years ago, and the manner in which Christians at times address their Deity; many of these prayers have really the form of homilies, instructing the Deity in the most categorical way what he is to do, how he is to do it, and reminding Him of all the good acts which have been done by the would-be beneficiary, to show how much he deserved to be benefited. It is sad to think how many prayers even

now are launched at the Deity in the form "Let my will be done," and that, if crucially examined, it would be found that the object of such prayers was really an attempt, perhaps unconsciously, to get as much out of the Deity as possible with the least amount of trouble.

The older one grows and the nearer one gets to the appreciation of what the Fatherhood of the All-Loving really signifies to us, the more one seems to realize that true prayer has nothing to do with petitioning the Deity for the fulfilment of earthly desires; it may be the easiest way in which the use of prayer can be taught to children, as it is in line with the anthropomorphic way in which they acquire the idea of God. They are told that God hears their prayers and therefore they conclude that He must have ears; He sees everything they do and must therefore have eyes; He walks in the Garden of Eden and must have legs, and He sits on a throne and must therefore have a body; He is therefore similar

to a man and can be asked for favours. But, as we grow older, we get beyond those childish illusions, and I think that most of my readers, after due consideration, will find it inconceivable that prayer between the created and the All-Loving could have any efficacy on such lines as asking for physical favours. However good and worthy two farmers may be, there would be a difficulty in answering both their prayers if, on the opposite side of a hedge, the one prayed earnestly for rain, to save his crop of late-maturing grain from ruin, whilst the other prayed just as earnestly but wanted dry weather urgently to gather in his harvest of early cereals which were already over ripe.

Let me try and make my meaning clearer. All Divine thoughts emanate from the Spiritual; true prayer is not the asking for earthly favours, but is *communion* with God and is only possible when we have thrown open the doors and windows of our being, so that His love may find entrance thereto. The action of

true prayer is, as it were, the reflection of that love back to the All-Loving from our inner consciousness, as light is reflected from a mirror. It is necessary to keep that mirror bright by constant use, for only then can the All-Loving be ever influencing our lives. It is kept bright not by the belief in obsolete dogmas or by theological discussions, but by the simple faith comprised in the three words "God is Love," which we know to be true Religion because it helps us to know the All-Loving and prevents us from straying away from that Truth.

The effect of this process, of the All-Loving being reflected within us, is the means by which we realize that His sanctuary, or what is called the Kingdom of Heaven, is within us, and that we are so far one-with-Him that He is able to make us feel at times that He is speaking to us in heavenly language. Just as asking for material gifts is natural between man and man, so is true prayer a perfectly natural action between spirit and spirit;

it is at first a feeling out for God if haply we may find Him; we shall understand this better when we consider the Spiritual outlook.

There is embedded in every man a strong impulse, especially in times of trouble and sorrow, to pray and worship, a great longing to know and love God. One of the greatest incentives to pray to God is, I suppose, the feeling that there is nobody else to whom one can turn for help and consolation; a very young child would, under such circumstances, not pray to God but would turn to its mother, and all its troubles and fears would vanish immediately it found itself enfolded in those loving arms.

The act of submission entailed, in attaining to the state of mind which accompanies prayer, must have been brought home to many people during their lives; let me give my own experience of its practical use. I do not know when or how I first began the habit, but when quite young I found great help in saying over mentally

the Lord's Prayer when confronted by difficult problems; it took but half a minute, and I was always surprised at the change which followed. Many people no doubt remember the state of uneasiness, perhaps even amounting to hopelessness, with which, at an important examination, the first sight of, say, a Mathematical paper inspired them, especially if the time allowed seemed inadequate. I am sure that on several such occasions I was greatly helped by the fact that, after saying the Lord's Prayer, I was in a much better state of mind for tackling difficult problems. Though it is now a long time ago, I can still well remember the change of aspect which followed the repetition; it was as though all care and anxiety had vanished from the mind, and thereby perhaps unconscious cerebration, which often soars beyond intellect, was able to assert itself. It will be noticed that the Lord's Prayer, which is in the form of praise rather than petition, has nothing to do with solving mathematical problems;

it is a case where true prayer is seen to be in the form of praising rather than petitioning, and I have given the example to show what power the very act of true prayer, without articulate speech, has over the mind of him who prays; the act of submission to a higher Will carries with it a wonderful consoling influence, when that higher Will is known to be the All-Loving. Man is a praying animal, he prays because he cannot help doing so, and because he has learnt to love the Being to whom he prays. True prayer is not a duty, and certainly not a means of getting all the material things which we think we want; it is a privilege rather than a duty, and has as much to do with giving as with receiving; it is more in the nature of praising than of asking for favours; perhaps the reason why so little use is made of this privilege is that the channel, through which we pray, is always open to us and we do not therefore appreciate the privilege as we ought; we are probably missing great opportunities. It is strange

that we feel more like praying when we are in trouble or sorrow, a proof surely that the Race is still in its infancy and we are as children governed by the objective. True prayer, being the act of loving, is more in consonance with a state of rejoicing and thankfulness than of unhappiness or complaining, but this is a mystery which can hardly be understood by Intellection.

True prayer is a communing with God and requires continuous practice; Intellection is responsible for many of the difficulties which beset the path of the devout in his feeling for God; these difficulties look very real until we face them and find them to be illusions. We shall consider these illusions in later chapters; meanwhile the first step to clear the vision on this subject of prayer is to realize that it is a perfectly natural act. I have already shown* that on the material plane it is an absolute fact that all Nature is praying, in one

* *Science and the Infinite.*

form or another, and that it is only those plants and animals that pray, to each other or to us, with efficacy, which survive in the struggle for existence; prayer, or the influencing by sympathetic action, is universal on the material plane and therefore natural, and so in the Spiritual it is only those who are capable of True prayer, namely, those who have exercised their natural privilege of being in loving and knowing communion with the All-Loving, who can attain to the life hereafter. Perhaps the illusion which presents the greatest difficulty to timid souls who are "seeking after God if haply they may find Him," is that raised by Intellection in the appalling idea of "Immensity"; how can one pray to, and therefore love, a Being who is absolutely "Perfect," who comprises all Space, all Time, all Power and all Knowledge? how can I, a mere speck in the Universe, influence Him? how can such a Being be moved by such a slight force as a whispered prayer? In later chapters we shall see

that the idea of immensity is an illusion, it is one of the inconceivables with which Intellection has surrounded us; but I will here lay before you another aspect which will help to exorcise this phantom in its connection with the difficulty of praying. Consider this fact: every atom in the whole universe is in such intimate connection that it actually pulls every other atom towards it. I have already shown* that what we call gravitation is a movement in the line of least pressure, and that the force exerted between two particles of matter is therefore a pushing rather than a pulling force, but in ordinary parlance we say that matter attracts matter. Now think for a moment what this action of gravitation means. Every atom affects every other atom and the influence is instantaneous; no atom can therefore be moved without every other atom in the whole universe being at once influenced by that displacement; now consider the enormous mass of the Moon,

* *Science and the Infinite.*

rushing at two thousand miles per hour round the Earth which, itself sixty-four times larger than the Moon, is rushing at sixty thousand miles an hour round the Sun; then think of the huge masses of Jupiter and Saturn, each a thousand times larger than the Earth, and the Sun a thousand times larger than Jupiter; then think of the influence which one of your fingers exerts upon every atom in those mighty bodies. If you but raise your finger the Sun and all its attendant planets are actually pulled out of their different courses by that movement, and the effect of that infinitesimal action will ever remain indelibly present in the character of those courses until for the Solar system time shall be no more. When we have fully grasped the meaning of this on the finite physical plane, how clearly may we understand in the view from our Watch Tower, when considering the Spiritual plane, not only that the "Powers of Evil," as we were taught in our childhood days, may well tremble

when they see the weakest saint upon his knees, but that our prayers, however feeble we may think them, are always dear, beyond human conception, to the All-Loving.

Let us now try and consider what prayer really means. As a child one asked with perfect confidence for everything one wanted, however trivial, without discrimination, and many people, even when grown up, seem still to make use of prayer as though it constituted, as somebody has well described it, "Childish supplications to a divine Santa Claus." Such praying for material things, even when combined with a submissive understanding that God only gives us what is good for us, can only result in disappointment and may even carry with it a feeling that He often seems quite indifferent to our requests; but, thank God, there is that within us which, as we grow in knowledge and realize our limitations, tells us with no uncertain voice that the All-Loving is only waiting

patiently until we have learnt, perhaps by disappointment, that we are not using prayers to Him in the right way. We are at first praying "objectively" as children pray to their earthly parents, but, with the growth of our Real Spiritual personality, we see that we must put away childish thoughts and commune "subjectively" as Spirit to Spirit, before prayer can become effective between ourselves and God; when that has been realized we find that the All-Loving is ever present with us and even more willing to grant than we to ask.

We come back once more to the wonderful truth that, embedded deep down in our nature, there is the aspiration to realize the Fatherhood of God, and that, based upon that realization, true prayer becomes that communion with the All-Loving by which we gradually learn what is the Will of God in His scheme of Creation and the special part which He has destined to each one of us for carrying that scheme to completion. The more

we commune and grow in that knowledge, the more are we able to realize that oneness, or as I have already suggested that equality, with Him, as a child to a loving Father, upon which our future life seems to depend.

I have tried to point out the difference between the two forms of prayer: the one is that wherein specific earthly gifts are begged for by the finite "physical ego," which, as we have seen, can only result in disappointment or even the doubting of the ability or Will of God to answer our petitions, and the other wherein our Real Spiritual personality finds itself in loving and knowing communion with the All-Loving and receives the all-satisfying gift of Spiritual discernment.

True prayer therefore is subjective, not objective; it is not the asking for favours, but has more the significance of "Love in action," because any act of willing, on our part, to influence the Deity, if it is to be successful, must be in consonance with His Will and (*pace* the Theologians)

every point of the whole universe is ever testifying to, and forcing into our very being, the first great Axiom of Consciousness, namely, "God is Love." The power of prayer therefore increases with the growth within us of the knowledge of the All-Loving, and, with that growth, which is the sole nourishment of our Real Spiritual personality, ever comes the desire to submit our will absolutely to His influence. The act of True prayer, namely, "Love in action," is the very life and growth of the Spiritual part of each one of us; upon that growth depends our power to realize that we are verily one-with-Him in "loving and knowing communion," and the only form of prayer therefore possible between us and the All-Loving is "Let Thy Will which is also mine be done."

V

HEAVEN

THE natural questions concerning this subject from the finite outlook are in the form: "Where is Heaven situated, what will it be like when we get there, and how shall we be employed throughout never-ending eternity?" Now each of these questions is in an impossible form because they demand a reply in terms which must be based upon experiences limited to our life here; it is somewhat similar to the case of a Chinaman asking a question and insisting on having an answer in Chinese from one who, though he may know the answer, does not know a word of that language. The Astronomer by means of Intellection may have collected a wonderful store of knowledge and will tell us that he has spent the whole of his life looking through-

out the vast depths of space with the most powerful telescopes, but though he has searched every corner of the Universe he cannot find any place where Heaven can possibly be situated—he had, of course, been looking in the wrong direction, namely, outwards instead of inwards. It seems natural, from the teaching we received as children and often from the remarks of even grown-up people, that we should look for Heaven straight up above us, just beyond the visible sky. On a clear night the immensity of space, with its limitless confines and invisible horizon, is too appalling for the mind to even imagine as a resting-place; but in the day time the light reflected by our atmosphere, which we call the sky, does not seem so very far away, and as the Bible gives instances both in the Old and New Testament of persons being taken up into Heaven and, in the case of Christ, a cloud receiving Him out of sight, it is natural even now for the man in the street to imagine this Heaven somewhere right up

above us just beyond the visible sky; but if Heaven is situated above our heads at a certain time, it will be down below our feet twelve hours later, because our earth will by then have turned half round on its axis. Now our idea of up and down has only to do with the direction of gravitation towards the centre of the earth, and unless there was a special heaven fixed to the earth and going round with it, there could be no fixed up and down for us in Heaven and we may dismiss any idea of sitting on thrones or going for walks on clouds as part of our life in the next world.

By Introspection we can indeed see clearly that it is impossible that we could in Heaven, where every Spirit will have the attributes of Reality of Being, be employed in doing anything which could be compared in any way with our present existence, because in the Spirit world there can be nothing except the Here embracing all space and the Now comprising all time. The difficulty is that when we try to explain Spiritual or

Infinite conditions we have still to make use of the language of our finite understanding; the finite and infinite have, as we have seen, nothing in common, they cannot be compared; it is therefore impossible by Intellection to understand the true answer to the question, "How shall we be employed in Heaven throughout never-ending eternity"; our finite minds cannot think of the possibility of action without duration or of events without sequence; but by Introspection we can realize that our real personality, which alone will have part in the spiritual life, is akin to and is in fact a part of the Great Spirit, and we shall therefore live in Heaven throughout eternity under conditions of existence similar to that of the Absolute whose instantaneous Thought, which we call the Creation of the Universe, comprises all time and events from the past to future eternity. I shall try and make this clearer in the last View of this book; meanwhile, try to realize that there will be in Heaven

" Reality of Being " without " Becoming " and Activity without successive actions. Heaven is indeed not a locality, but a possession of our Real Personality, namely, a state within us of " loving and knowing communion " with the All-Loving; it is what is called Eternal Life and is attained when our knowledge of the Good, Beautiful and True has progressed so far that we realize as an Axiom of Consciousness that we are actually the Offspring of the All-Loving.

VI

CREATION

THE whole of Creation is an instantaneous Thought of the Great Reality; it is only we, with our finite minds, who draw that thought out into a long line extending from past to future eternity, and are obliged to examine all events therein piecemeal as though happening in sequence. Our thoughts being limited by time, we are forced to look at time, as it were, lengthwise because the idea of duration seems to present to our understanding the appearance of only one direction; we have got into a habit of comparing it with one dimensional space, and we feel that we can only look lengthwise in time, without any knowledge of other directions to the right or left of it; this is the narrow

method of analysis employed by Intellection, but from the open windows of the unlimited we should be looking crosswise at time and the whole of creation would be lying there before us as a concrete whole; this is the method we try to employ in Introspection. Perhaps this will be clearer if, following our Axiom that the whole of Creation is an instantaneous Thought of the Reality, we again make use of the illustration of how the expression of thought is optically presented to us in the writing of language.

In order to get a true knowledge of the contents of a book, we are forced to examine each word in succession and to insist that one word comes in front of or behind another; we can in fact only look at it as a long string of words extending from the beginning to the end, we have to look lengthwise at the succession of thoughts in that book, and yet, if pressed, we have to acknowledge that the story, the whole completed thought, is lying there openly before us. It is well for us if we

can, by this or other means, realize that Intellection cannot be relied upon to carry us far towards deciphering the whole message or thought which is lying open for us in the Volume of natural phenomena. In the Middle Ages the devil, in alchemy, witchcraft and magic, was everywhere and, in every phenomenon, he interfered with the works and wishes of God; it was the time when matter was looked upon as the devil or his clothing; but with increased knowledge, the advent of scientific investigation in the sixteenth century began to suggest that, when rightly understood, all phenomena were the work of God Himself under certain laws which He had Himself created. This knowledge was hotly contested by the teachers of religion in those days, who had need of "the devil and all his works" to inculcate a healthy fear of punishment hereafter in the minds of their flocks, and a profitable demand for prayers and indulgences to help sinners to escape their deserts.

We have made great strides in the last hundred years towards understanding the laws under which the forces of nature act, but up to the middle of last century this knowledge was still looked upon by a large majority of really good people as antagonistic to religion, and the investigation was held to be a dangerous employment leading to what was called materialism; there was a fear that, when the nature of forces inherent in matter was fully known and found to be immutable, when the telescope had pierced into the infinitely great and the microscope into the infinitely small, without finding anything besides the physical, man would come to the conclusion that the world had existed for ages and could go on perfectly well by itself indefinitely without any need of a God to guide it. This was the time when the word Agnostic was coined to designate those who, though they were not Atheists, yet maintained that they could not know of God's existence; but in the last forty years we have entered

upon a new era of religion and philosophy; we hear no more of the old belief that knowledge of Scientific facts leads to atheism or irreligion; we indeed clearly see that Religion and Science must go hand in hand towards elucidating the Riddle of the Universe. We still have some amongst us who call themselves Agnostics, but aggressive Atheists are no more to be found among thinking people; with the advance of knowledge, it is recognized that the positive assertion that there is nothing beyond the physical is rank stupidity, it is only the fool who can say in his heart that there is no God; the only rationally true atheists are the Buddhists, who do not believe that there is anything beyond what man can attain to; but it must be remembered that the "man" they refer to is not the corporeal frame but the inner self of man, and they are apparently not far from our own contention that the real personality is akin to, is in fact a part of, the Absolute. Matthew Arnold, in his *Literature and*

Dogma, when referring to self-denial as being the secret of Jesus, showed appreciation for the Buddhists when he stated that they had the secret but not the sweet reasonableness of Jesus; that was a bold admission in the middle of last century, when it was almost blasphemy to suggest that there could be anything worthy of consideration in a religion which was outside that of our own belief.

There are two theories as to the mode of Creation; one is taken literally from Genesis and maintains that everything on this earth was created perfect all at once, or rather in six days, in its present complete forms; the other theory is that in the beginning God created life in its lowest mono-cellular form which was then, and would be continually, endowed with potentiality not only to reproduce its own species, but by evolution to pass through many different species and which, becoming more and more complex as it took on higher forms of life, would at last, in the fulfilment of time, attain to that

epoch, in the life history of the genus *homo*, when the mind of that noble animal had developed sufficiently for the spiritual to make its home there; man then became a living soul and, as the offspring of the Great Spirit, took his part in helping to carry forward the Scheme of Creation to fulfilment. The majority of those who at first adhered to the former belief have come over to the latter, but both theories contain the paradoxical idea that the universe, and all contained therein, is an *outside* creation of an *Omnipresent* Being; as though likening the Creator and the universe, anthropomorphically, to a carpenter and the work of his hands; whereas we surely have to realize that we and all our surroundings are an internal creation of the All-Loving, that the invisible is the Real and the visible, the whole universe, is its shadow or manifestation, as depicted by the finiteness of our senses, on the physical plane; in other words, the invisible as distinguished from the visible, is not in a

place apart from the physical, but it is the Reality of which the visible constitutes the boundary lines or planes in our consciousness, as lines and planes are to our senses the visible boundaries of solids.

VII

THE DEVIL AND ALL HIS WORKS: AN ILLUSION

THE history of the growth of a belief in the Devil and the kingdom of hell, over which he was supposed to hold sway, is certainly not to the credit either of our religious teachers or of the intelligence of those who were frightened into abject submission by the terrible threats of everlasting torment which accompanied that teaching. In the Middle Ages this teaching, as to what the Devil had in store for the human race, created such a terror in the minds of the people that, in order to lighten the burden, they commenced to scoff at Death. This gave rise to the invention of a series of pictures portraying Death, satirically, in every conceivable occupation of life,

which comprised the cycle of what was called the "Danse Maccabre."

Even fifty years ago many of the sermons could hardly have been preached without the supposed existence of a Devil; the preacher not only threatening terrible punishments to the evildoer but, metaphorically, shaking his fist at the congregation's head and addressing them as "You miserable sinners, and if you are not miserable you are not religious," instead of, as it should have been, the encouraging words, "Ye are divine, act up to it." We are living in a more enlightened age and have begun to appreciate that the All-Loving really wants us to be happy in this life, and that we do not make Him happy by being miserable ourselves. The Greek word in the New Testament which is translated by our word "repentance," carrying with it, according to religious teaching, a necessity for being very miserable, is *μετάνοια*, meaning "a change of mind"; you are going, as it were, "to the Devil," but you turn round and go in

the opposite direction; this action should surely not be accompanied by misery but with a great joy; and yet it is not uncommon to see people entering a church and sitting through the whole service with signs of being abjectly unhappy, instead of being filled with joy and thankfulness at their privilege of being in the presence of and being beloved by the All-Loving.

The Christian hell, even in the middle of last century, was much more real than the Heaven to which we were all looking forward—at least we were told much more about what was sure to happen to us there; the description of Heaven as an ethereal state of endless praise, when combined with the apparent belief of our teachers that the human being could more easily be enticed to be good by the fear of hell-fire than by a description of the joys of Heaven, was not very attractive to men of thought in that age of strenuous struggle between materialism and idealism. We were told very concisely what would

happen in hell; how the terrible conditions, of those who went there, would continue unceasing and the torment ever grow worse; the usual employment would be "gnashing of teeth" interspersed with lamentation, all of which was to go on to all eternity without any hope of succour; and the whole of this endless agony was to make amends for some slight mistake or back-sliding which was done, even in ignorance, during this little transitory life. It was a terrible misapprehension to think that the All-Loving, our Spiritual Father, could condemn, to everlasting torture, his own offspring, whom He had Himself created imperfect, because that finite creature was weak enough, even as a child might be, to follow instincts which had been planted in his nature by that Creator. Dante and Milton were responsible for a great deal of the misconception, that has permeated modern belief, as to what was going on in heaven and hell and the idea that these were actually separate localities.

The study of ancient beliefs and forms of religion shows clearly that all religions have their origin in man's inner self, from that Spiritual part of him, however small it may be, which is one-with-the All-Loving: we are in fact all on the same ladder, some higher than others, though some of those that think themselves highest are really lower than those whom they look down upon. Perhaps the most striking example of a religion arising before the time was ripe for its acceptance, was that which was started some 1500 years before our era, when Akhnaton, a pharaoh of Egypt, son of Amenophis III and Queen Tye, attempted and for fifteen years succeeded in overthrowing that powerful priesthood of Amen-Ra at Thebes, whose great temple at Karnak is one of the wonders of the world. Akhnaton at that early period in history actually diagnosed a God of Love who, when anyone did wrong, did not punish him but shed all the more love upon him to win the sinner back into the paths of

right living. Akhnaton founded a City and Temple at Tel-el-Amarna for cultivating this new worship, as he would have nothing to do with the temples which had been used for the old worship; and, quite lately, a great library of inscribed tablets has been unearthed at Tel-el-Amarna containing some of the hymns and prayers which he wrote himself to the new idea of God, which are extremely beautiful. In this religion the Light or Rays from the Sun were the means by which love and happiness were dispensed to human beings; when these rays were *absent* there was wrongdoing and unhappiness. The idea had a good deal in common with that Old Persian religion, the devotees of which were called "Fire-worshippers," whose representatives are now the Parsees. The God, named Ormuzd, was also manifested by Light representing the good in everything, and their Devil was the *absence* of that Light, namely, darkness representing evil, called Ahriman. The inferiority of Ahriman

consisted in his acting before he thought, whereas Ormuzd always thought before he acted. This religion was based upon the teaching of that renowned Persian Sage Zoroaster, who was probably about contemporary with Akhnaton; everything that was good in the Universe was the work of Ormuzd enlightened by Intelligence, whereas the work of Ahriman was its *negative* based on the want of intelligence. I have given the above examples to show how near those ancient religions came to the truths which I am trying to make plain in these pages, namely, that the Reality is the All-Loving, the All-Wise, and that the Devil and all his works have no existence except to finite minds which, being based on relativity, are prone to accept a *negative* as being as real as the positive which has made it manifest.

If therefore we can show, as I propose to do, that apart from our limitations there is no such thing as evil, it follows that there can be no such thing as the

Devil; we shall then see that, although the All-Loving has created us in His own spiritual image, it is we, with our limited modes of thought, who have created, in our own finite physical image, the illusion which we call the Devil.

The great fundamental law of the physical universe, upon which indeed its very existence depends, is what is called "the Conservation of Energy," namely, that wherever there is a force there must be another force opposite and equal to it; the reason why, if you strike your fist down upon a table, you hurt your knuckles, is that the table strikes back with a force relatively equal to that which you have used, and wherever we turn we have similar experiences of positives and negatives, plus and minus, which are equal and opposite, not only in all physical phenomena perceived by our sense organs, but also even in our very conceptions in the realm of abstract thought. Let me give examples of both of these. In our perception of sight we find

the greater the light, the darker will be the shadow; a light placed over a table throws a shadow on the floor, though not sufficient to prevent our seeing the pattern of the carpet; but increase the light, and the shadow now appears so dark that no pattern or carpet can be seen: not that there is now less light under the table, but the light above has, to our sense of sight, created or made manifest a greater darkness, which is always relative to the brightness of the light. The shadow has no real existence, it is only the absence of Light, but we are prone to look upon it as a reality because our senses of perception can only act under the modes or limitations of time and space, and are dependent on relativity or contrast. This dependence on contrast may be seen more clearly if we take the case of our perception of colour; if the only illumination in the world was red light we could have no knowledge of colour, red would be our universal light. It might be asked why, if our powers of perception are based upon

relativity, the above example of light and shadow might not be equally used to prove that darkness was real, and that light was its absence, namely, an illusion; but that is easily answered because, apart from the fact that the very existence of ourselves, and indeed of all life on this globe, is dependent upon the presence and therefore the existence of light and not upon darkness, we can show experimentally that light is the real or positive and that darkness is the illusion; because light placed over the table caused darkness, whereas no darkness, however intense, placed there could create light on the carpet underneath. We see the same result if we take the physical phenomenon of Heat and Cold, the former being the real or positive and the latter its negative, or, as we say, cold is the absence of heat; but it might be again suggested that, as our perception of heat and cold is based on relativity, heat might also be looked upon as the absence of cold. Intellection can answer this

because, from knowledge gained from the physical sciences, we know that the sensation which we call heat is caused by the rapid vibration of the atoms in matter; the quicker the vibration the greater the heat, and as the vibration of the atom becomes slower, so there is less and less heat or more of what we call cold, until when the vibrations cease entirely there is no heat left at what is called the absolute zero of temperature. Cold is therefore only the absence of heat, and has no real existence, as shadow is only the absence of light. We find that the same conditions hold when we consider our conceptions of the *abstract*. Good is the real or positive, evil is its negative and has no real existence apart from our finite modes of thought. Evil is only the absence of good as shadow is only the absence of light; in other words, evil is as dependent upon good for its manifestation as shadow is dependent upon light. Do not let me be misunderstood. I do not suggest that any of these negatives or negations have

not the appearance of realities to us, under our present conditions of existence, so far as Intellection can carry us. They indeed have to be dealt with by us as realities, but it is clear that they are only manifested as phenomena on the physical plane, because our modes of perception and conception are limited by time and space and our thoughts are dependent upon relativity.

Let me put the case of Good and Evil as analogous to light and shadow. Moral laws and responsibility thereto are dependent for their existence upon goodness. The purely animal *homo* was, as I have pointed out elsewhere, free from sin or responsibility until the advent of the spiritual made manifest, in that animal, the physical Ego, and by making him a living Soul or Soul-man, raised him far above all other animals; he thus became a responsible moral being, aware of right and therefore of wrong, and certain acts then became for him sin that were not sin before. Thus the advent of Christ and, in

a less degree, the coming into the world of every good man so raised, and is raising, the level of moral rectitude, that things become sin that were not sin before. St. Paul himself specially recognizes this when he says that without law there is no sin. The goodness, then, brought into the world by Christ, did not create evil but made it manifest, and gave it the appearance of reality, under our present conditions of life and thought, in a similar manner to that of darkness being made manifest by light.

Goodness in this example is clearly seen to be real or positive, because the more we learn of the wonders with which we are surrounded in this world, the more we recognize that goodness is one of the attributes of the Creator; and that wherever goodness and moral laws reign supreme, to the exclusion of evil, there the noblest ideals are formed, the noblest lives are led, the conception of the brotherhood of man and the Fatherhood of God is nourished, and its realization brought

to perfection, in "loving and knowing communion" between God and man. Goodness leads to peace, contentment and happiness, whereas its negative or absence, evil, leads to strife, discontent, unhappiness and death; strangely analogous this to our first example of the brightness of light and the gloom of its negative darkness. One more example from abstract thought will further help us to grasp that the negatives are the absence of the positives, and are therefore dependent for their manifestation upon the conditions of relativity under which all our conceptions are formed. Knowledge, the real or positive, making manifest its negative ignorance, is quite on a par with our example of good and evil. Ignorance has no real existence, it is only the absence of knowledge, and depends for its manifestation upon the relative extent of the knowledge with which it is brought into contact. Without knowledge there could be no such thing as ignorance, in the

same sense as without light there could be no shadow.

Let us now try to grasp what the above examples teach us respecting the subject we are considering. We have seen that throughout the universe, as interpreted by our intellect, phenomena range themselves under the forms of positives and their negatives, the apparently real and the unreal; we have taken four typical examples, two from the objective and two from the subjective point of view. We found that the negatives have no existence in reality, they are only made manifest by the limited conditions of our thoughts. We will now take these four negatives, in the most realistic form, known to us in this world, and try by Introspection to understand even more clearly than we have done that, though they appear real to us, they absolutely have no existence apart from our finite conditions of thought.

1. The darkest shadow in this world, if placed in a world of utter darkness,

would not be dark at all but would be too dazzling to look at.

2. The greatest cold experienced on the surface of this globe, if placed in a world where absolute zero reigned, namely, the temperature of space, would, to beings living there, not be cold at all but would be too hot to touch.

3. The most ignorant man in this world, if placed in a world where there was no knowledge at all, would not be considered ignorant but would, on the contrary, be looked upon as a wonderful sage having the aspect of what we would call the divine.

4. If the greatest evil in this world, which Intellection insists upon being real, were placed in a world where there was nothing better, but everything infinitely worse, that evil would not be evil at all but would be looked upon as their highest ideal of good.

It is therefore seen by Introspection that what we call evil has absolutely no existence in reality; in fact we have seen that the only means by which that evil

could make itself known, in that world where there was an utter absence of good, was the fact that it was still possessed of a small quantity of good, its aspect of evil having entirely vanished; an encouraging thought, showing that there is still a hope for the greatest sinner in this world, as, when the whole of the evil has disappeared at his death, there is a spark of goodness still left in him which may, by the All-Loving, be "loved" into participation in Everlasting Life.

Have I not in the above shown, as I proposed to do, that, apart from our limitations, there is no such thing as what we call evil, which is the only evidence we could have of the existence of a devil? We must therefore surely come to the conclusion that, although it is true that the All-Loving has created us in His own spiritual image, it is we, with our limited modes of thought, who have created, in our own physical image, the illusion which we call "the Devil and all his works."

VIII

THE PHYSICAL FILM

THE whole of the visible universe is for each one of us, according to our powers of perception, as it were a flat background, a thin veil which I have called the "Physical Film." I have already* explained my reason for this conception, and have pointed out how my readers may learn actually to look through this film at the Reality which is beyond: I propose now to carry this subject a stage further. There is nothing in the composition of this film except vibrations or movements, the product of those modes or limitations, time and space, under which, only, sense perception is possible. This film is an illusion raised by the finiteness of our consciousness between each one of us and the

* *Science and the Infinite*, p. 30.

Reality of Being; it may be likened to the surface of a pane of glass so covered over with patterns, flies, dust, smudges, etc., that we cannot see through it. These obstructions, when analysed in time and space, produce that appearance of succession and change which in detail we call physical phenomena, but in the aggregate we designate the universe. The cause of this illusion is that our physical senses can only see the surface of our surroundings, and we take for granted that what we perceive is real because we have no way by ordinary Intellection to see through the glass, through the shadows, at the Reality which is beyond. To some it will seem a difficult task to realize that the whole of the physical universe is for each one of us spread out, as it were, like a thin soap film, on a flat surface. Let us examine this difficulty of eliminating perspective, first by means of Intellection and then by Introspection—that is to say, first from the limited outlook of the finite physical ego, and then from the wider

unlimited view of our real personality. The first step, to a clear understanding of what is the true outlook of the physical ego, is to grasp the fact that, as already pointed out, it is not we who are darting out glances to apprehend phenomena, but that it is the Reality which is ever trying to make itself known to us, by bombarding our sense organs with the particular physical impulses to which those organs can respond. If we analyse our sense of sight, we find that the only impression made on our bodies, by external objects, is the image formed upon the retina: it is difficult to realize that it is not something from within us which goes out to seize upon and grasp the truths of nature, because, in the first place, we have been accustomed, from infancy, to confine our attention to the objective, taking for granted that anything which forms an image on the retina must be there in front of us, apart from our senses; and, in the second place, we are apt to confound our sense of sight with that of

touch which, in the case of a near object, requires us to stretch out our hand to grasp it; but it is clearer when we take an object far away; in our telescopes we catch the rills of light which started from a star a thousand years ago and the image is still formed on the retina now, although the rills forming that image are a thousand years old and, though invisible to our naked eye, have been falling upon mankind for countless ages trying to get an entrance to our consciousness; yet when we now allow its image to form on the retina, our physical Ego insists on fixing its attention upon that star as a real outside object, refusing to admit that it is only an image inside the eye, and making it difficult to realize that that star may not be there at all; it may have disappeared and had no existence for the past 999 years, although in ordinary parlance we are looking at and seeing it there *now*. When we have once realized the fact that the only knowledge we can gain by our sense perception of distant

objects, is not from the object itself but from the image formed upon our retina, and that outside objects have absolutely no other existence for us, the difficulty, raised by Intellection concerning the distance between objects in line of sight, vanishes; the house in the foreground with the garden behind, trees beyond the garden, then, in succession of distance, hedges, roads, the landscape for miles with mountains in the background, again followed by the sea and the sky and, beyond all these, the stars so far away that light, travelling 186,000 miles every second, takes a thousand years to cross that vast distance, are all depicted for us on the *flat* surface of our retina, and the whole of our consciousness of the very universe is thus seen to be but a thin layer of colour, shade and form, similar to a painting upon a thin flat canvas. On that canvas there is certainly no object in front or behind another, and certainly no difficulty in realizing that the reason why a horse is made smaller

than a fly, supposed to be in the foreground, is not that there is actually a great distance between those objects on the canvas, but because the whole picture is a make-believe, in conformity with the incapacity of our finite range of sight to see anything at a distance except under an ever decreasing angle of vision. It is therefore possible to understand, even by Intellection, that our sensuous perception of the universe is an illusion, and that all phenomena around us are really perceived by us in the form of that which I have called the physical film; a thin veil which has been built up by the finiteness of our senses, and which at death is pricked and passes away like a scroll, leaving us face to face with the Reality. In the domain of Introspection, on the other hand, there arises no such difficulty as that of the conception of different distances of objects in line of sight, nor indeed any of the difficulties raised by Intellection owing to the limiting conditions of what we call perspective;

because our Real Personality, being independent of space limitations, is Omnipresent and no point of space is therefore further withdrawn than another; and, being independent of time limitations, it is Omniscient and can hardly be imagined as having, apart from these two limitations, any cognizance of matter, namely, movement in the ether, except in the form of what we, on the physical plane, would call instantaneous thought. That which is objective to Intellection is indeed subjective to Introspection. I shall explain this more fully later on when we consider the Spiritual Outlook.

The ether is so intimately connected with our Physical Film, and in many of its incidents so absolutely inconceivable by Intellection, that it may help if at this point we consider some of its aspects.

Our atmosphere extends to probably two hundred or three hundred miles above the earth's surface, and although human beings cannot live six miles up, owing to the rarity of the air, we know that even

at a height of 120 miles it is still dense enough to render incandescent, by friction, those small particles of meteoric iron, generally only a fraction of an ounce in weight, which we call shooting stars. The pressure of this volume of air, at the surface of the earth, is equal to about one ton on the square foot, and we do not feel any inconvenience from this great weight, because the same pressure is equally inside as well as outside of us, unless, by going suddenly up to a great height or down to a great depth, we alter the pressure either inside or out and become ill. At the bottom of the sea at a depth of four miles the pressure of the water is about five hundred tons on the square foot, and there are actually organisms living under that enormous pressure without any inconvenience, as again the pressure is equally inside and outside; but when we bring one of these quickly to the surface, the pressure inside is so much greater than outside that the body swells out like a balloon and goes

to pieces. We can understand these pressures though they are enormous, but when we come to the ether we find conditions which most people would acknowledge as quite inconceivable; the latest calculation of the pressure of the ether surrounding us on all sides and, fortunately for us, permeating every particle of our body, is 25,000 tons on the square inch, namely, 3,600,000 tons on the square foot, and though we have no knowledge whatever of it as an obstruction to our movements, its density is millions of times greater than that of iron. In another place * I have tried to show that gravitation is caused by one material body shielding another body, from ether pressure, in the direction of the former; it is a movement in the line of least pressure and must therefore be looked upon as a pushing and not an attracting force; the argument may be strengthened by considering the effect of my further suggestion that the different atoms of

* *Science and the Infinite*, p. 105.

which matter is composed, or perhaps the cosmic bricks which compose the atom, are apertures of different complexity of outline or strain in the ether, namely, those points at which the ether is absent or its density attenuated; it would follow then that matter does not obstruct ether pressure by its density, as a wall shields from the wind, but rather as a non-conductor obstructs the electric current, because each atom, being a locality where the ether is absent or attenuated, is therefore a more or less negative or poor transmitter of ether pressure, in a similar way to a vacuum in the air obstructing the transmission of sound, or a whirlpool in the sea obstructing the progress of a wave. The small density of matter, resulting in the scarcity of atoms at any one place, as compared with the enormous density and pressure of the ether, thus explains the relatively small retardation of that pressure, and therefore the weakness of the force between two masses of matter which we call gravitation.

The ether cannot itself be explained by any of the known dynamical laws, though it is probably the very root and cause of all of them, it is absolutely beyond our plane of perception or conception. We can only perceive certain effects of its presence when it comes into our limited world of consciousness under the limitation of time and space, namely, in its movements which we classify as forms of matter and modes of energy, such as Light, Radiant Heat, Electricity, Magnetism, etc.; in fact all that we call wireless waves, for these modes of energy are the cause of all the sensations we receive from the rills or frequencies of different rapidity which are transmitted to us by the ether.

Let us consider another aspect of the ether. If two lines of railroads cross each other at a certain point, it is impossible for two trains, one on each line, to be passing that point at the same moment in such a way that, in spite of their having interfered with each other

at the crossing, they would be found still running along their own line of railroad as though nothing had happened. It is thus with moving masses of matter, but it is quite different when we come to the transmission of force. When a wave is propagated in the sea, the water is not carried along with the wave but moves only for a short distance, and returns to its original position as soon as the wave has passed; every particle of water affected by that wave moves in an ellipse, the amount of temporary displacement is called its amplitude and depends on the size of the wave; it is therefore not water but force which progresses, and when one wave crosses another, say at right angles, they do not interfere with each other but continue to progress in their original direction as though nothing had happened; it is probable that several different systems of waves could cross each other in this way, without materially affecting the direction and character of each of these systems; but when we turn

our attention to the ether we find a state of things which is altogether beyond what our mind is able to conceive; there seems to be absolutely no limit to the number of ether waves or rills that can pass through any point of space without interfering in any way with each other. Let us fix our attention on the smallest point we can think of in space, say the one-millionth part of a cubic inch, and then, to get our minds into a mood for thinking on vast subjects, consider how many of those small points, one million in every cubic inch, must be contained in the vast universe that is visible to us, which is only an infinitesimal part of the whole. Intellection will not of course be of any use to help us to face such inconceivables, but let us bear in mind that we are about to try to understand what is happening at only one of these minute points, although the same is taking place at every one of them.

The largest of the ether waves which give us the impression of Light are those

of the red end of the spectrum, and even they are so small that it takes 40,000 of them spread out in a line, one following another, to cover one inch of length; if then we take the length of one of these waves as a unit for dividing up an area into small squares, there will be 1600 millions of those small divisions in a square inch, and we shall have a wave of light reflected from each of those small squares; there will therefore be 1600 millions of waves starting simultaneously from a square inch of surface, and every one of those waves will cross the paths of all the others instantaneously at the particular point we have chosen in space. Now think what this means if you take the area of even a small field; from every square inch of that area will be pouring forth these multitudinous waves; then think of the whole of England, of Europe and the whole surface of the world. But that does not in any way end our calculations, because the same number of waves are rushing at 186,000 miles per

second from every square inch of the whole visible surface of all the planets; one of them, Jupiter, being a thousand times larger than the earth; and also from the surface of the Sun itself which is a thousand times larger than Jupiter. But even this does not exhaust the number of waves passing through that single point, because our Sun is only one of countless millions of other suns, many of them much larger in size than ours and also surrounded by planets, from all of which the same inconceivable number of waves, from every square inch of surface, are also converging on and passing through that small point; and remember that we have only been dealing with the crossing of waves in one moment of time; it is indeed a continuous process, because from each one of those minute divisions of every square inch in the whole universe, those waves are pouring forth * at the enormous rate of over 530,000,000,000,000 per second; and even that is not all, be-

* See *Science and the Infinite*, p. 148.

cause white light is composed of all wave lengths ranging from red to violet, whereas I have only mentioned a small portion of these, namely, the red waves; there are also all the Radiant heat waves which extend far below the red and other wireless waves far below these, and an infinite number of other waves which extend far beyond the violet. But again there is much more passing through that point than ordinary wave movement; those waves are carrying actual views of what is taking place and messages from every part of the universe, and all events from the grandest to the most trivial pass through that point without interfering with the others; we can and do actually ourselves gain knowledge of many of these events although, before coming into our consciousness, they have all passed through myriads of myriads of similar points, every one of which was the scene of the same intense activity as described above.

Our finite minds can only acknowledge

that such things are altogether inconceivable, but there is no difficulty when we view it from our Watch Tower. To an Omnipresent Being no parts of the universe are further away than the others, they are all comprised in a mathematical point, the Here; and to an Omniscient Being the whole of creation from the beginning to the end of all time, with all events contained therein, is lying open to view in the Now. Apart from time and space limitations, as already explained, there can be no such thing as points in space, no such thing as movement; all difficulties are illusions pictured on the Physical Film by the finiteness of our consciousness; there are no rills in the ether. In the world of Reality there is only Being without becoming and activity without successive action.

Whilst investigating these phenomena we can hardly help at times wondering whether we are not, in the ether, getting an actual direct presentation of the Reality; but further thought shows that

this is not so, it does not possess all the qualities pertaining to the Infinite. It is true that, from what we have seen above, the ether appears to be what is called continuous and not discrete, that is to say it is not made up of particles which cannot be divided, such as we allocate to matter, but can be divided *ad infinitum*; but, on the other hand, we know that its elasticity, though enormous, is still finite, as shown by the rate of transmission of those impulses or rills which we call Light, Radiant Heat, etc. If the elasticity of the ether were absolute, namely, perfect, those impulses would be transmitted instantaneously, whereas we know that they all travel at the same finite rate of 186,000 miles per second. Gravitation, on the other hand, does act instantaneously, showing that it is not the result of a transmitted impulse but is the result of some mysterious kind of pressure, or other influence whose character is quite unknown to us.

Another subject, intimately connected

with and giving us a wonderful insight into our Physical Film, is the recent discovery of what is called Radio-activity; each year is seeing further advances in our knowledge of what this wonderful phenomenon portrays: it shows us in a marvellous way the unity of design running through all creation. The whole of the universe, the grain of dust at our feet, the Earth and other planets with everything they contain, the Sun and Moon and every distant Star visible in our greatest telescope and even the portion of our brain which gives us knowledge of all the wonders contained therein, all are built up of exactly the same, what I have called, "cosmic" bricks. By the knowledge we have gained from the study of radio-activity, we have been able to watch in our laboratories the actual evolution, or, more correctly, devolution of matter passing from one form to another. In the organic world all plants and animals are found to be built up of the same identical protoplasmic cells, and we are

now able to break down and analyse not only those cells but, by means of our new knowledge, the very structure of matter is divulging to us its secrets of construction. The different forms under which we classify all matter and which we call Elements, because we cannot break them up into simpler forms, are the designs of the great Architect upon which each structure has been built; we can count the relative number of bricks in each of these designs and can actually foretell the characteristics which they will display when used as ashlars for building up other more complicated substances. As Evolution, carrying out the scheme of creation, has in the organic world produced separate Species, so in the material world it has developed Elements. The structures of animal and vegetable life are of comparatively recent formation and are still progressing in the direction of complexity, whereas the structure of matter appears to have long passed the stage of highest complexity, and the

elements are now undergoing the retrograde process of being transformed, by radio-activity, from the more complex into simpler elements of lower atomic denomination, namely, having fewer bricks in the design of each atom. Matter is therefore disintegrating and, under this process, must eventually cease to exist in the form to which we are now accustomed. Gold, Silver, Lead, Copper and Iron are therefore composed of nothing else but the same primal brick; the special characteristics of each of these metals are the result of the different number of bricks contained in their composition. The only difference between gold and lead is that gold has 197 and lead 206 of those bricks. It is quite conceivable therefore that lead might be turned into gold, or any other rare substance, if we only knew how to accentuate or influence radio-activity; this we have not yet accomplished, as neither the greatest heat nor greatest cold of our laboratories has any effect on this action; there is however irony in

the suggestion when we realize what terrific forces we should be letting loose or employing, and that, even if we could do this, the power we should let loose or have to employ would be worth hundreds, perhaps thousands of times the value of the gold derived from transmutation. It would be something on a par with the periodical attempts to get all the gold we want out of the sea; we certainly know that the sea, and probably every cubic yard of it, contains a certain quantity of gold in solution, and there are millions of tons of gold therefore in the Atlantic Ocean alone. We indeed know a method by which this gold can be recovered, but unfortunately it would cost, even if worked on a large scale, at least £8, and probably more, to extract the value of £1; this would be rather a ruinous process, but not so foolish as the suggestion that the gold should be extracted by submerging a block of gold in the ocean, under the probably reasonable contention that metal attracts like metal in a solution and that

in time it would double its weight; it would probably do so, say a block of gold one ton in weight worth rather over £100,000 would in time become two tons; but how long would it take to do this? Certainly some thousands and probably hundreds of thousands of years; whereas, if invested at 5 per cent interest, £100,000 would double its value and become £200,000 in only fourteen years!

The discovery of Radium by M. and Madame Curie was a great event; it threw open a new window and greatly widened our outlook on the physics of the universe. There was great excitement at the first report of its discovery and much prophesying in the papers as to the wonderful things it was going to do for us. Apart from the delusive hope that it would cure cancer, it was to revolutionize many of our industries. Radium gives out torrents of light and heat and lasts practically for ever. Coal would no more be wanted when we could get a perpetual source of heat from this discovered element, but these

prophecies were also too premature; it is true that, in the aggregate, Radium will give out thousands of times more heat than coal, bulk for bulk, but it takes its time over the process and won't be hurried; it can keep itself practically for ever at a temperature 2° above its surroundings—that is to say, if the temperature of a room is 2° under freezing, Radium would keep itself there at freezing-point; that would hardly be of much service for heating a home or driving an engine. In the case of light, it is perfectly easy to make a Radium lamp which would practically never be exhausted, and it would appear on the surface that this would be a great economy, but a lamp to read by, and a very poor one at that, would cost about £2000, and the interest alone on this outlay would come to £100 a year, which would be rather ruinous, especially as you could not stop the expense by smashing the lamp; the £100 a year would still go on for ever.

All matter is more or less radio-active

and the quantity of any element, existing in undisturbed strata, is an inverse index of the comparative radio-activity of that element; the reason why lead is, and always must be, more plentiful than gold, is because lead is less radio-active than gold, namely, is not turning so quickly into some other element. Radium must always be very scarce because it is very radio-active; in 2500 years Radium gives off half its mass and in every subsequent 2500 years it loses half of what remains; but there are substances much more radio-active than this: some lose half their bulk in a few years, and one transformation, namely, the one into which Radium is actually turning, has a half bulk period of only four days. We have been able to follow this wonderful radio-activity for many stages down three different lines of transformation. One of these lines, the one which contains Radium, is the group starting from Uranium. This is the heaviest mineral known, with an atom containing 238 bricks; by radio-

activity this throws off eight of these particles and changes into a new element called Ionium with an atomic weight of 230; this in its turn throws off four bricks and becomes Radium containing 226: Radium throws off four particles and strangely turns suddenly into a gas with a value of 222; this gas has been condensed by the cold of liquid air and found to be so enormously radio-active that it loses half of its bulk in about four days; after two or three other transformations have taken place, of which we have no definite atomic details, except that during those processes twelve more bricks have been discarded, we arrive at a substance named Polonium with an atomic weight of 210; this substance in its turn by throwing off four bricks changes into a substance with a value of 206, which is the metal Lead. This series of intensely radio-active bodies pauses here, and we have in lead a substance whose radio-activity is so slow that we have not yet been able to calculate its period.

The metals Thorium and Actinium each

start a series of disintegration similar to that of Uranium. In the Thorium series we have been able to detect nine transformations, the final change being also Lead, and from Actinium we have, so far, traced the series through seven transformations, but these are not so well tabulated as those of Uranium and Thorium. In thinking over all that radio-activity has taught us, it seems to me that it is now possible even to calculate the actual date, far back in the dim distance of past ages, when the *apex* of material complexity was reached and when disintegration actually began; because, as we know the rate of disintegration between Uranium and Lead, to quite an approximate degree of exactitude, the amount of lead now found in pitch-blend, our great source of Uranium, gives us the length of time that has elapsed since there was only Uranium present there. The calculation of this gives a result of 340 millions of years as the time which has elapsed since Uranium, the heaviest atom known to us, began to

disintegrate. The brain stands aghast at such duration, especially when we remember that, during that enormous interval, matter has only been able to throw off 82 bricks out of 238 and, to accomplish that, it has used up all known substances, in the Uranium, series which have a marked degree of radio-activity—that is to say, that lead and all known substances of lower atomic weights are disintegrating so slowly that each transformation must take ages upon ages to accomplish. When we have fully grasped what this disintegration of matter really means, another thought seems to come through from our inner consciousness: that we have here actually within our reach that which in 1912* I suggested we were then on the eve of discovering, namely: "a new aspect of Creation which will open a wider view and give us a clearer knowledge of the goal which we are destined to reach hereafter. Each generation will,

* *Science and the Infinite*, p. 178.

according to the teaching of Embryology, gradually come into the world at a higher stage (spiritual) than its predecessor, until the last physical Ego at its birth will coincide with the final stage of development, when there will be no more physical clothing, the disintegration of matter being completed, and it can be pictured that, at the final consummation, there will be nothing imperfect, no shadow left, that all will be spiritual." We have seen that, in the last few years, by the study of Radio-activity, we have found out so much of "the Secret of Matter" that I have been enabled to point out, above, how we can actually calculate the date in past eternity when the apex of complexity of matter was reached and disintregration began its downward course: but with such knowledge in our hands we may, I think, go further and aspire even to unravel the whole secret; in fact to indicate the time when the disintegration of matter will be completed

and the physical universe cease to exist. Let us try to grasp how this may be accomplished. We have seen that matter commenced to disintegrate 840 million years ago, as that was the time taken by the series of transformations from the element of highest complexity, Uranium, down to that of Lead. We saw that during that vast interval of time matter only lost altogether 32 bricks, reducing the 238 of the Uranium atom to 206 possessed by the atom of Lead. How long then will it take to throw off the remaining 206 bricks? We find that the decrease of complexity of an atom is apparently associated in some way with a lessened degree of radio-activity, and all elements, from lead downward, do not exhibit anything approaching the activity we have seen in most of the elements of higher atomic values. We are daily gaining more knowledge as to the periods of disintegration of the other elements of which the universe is composed, and when that has been fully accomplished, it will

only be a question of addition to calculate the time when matter, and therefore the physical film, will cease to exist. The mind of man is unable to grasp such durations; even in the case of lead alone, as far as we can see, it would take at least a thousand times longer for the same quantity of lead to be transformed into the next substance of the devolution scale than was required for the same quantity in the whole series from Uranium to Lead; this would give 340,000 millions of years for lead alone, and it may be that even this is a thousand times below the truth, and matter would by then only have cast off a further four bricks, leaving still 202 for further disintegration. These figures can have no meaning for our finite comprehension, they are absolutely inconceivable; it is only when we, from our Watch Tower, make use of the open window of our real personality, that we witness these endless ages of past and future eternities, these unfathomable vistas of duration, with all events con-

tained therein, roll up into the Eternal Now, and the Creation of the whole Universe, from the beginning to the end of time, is seen lying open before us as an instantaneous thought of the Reality.

IX

THE SOUL OR PHYSICAL EGO

IF we try to understand the basis of our consciousness of existence, we see that there are two phenomenal worlds which we have to take into consideration. These are sharply defined; one comprises all that is known to the mind and is interior to us, and the other includes everything that is outside and therefore exterior to us: concerning the existence of this latter we can know nothing except by means of certain impulses or movements which, coming from that outside world, make certain impressions upon our sense organs; these impressions, although inside our head, we gradually learn, by experience, to accept as representing phenomena which are exterior to ourselves, and the images, thus formed on our sense organs, then become part of our

interior world. This transfer, from the outside to our interior consciousness, is accomplished by an organ which we call the brain and which is itself built up of particles from the outside world. The difference between the two worlds is this: the interior world which we call the mind, the Soul or physical Ego, cannot exist without the material organ the brain, whereas matter, the outside world, can and does exist without intelligence, such as a bar of iron or lump of coal. From this it would seem to follow that the outside material world was more real than the inner world of consciousness. This is one of the illusions with which Intellection has surrounded us; it is caused by the fact, already emphasized, that from infancy we have been accustomed to confine our attention wholly to the objective, believing that to be the reality, instead of recognizing that all physical phenomena are but the material symbols under which divine thought is presented to us; in the same way as the characters

of written language are used as symbols for the expression of thought emanating from our own minds. It is only in recent years that we have been able to realize clearly that the Invisible is the real and that the visible is only its shadow or manifestation in the physical universe; this can only be fully understood when we realize the narrowness of outlook which we possess under our present conditions of consciousness. We are limited in our thoughts by the fact that our senses of perception, and therefore all conceptions based upon them, are rendered finite by considerations of time and space, and as our very consciousness is dependent upon those limitations, we can only know that aspect of the Reality which can be manifested within that range of thought, namely, as *motion* or what we call physical phenomena. We know that matter is not real in the sense that it is not eternal, because, as I shall point out later on, it is a manufactured article which had its beginning in time and must

therefore end in time; it is a movement in the ether and movement can have no existence apart from time. Matter is real to our senses because it cannot by any physical process be made or destroyed and it is all present: it can indeed combine and alter its characteristics; the two gases Oxygen and Hydrogen combine and become something quite different, namely, water; Sodium a metal and Chlorine a gas, combine and become salt. Matter can actually come, as it were, into existence where it was not before; for instance, a seed falls upon a vacant plot of earth; time passes and behold there is a great forest tree standing there where there was nothing before. We can ourselves inaugurate these changes and have learnt to appreciate them as forms of "becoming," but matter itself, apart from its forms of combination, is unchangeable and indestructible by us; it is the divine shadow or expression of that wonderful "Thought" which we call creation, and

we can only think of its disappearance when the scheme of creation is completed, the fiat of the Deity is withdrawn, and the physical universe passes away. That wonderful climax, as a coming event, seems to be "casting its shadow before" in the disintegration of matter, which we see has already commenced its course of devolution in the form of radio-activity.

Let us consider another aspect of the outside world which may help the mind to grasp the significance of matter, and therefore the phenomena of nature, as containing messages, which are ever trying to get entrance into our interior world, from the All-Loving. The reason why a ship, floating on the sea, requires a propelling force to enable it to get from one port to another, is that water is not a perfect fluid, it has what is called viscosity, and this has to be overcome if the ship is to move from one place to another. There are two resistances exerted on a moving ship which are caused by this viscosity, namely, friction

between the sides and the water, and the production of waves; both of these require a propelling force to overcome them if that ship is not to be brought to a standstill. If, on the other hand, water were a perfect fluid and had no viscosity, there could be no friction and no process of wave formation; under these circumstances a ship without any propelling machinery might be started from this side, at the rate say of ten miles an hour, and, neglecting the friction of the air, would cross the Altantic Ocean and be still moving at the same rate when it arrived at its destination. In this connection it is interesting to remember that Helmholtz has shown that in a perfect fluid or perfect solid, where there would of course be no viscosity, no physical force could ever start a vortex, but that if a vortex were once started by any means, no physical force could ever stop it. Now the most applicable description we can give to the known characteristics of the ether is that it is a perfect solid or perfect fluid,

and if we take the suggestion, which I have already made elsewhere, that the atoms of matter are vortices or apertures in that ether, where the ether is either absent or greatly attenuated, we have to acknowledge that these vortices, and therefore the atoms of matter, are manufactured articles. As we have seen, they could not have been manufactured by natural forces or by evolution and must therefore have been started suddenly revolving by an outside Supernatural force. With this conclusion before us, do we not seem to get a clear understanding how, if described in our finite physical language, the whole of creation is an instantaneous 'Thought' of the Deity, whose mind may be said to be everywhere, and that those vortices in the ether, which constitute what we call matter or physical phenomena, are the resulting materialization of that divine thought or fiat? Those expressions of divine thought are ever there, ready to make themselves known to us, when we so permit, by bombarding our sense organs

with the physical impulses to which those organs can respond, and it is by these means that the All-Loving is persistently trying to come into our consciousness to teach us sublime truths concerning the Reality of Being.

Wonderful progress has lately been made in our knowledge of the ultimate constitution of matter. The Spectroscope, combined with the new light thrown on this subject by the discovery of radio-activity, is giving us an insight into what is actually taking place inside the atom itself, and we are even getting to understand in what respect the atom of one element differs from that of another. When speaking of "The Physical Film" I showed what wonders radio-activity has taught us and, by the help of that knowledge, the Spectroscope, by analysing those frequencies which give us the impression of light, and which come from matter when its temperature is raised above a certain degree, gives us a fairly clear idea of what wonderful energies are

at work in the interior of every atom of matter in the universe. These atoms are so small that a very small particle of matter, say a grain of sand which can hardly be seen by the naked eye, contains not only millions, but millions of millions of them; these are all in intense motion and yet never touching each other. Think how minute each of those atoms must be and then try to picture the almost inconceivable activity which is ever going on inside them; there are, as we have seen, numbers of small bodies inside every atom, called electrons because they are themselves, or carry with them, a charge of negative electricity, revolving round a centre of positive electricity, at the rate of light, 186,000 miles per second; those small revolving bodies are the bricks referred to in "The Physical Film" of which all matter is composed, and the number of bricks in any atom constitutes the character of the particular element to which that atom belongs. If we contemplate the enormous velocity of these

bricks and the almost infinitely small space in which they move, we may almost conceive the reason why an atom is so hard that it could never be cut in two or destroyed: because these bricks, which compose the atom, moving at such an enormous rate, must be as it were everywhere at once, no knife-edge however thin could conceivably be inserted between them.

If we try to picture to ourselves an atom, say of Uranium, we seem to see a condition of the ether which to our finite physical mode of thought would have the aspect of a vortex revolving at a certain fixed enormous rate; in this vortex, or perhaps actually constituting the vortex itself, are 288 particles or cosmic bricks, somewhat analogous to planets in a solar system, which are revolving round the centre at the rate of light; these planetary bodies are apparently not all the same distance from the centre, as they appear to be connected in some way with the different wave lengths

of light, as shown by the spectroscope, which the atom sends forth into the surrounding ether when the temperature, namely, the pulsation of that atom, has been raised to a certain intensity. As these planetary bodies are all travelling at the same speed, those that are nearer the centre, and have a smaller orbit, must make more complete rotations in a given time than those further away; hence, when the atom is brought up to incandescence, it gives out practically wave lengths covering the whole spectrum, but the character of the atom, the fixity in position of its characteristic spectrum, depends upon the rate of rotation of the vortex as a whole, which in its turn depends upon the load or number of cosmic bricks which that atom contains.

This rotation of the atom seems to explain how radio-activity results in the transmutation of one element into another. If we take physical phenomena as our guide (it is the only guide we have) we see that, when a body rotating at a certain

speed throws off by centrifugal force part of its bulk, that body, on parting with its incubus, at once slows down to a less speed; so when Uranium, with its load of 238 bricks, throw off eight of them, it at once, with a load of only 230 bricks, assumes the lower speed of rotation and therefore the physical character of Ionium, and this, by discharging four bricks, slows down into Radium with 226 bricks, and so on down to Lead with a load of only 206.

Radio-activity is an explosion of great violence, the energy exerted is millions of times more powerful than the highest explosive substance yet made in our laboratories; one bomb loaded with such energy would therefore be equal to millions of bombs of the same size and energy as used in the trenches; one's mind stands aghast at the thought of what would be possible if such power could be used for war purposes; a single aeroplane, let alone an airship, could carry sufficient to annihilate a whole

army or lay the biggest city in ruins with the death of all its inhabitants. On the other hand, if used for economic purposes, power would be so easily obtainable and in such quantity that the productive capacity of the world would be enormously increased; there would be no more poverty, no more starvation; food would be so abundant and all other amenities of living so easily procurable, that the conditions of a Millennium would be experienced; the present disproportionate difference between the rich and poor would disappear, money would lose its value, therefore its charm and temptations, and all causes of quarrels between classes and strife between nations would cease to exist.

I have thus given a general view of the leading features of what we have called the exterior world, and we will now try to understand the mechanism of that wonderful organ the Brain, by means of which the knowledge of that outside is transferred to the world which is interior

to ourselves comprising all that which I have called the Soul or physical Ego.

It is curious that phosphorous, in different forms and in combination with ammonia and magnesia, abounds in the brain more than in any other tissue; these substances are connected in some unknown way with the exercise of thought, as we find them in the waste products thrown off by the kidneys and they greatly increase in quantity after mental exertion or nervous excitement.

This raises a question which I shall try to answer later on, namely, does matter contain the elements of physical life, so that the vibration of each atom gives a particular characteristic to the manifestation of certain sensations, such as that of consciousness? This follows close upon the lines of looking at each form of life, plant or animal, as a *Chord*, similar to that in music, having as its characteristic a fundamental frequency of a certain pitch. This will be referred to in a later chapter.

The Brain is the organ of the mind and is, as it were, the central exchange of the nervous system of the whole body. As we descend in the scale of intelligent beings, so we find that less mental powers are associated with decrease in the complexity of the nervous system. The nervous system is made up of two kinds of substances of different colour, namely, what are called the white and the grey matter; these substances are found microscopically to be composed of immense numbers of fibres and cells; the former in vast bundles constitute the contents of the nerves proper and are associated with the latter, the cells or vessicles, in the ganglia or nerve centres. These nerve fibres are tubular and of microscopical diameters, their thickness on the outside often not exceeding the one twelve-thousandth of an inch, and the inner matter, of albumenous character, which is the essential part of the nerve, does not exceed the one hundred-thousandth of an inch in diameter. These

tubular fibres are coarsest in the white nerve substance which constitutes the nerve lines of communication between the sense organs and the inner brain. The fibres are finest in the grey cortex of the brain where is situated the grey substance; this is the locality where mental images are formed, and the centre to which all nerve lines run from the special sense organs. From the minuteness of these tubular fibres it may be imagined what an enormous number of them there must be, and what an extraordinarily complex system must exist so that every one of them may be coupled up with all the others to form one complete conscious Ego. It has been estimated that, in the nerve which carries the sense of sight alone, there are over one hundred thousand of these fibres, and the total number of those in the white substance of the brain alone amounts to hundreds of millions. These millions of lines of communication, which come from every minute part of the human frame,

as is shown by our being able to locate a pin-prick at any point of the skin, lead to, and are each continuous with, those fibres which constitute the grey cortical layer of the brain; they pass through junctions or central stations but are continued beyond; they are never fused one with another. In this grey cortex region are situated the seat of sensation of the four central sense organs, namely, the sphere of touch in what is called the vertical lobe, the sphere of smell in the central lobe, the sphere of sight in the occipital lobe, and the sphere of hearing in the temporal lobe. Between these four sense centres lie the four great "thought centres" or centres of association, the real organs of mentality or consciousness. These thought centres are, in some marvellous way quite beyond our present knowledge, subdivided into regions relegated to special forms of thought; pathological experiments have shown that certain well-defined localities of the cortex are centres of special mental activity, and when any

such centre is diseased, that particular form of thought is destroyed; there is, for instance, a well-known area specially connected with speech, and injury to that area destroys completely the power of transmission of thought to others, and probably destroys the very consciousness of personal existence.

As we have to form words before we can think, namely, to clothe thought in physical language before it can come into our plane of consciousness, it is evident that the advent of consciousness of personal existence in a child is not possible before the child begins to speak, or becomes capable of speech, namely, until the region of the grey cortex used for speech comes into play; and even then the child for some time afterwards still speaks of itself in the third person. The consciousness of personal existence, which is the Soul or physical Ego, is built up of all those impressions which have found and are finding their way, from the outside, through the sense organs, to the ganglionic

cells of the grey cortex and thus into our interior world; the association of all these pictures and the new combinations which arise by intuition, constitute the "I am" or Soul of each one of us. The higher-sense organs are each capable of receiving, and passing on to the brain, the special impulses from the outside world with which that organ is specially adapted to deal, it is not affected by any other influence. This is a wonderful example of the unity of design, and adaptation to ends, running throughout nature, because from the lowest to the highest forms of animal life, including of course man, the cells of all sense organs have had their origin in, and been formed from, the cells of the skin which covers the whole body; this is clearly seen in the process of formation and development of the human embryo and in those of the lower animals.

The whole brain is indeed like a great central automatic telephone exchange, with hundreds of millions of lines running

through it, in such a way that anyone connected with that exchange is in perpetual touch with everybody else; so completely in fact that the whole, though constituting a world of hundreds of millions of separate existences, acts as one single intelligent being, the Soul or physical Ego of each one of us.

This physical Ego is strangely analogous to a world of separate beings, because if one of the trunk lines (nerves) of our great Exchange, containing millions of subsidiary lines and connecting one of our limbs, is injured or severed, that part of the world is entirely isolated from the rest, it having no system of wireless telegraphy to keep up a correspondence. The physical Ego only finds out that part of its world is lost to it through receiving no spontaneous information from its members, and through getting no response to any message it trys to send down that trunk line; and yet the limb and therefore all its inhabitants are just as much alive as they were before, and get their

nourishment through from the central food station as though nothing had happened; their telephone lines have been severed and no news can therefore be sent direct to, or received from, headquarters, but the lines of railway (the arteries), bringing their food and taking away their waste products, are still intact and in working order. It is true, as I have said, that under these conditions no news could come through from them to the physical Ego, to show that they were still in existence, but here we encounter a great marvel. The building up of the physical Ego, as we have seen, was actually the product of those isolated inhabitants, in conjunction with all the other members of its world; and the physical Ego had got so accustomed to rely upon their regular contributions for its very knowledge of existence, or shall we say their regular press news which was used in the central publishing offices for the general circulation of news on the plane of consciousness of the whole inner world, that,

being evidently in need of news from that isolated portion, it actually invents messages, or rather continues to publish the old messages, in a slightly different dress, a proceeding not quite unknown, I am afraid, in our own days of great competition for press news; in doing this the physical Ego actually misleads itself and finds it difficult, in fact almost impossible, to believe that these bogus messages are not true communications. This happens not only when the trunk lines of telephonic communications are severed, but even when the railroads which carried the nourishment and by-products have been destroyed for days and all the inhabitants have died; such is the case when the limb has been amputated, because in the case of a man, who has suffered from gout, after his leg has been cut off he still feels the pain acutely in his toes and suffers from cold feet, though neither the foot nor the toes have been in existence for several days past. This clearly shows that the very plane of

consciousness is not dependent only upon the central organ or what we call the brain, but upon the total existence of the whole frame including the brain, nerves, organs of sense, and even the muscles and organs of nourishment, respiration, and reproduction. In fact the building up of our consciousness of existence which we call the physical Ego is the result of the correlation of all those messages which are transmitted from all parts of the body; these messages, and the memory of them which we call experience, are the very essence of mental action; these transmitted influences include all movements our body has gone through, every image we have received of the outside world through the four great gateways of our sense organs, and the reminiscences of the conceptions we formed of them in the past; without these it is hardly conceivable that we should have any consciousness of the existence of a physical Ego.

But there is another aspect of the Soul or physical Ego which I have not touched

upon, and it is one without which our life here would be meaningless. All those physical experiences which, as I have tried to show, have gone to build up the "I am" of our consciousness, all the knowledge we have gained from the phenomena of nature and along many other lines of thought which constitute what is called the intellect, are conditioned in time and space and therefore have no real existence apart from this life; but, as we have seen from our Watch Tower in earlier chapters, there is, growing up within or in intimate connection with each one of us, a wonderful divine Afflatus or Power which is not conditioned in time and space and which is akin to, is in fact a part of the Reality. Owing to our senses being finite, we cannot, in this life, form any direct conception of that power though we feel that it is intimately connected with everything that is best and real in us and is in fact our Real Personality. We also recognize that, in some marvellous fashion, it is continually being

nourished or starved by the action of the physical Ego, somewhat in a similar way to that in which the life of the body is nourished by the action of breathing; except that in this case the nourishment depends upon the progress which the physical Ego makes in gaining a knowledge of the good, beautiful and true; these three are, as we have seen, the earthly aspects under which we are able to discern the All-Loving in this life, and it therefore follows that the more our real personality becomes thus nourished by the action of the Soul or physical Ego, the more does it partake of the heritage which He has prepared for those that love Him.

X

MEMORY

IN the last view we tried to understand the process of building up, and the everyday existence of the Soul or physical Ego. We saw how it gained strength and grew to maturity by means of all the experiences it encountered from time to time in the past;—commencing at that time when the development of the grey cortical layer had first unshuttered the window through which it became aware of the dawn of its own personal existence, it continually correlated itself with all surrounding phenomena until, by mental reflection, it realized its predominance over the purely physical; it thus "found its feet," as it were, in the universe, and became able to differentiate between those two worlds of matter and mind which we have seen constitute its very

knowledge of existence in the present. But consciousness of existence depends on something more than the action and reaction of these two worlds in the present; it requires, and is provided by the scheme of life with, what may be called, a wonderful reference library or repository which gives us, at any time, the power of calling up the past into the present; this we call Memory. In conjunction with this repository there must also be, available to the individual, organs by which the surrounding physical phenomena, the outside world, can be brought into touch with us in the present, and when the brain has formed concepts of these contacts, they can be given over to memory to store up in the past, ready at any time for future reference. It is a great mystery to realize what millions of impressions are thus stored up from hour to hour and day to day, and every one of these events gives us that hold on the past upon which our very consciousness of existence depends. We know that wonderful store exists

because, by the effort of our will, we can at any time actually bring up any one of those past events into our consciousness in the present, and, by concentrating our attention upon its details, we can live them over again, accompanied by even the very thoughts we were thinking at the time, to the exclusion of everything that is happening in the present. If our finite brain can accomplish such a marvellous performance, what will not our real personality be able to do in the next world, when it has unlimited Omniscience to draw its individual images from.

As we can turn up any event from the past periods of our own short life, so the earth has also stored up for our use memories from that past which, look as we may down the vast corridors of time, seems to be unfathomable, although, as we saw in a former view, that wonderful 'Thought,' which we call creation, had a sudden beginning and must therefore have an end. We are

indeed getting ever more and more evidence of its marvellous history, in bringing to light, by our excavations and studies, those endless succession of events in past ages, the impressions of which have for countless generations been stored up in the crust of the earth; in the same way as memories of past events are stored in our own brain, waiting only the action of man's will to bring them into our consciousness in the present.

Trees grow by depositing annually an extra layer outside the layer deposited the year before, and if a horizontal section is taken, a number of concentric circles are seen in the trunk; those circles show the number of years that tree has been in existence; but they show much more than that, they contain a history of the life of that tree. The circles are irregular and show, by the thickness or narrowness of the rings, that certain years had been favourable or unfavourable for its growth; in several cases it is seen that a ring is divided

into two or three thinner rings, telling us that, in that year, its life had alternations of favourable and unfavourable conditions; each of the branches will be seen to have its origin in a particular ring, which shows the year when that branch had its birth. It is also possible by examining these rings to determine the prevailing direction of the wind during the lifetime of that tree, because the rings have longer diameters in the direction of the prevailing wind; but every storm of rain, cloud and sunshine, have left their records. This is somewhat similar to Memory in the animal kingdom. Events have written down their records in the past, though the tree itself has not the will power to call them up into the present, otherwise it would have consciousness of existence. We have the same records in fossil trees and, if a large number of specimens were studied, it would be possible actually to reconstruct a true history of the vicissitudes of seasons hundreds of thousands or

perhaps millions of years ago: even the dream of Pharaoh, or rather its fulfilment, has left a record of seven years of plenty and seven of destitution, ready to be unearthed when the will of man is employed to bring it up from the past into consciousness of the present. The whole crust of the earth is in fact a vast repository of images of the past, not only records of seasons and weather, but of the vicissitudes through which all animal and plant life has passed, with a clear description of the terrible catastrophes of ice ages, of deluges which drowned whole Continents, and tropical heats. We see the truth of the statement; that "the growth of the embryo of man, and indeed of all the higher aminals, is a replica of the past history of the evolution of life upon this globe," in the vast deposits of plant and animal remains to be found fossilized in geological strata. Each of those strata shows the steady upward progress in development of living forms during one particular long period in

the history of the earth; some of these periods represent only hundreds of thousands of years, but others cover many millions of years in duration. The fossil remains of aminals, representing the imago stages through which each one of us has passed during gestation, are found deposited there in the same order as may be seen in the embryo, though here the whole development from monad to man has been accomplished in a few months.

We have seen in the last view that the epoch in the history of the world, when the building up of the atoms by means of evolution had been completed, namely, when matter had reached the apex of its complexity and commenced to disintegrate by radio-activity, was 340 millions of years ago. If we conclude, as I think we reasonably may, that this was the time when the temperature of the earth had become such that protoplasm could exist, we seem to have the time in the distant past when life actually had its commencement. Perhaps in some

marvellous way, at present beyond our ken, the enormous energy let loose for the first time by the action of disintegration, caused by radio-activity, was itself the means by which this wonderful new force came into existence. If this is the case we have, in the short period of each month of embryonic life, the record and therefore the memory, if we only possessed the power to recall it from the past, of approximately 88 million years of evolution, namely, one-ninth of the whole life history of this planet. Such a condensation of events in time, as portrayed by the above calculation, is altogether beyond the grasp of Intellection; it is only conceivable when, by Introspection, we realize that there is no condensation whatever, because those 88 millions of years are only a fraction, and a very small fraction, of the whole aspect of creation; this in its turn is an instantaneous thought of the Creator and is therefore, to the spiritual outlook, lying open to view in the present as a complete whole,

somewhat analogous, as we have seen, to a complete story in a book lying open to our gaze on the physical film. When therefore, as at death, the physical film is pricked for each one of us and passes away with all limitations of time and space, the whole of past eternity will, with the whole of future eternity, be present to us in the Now. The question "When we die shall we in the next state 'remember' the dear ones we have left behind and be able to recall in succession the happy times we have spent with them here on earth?" must be answered in the negative, because memory is based upon, and requires for its very action, the conditions of time limitation; but we shall have then something infinitely better than memory; all records stored up by us in the past will indeed have been destroyed by the death of the brain, but with the passing away of all limitations we shall become omniscient; the whole of the past will be lying open to our view, all unrealities or negatives, referred to in Chapter VII,

such as shadow, evil, sorrow, misunderstanding, vexation, or unkind thought, will, with all finiteness of outlook, have vanished into nothingness, and only that which is real, the good, the beautiful, the true, will be visible; we shall know our dear ones and be known by them, in a way far beyond that which could be called up by memory and, in an infinitely truer sense than has ever been possible in this life, we shall have the supreme joy of being in "loving and knowing communion" with their real personalities, with no possibility of any shadow or sadness of parting coming between us for all eternity.

XI

LIFE

IT is usual to divide the World into what are called the Animal, Vegetable and Mineral Kingdoms. The first two comprise all that which is called organic matter, because it has been organized or built up from the mineral by the action of a force which we call Life. This organic matter has the wonderful power not only of continual growth but also of multiplying or reproducing its own species; it can actually create beings, similar to itself, which have a separate and perfectly independent existence and which in their turn can create similar beings; it is *par excellence* the world of "becoming." The Mineral Kingdom, on the other hand, comprises what is called inert matter, because it has no power of growth or movement by itself, but chemists tell

us that, inherent in that matter, are forces of incredible energy far beyond anything that we know of in organized matter. These forces are let loose, or made manifest, when certain elements of matter are brought into such close contact with other elements, that they become chemically combined into new substances totally different in their characteristics from the original elements. The power of one element to combine with another, depends upon their having what is called chemical or atomic affinity for each other; but we have absolutely no clue as to what constitutes this power, and why atoms have this wonderful property only for certain other atoms and not for all, unless, as I shall point out later on, it may depend upon the harmonizing or syntonizing of the fundamental notes or periods of vibrations of the atoms involved.

Let me give a simple example. The gases Oxygen and Hydrogen have affinity for each other in the ratio of two atoms of Hydrogen to one atom of Oxygen, and

when these proportions are mixed together and raised to a certain temperature, or, what has the same effect, a flame is applied to the mixture, they combine with great violence and form water. From the violence of the combination one would have thought that it would be difficult to dissociate these gases again, and so it is, except under special circumstances, namely, when, by introducing another element, which has a greater affinity for either of them than they have for each other, the combination is at once broken up. In the case we are examining, namely, water, this may be effected by the introduction of either of the metals Sodium or Potassium. If either of these metals be dropped into water it will at once burst into flame, and the only explanation we can give is that one of the component parts of water, namely Oxygen, has such a much greater affinity for these metals than it has for its companion, that it at once deserts the Hydrogen, and throws itself into the arms of its new love so madly that the heat,

generated by its combination, is sufficient to explode the released Hydrogen in the Oxygen of the surrounding air; it is the flame of this explosion which we see when either of the above metals comes in contact with water. The study of what I have elsewhere called the "Loves of the Atoms" is the basis of all chemical science; we know now not only which Elements have affinity for other elements, but the exact amount of ardour which will be manifested, and the exact relative quantity of each which will enter into combination. I shall refer to this later on in this chapter when dealing with Synthetic chemistry; meanwhile, apart from this chemical action, one still hears the expression that the difference between what is called organic, or living matter, and inorganic, or dead matter, is that of activity and inertness; but this is far from the truth. The Physicist tells us that the nearer we get to the knowledge of what matter really is, that is the more we approach to the understanding of the

infinitely small, the greater the activity manifested, until we arrive, as we have already seen, at the inconceivable activity which is going on inside every atom of the universe. This state of things is indeed necessitated in a world of sensations, dominated, as ours is, by the limitations of time and space, where all sensation is dependent upon vibrations or movements for its excitation, and where all knowledge of our surroundings is based upon "relativity." The shorter a pendulum the quicker is its mode of swing; the shorter a violin string or tuning-fork the higher the pitch and therefore the quicker the vibration; the smaller the distance of a planet from the sun, the quicker its movement of translation and the greater number of revolutions or vibrations it makes in a given time. I have already dealt with this aspect of the conditions under which we are living here, in the opening chapter of *Science and the Infinite*, where we saw that when duration in time and extension in space

were both equally decreased, towards the infinitely quick and the infinitely small, in all our surroundings, we could have no possible knowledge that any change had taken place; and when, in the opposite direction, time and space were so increased that the stature of each of us became so great that light, travelling 186,000 miles per second, would take 86,000,000 years to pass from head to foot, and time slowed down in the same relative proportion, so that every second of our present time would be drawn out to 5860 millions of millions of years; we could still have no knowledge that any change had taken place, our everyday life would go on as usual though duration and extension had for us become vast beyond conception. The reason for this extraordinary total ignorance of so vast a change is that duration and extension are only the two modes under which all our senses act, and this, as already explained, necessitates movement as the basis of perception; now the very sensation of

movement is dependent upon the relation of time and space, and it therefore follows that all our sensations and therefore knowledge of surrounding phenomena are based upon relativity. Time and space may therefore be increased or decreased to any extent without our knowledge provided the same relative proportion one to the other, to which we have become accustomed, is maintained. We have seen that if our Solar system were reduced to the dimensions of an atom, and the planets therefore take the place of and be reduced to the size of the cosmic bricks which constitute that atom, the relative rate of our earth's revolution round the sun would approximate that of light, and when we think of the minuteness of an atom, the activity of these particles is altogether beyond conception; and yet we know even the number of revolutions which each particle makes say in a second of time, because we have either senses or instruments by which we can count the impulses or vibrations in the ether which

are caused by every one of those revolutions. We have seen in the View on "Time" in *Science and the Infinite* that all these emanations, from the Hertzian waves up through Radiant Heat, Light, Actinic, and Magnetic waves, are identically the same kind of wave or rill in the ether, they only differ in their quickness or pitch of vibration. Just as even in the same sense organ, say in musical sounds as heard by the ear, we have to divide the whole range into notes of separate pitch; and, in our organ of sight, we have to divide light into separate colours and call them by different names because, owing to the limitations of our outlook, we cannot grasp the whole without recognizing, and therefore designating, that each note or colour has a different character or mode of vibration of its own; so in the multitudinous vibrations of the ether, we cannot grasp the truth as a whole, namely, that all the rills emanating from the atom are identical except in the matter of pitch; we therefore divide them into

different classes according to the impression they make on our different senses, or on the receiving instruments which we have invented for making them manifest. The reason why we experience such a great difference in the effect of vibrations of various pitches, is that vibrations, in order that they may be perceived, require nerves of certain lengths, which can vibrate in sympathy with the wave lengths of those particular vibrations, before they can affect our sense organs; it naturally follows that each organ can only appreciate those particular vibrations which come within its range; between the different ranges of these organs there is no knowledge for us, though the vibrations may be falling upon us in torrents, and it is in these regions of no sensation that we have invented instruments for making these vibrations manifest. It is quite conceivable, as we shall see later on, that in other worlds nature has developed animal life with a greater facility for understanding its surroundings

than is possible to us here. Although the impressions made upon them appear to be so different, all our sense organs have been developed from the same source, namely, from the skin which covers our body, this may be clearly seen by examining the growth of each organ in the embryo of all animals. Instead therefore of having different senses as we have, a being might be endowed with only one organ which could appreciate not only the lower material vibrations of sound but also the whole range of etheric rills; there would be no lacunæ in such a sense organ, no need for inventing receiving instruments for filling up gaps between the senses as with us. The effect on the human race, if it possessed such an all-comprehensive organ, would indeed be extraordinary; all matter is transparent to certain waves of definite pitches and, with such an organ, we could therefore see anything that was going on anywhere even if at the centre of the earth or at the other side of the world; nothing would be

hid from us; we could see everything that was going on inside our bodies, no disease would be obscure; our very thoughts and wishes would be known before we expressed them; insincerity and untruthfulness would be impossible; sympathy with distress and its alleviation would be simultaneous, because life surrounded by such persistent objective visible suffering would be unbearable, except by such depraved natures as would be instantly ostracized; the brotherhood of man and the Fatherhood of God would be universally recognized. I shall refer again to this subject in my concluding chapter.

Let us now come back to the atom. The study of radio-activity has shown that all these emanations, these rills which come from the atom are what is called electrical; the cosmic bricks or planetary bodies which, as we have seen, are travelling round the centre inside the atom with such enormous rapidity, are nothing else than negative charges of electricity, revolving round a positive

charge at the centre. The atom is indeed composed of these electric charges and, as all matter is made up of atoms, matter itself is what we call Electricity. We have not yet grasped the whole "Secret of Matter," but every fresh discovery seems to me to be leading us to the conclusion which I am suggesting in this chapter, namely, that Life itself is a higher mode of etheric wave and that all rills, from the lowest to the highest pitch of frequency in the ether, however incredible it may at first appear, must be classified under the denomination of Life.

I have already pointed out that owing to our senses of perception and conception being limited to the modes of time and space, we can only have knowledge of phenomena in the form of movement, and it is clear that we could have no knowledge of Life force and its action in the universe unless it came under that category. Life is therefore a movement in the ether, it is a transient physical

force, and can thus only be looked upon as a reality in the same sense in which all other forms of energy or matter appear real to our finite outlook, namely, as the shadow or manifestation of the Absolute on our limitated plane of consciousness. The material basis of all life, both animal and vegetable, is the protoplasmic cell; this cell is built up of substances known as *proteins;* these proteins are the most complex chemical substances of which we have knowledge; we know the elements of which they are principally composed, but they are quite beyond our power for exact chemical synthesis; they cannot be manufactured in our laboratories, they require life force to build them up, and every species of life organism, whether animal or plant, has apparently its specific protein, differing in its composition from that of all other species. I shall explain the reason for this later on when I suggest that every plant or animal has its special combination of vibrations, its own particular "Chord of Life." Inside

this protoplasmic cell is formed, by means quite unknown to us, a nucleus composed of still more complex proteins, and we have in this nucleus the primary living substance which has been called "Chromatin"; and upon the presence of this chromatin depends entirely the power of the protoplasmic cell to assimilate food, to grow, and, still more marvellous, to exhibit the phenomena of reproduction and sex.

All living matter is built up entirely of these cells with chromatin enclosed; each cell, though so small that it is far beyond the power of the human eye to perceive, is nevertheless a distinct living unit; and it is this minute cell that we must examine, and not the large masses of cells which we have in living organisms, if we want to find out what life really is. We are too prone to think of the life, say of a man, as a single unit, a complete whole of a certain size, somewhat like the bulk of water contained in a glass. The old Levitical saying that the "life of the body

is in the blood" is very true, but the blood of the body is not, in the ordinary sense, a fluid, namely, a single homogeneous unit; it is composed of myriads of separate individual cells, each of which is a living unit moving about of its own accord quite independent of the other cells, though they are all working together at the special task allotted to them for furthering the welfare of the scheme of life of the same body. It seems a wonderful phenomenon to have a small separate cell, quite independent of and detached from all other living cells, with power within itself to give forth a continuous flow of life force for years, provided it is kept supplied with food in the shape only of, what is called, inert or dead matter, of which the protoplasm is composed, and which it uses up in the process of manufacturing life force; surely this marvellous continuous performance points clearly to life force being a vibratory emanation derived from the atom, of exactly the same nature as all those other forces which we

have seen come from the same source and which hitherto have been placed under the category of electric or electro-magnetic, only that life force is of a still higher pitch of frequency. If this is a correct description of life force, we should expect to find in the force situated just below it in the scale, namely, in the way electrical force is produced in our laboratories from inert matter, something analogous to the way a steady supply of life force is produced by a protoplasmic cell, when also supplied with inert matter for food. It is very suggestive that we are not far from the truth when we find how near the two processes approximate. Electricity is in fact produced in our laboratories in almost the identical way this life force is produced in a protoplasmic cell. If you take a jar and place in it certain substances of inert matter, say for instance a piece of copper and a piece of zinc, and fill the jar with salt water and join the copper to the zinc with a piece of wire, you have then an electric cell giving out

continuously a flow of electric force; and it will go on doing this practically for ever, provided you keep it supplied with the same ingredients of inert matter as it was composed of at the start, to enable it to replace what it has used up in the manufacture of electric force. This electricity is also the force which, owing to its being in closest proximity on the scale of frequency, naturally approaches nearest to the mode of action of life force. Electricity increases enormously the vitality of plant life, is used extensively in therapeutics for revivifying and strengthening the tissues of the human body; it can contract or extend the muscles of the living body even against our will, and can keep even the muscles of a dead body in motion as though it were alive; the heart of a frog though removed from the body, may be kept throbbing naturally for weeks by the application of an electric current from the cell described above; this electric force can be manufactured in cells containing many other

elements than those given above, and indeed all of the other forces emanating from the atom may also be generated in cells containing various kinds of inert matter; it only requires to bring into juxtaposition certain elements so that chemical action, or what is called atomic affinity, may come into play; and forthwith there is produced in enormous volume any of those forces which we have seen are inherent in every atom, and which we call by different names because they are manifested to us according to their mode of frequency or pitch of vibration, namely Hertzian waves, Radiant Heat, Light, Actinic and Röntgen rays, Magnetism and Life. I shall refer again to this subject when dealing with the explanation of how the life of the body is affected by poisons.

We have dealt thus far only with what life force is and how it is produced, but we find that it is endowed with unique powers; if for instance it is given a variety of substances to choose from, it

can pick out and assimilate the particular food it requires; and when a large number of cells are congregated together to form what is called a living organism, either plant or animal, that organism has the wonderful power of creating a new being like unto itself; and of endowing that offspring with life force so that it can exist as a separate being with all the powers of its parent, and can itself create fresh beings after its own likeness.

In the early days of life upon this globe, all living organisms were hermaphrodite, namely, having both the male and female principles combined in the same individual. In conformity with the fact, already pointed out, that the history of every embryo is a replica of the past, showing clearly how the higher forms of living organisms have been evolved in the past from the lowest forms of life, we find that during gestation every animal in embryo form, including man, not only passes through the different embryo stages

from the lowest monad, but that in the earlier stages of development that animal is actually hermaphrodite. Even in the mature human frame every organ in the body is still duplicated, with one curious exception; this is a gland situated behind the centre of the forehead, called the pineal eye, and it was, on this account, named by Descartes " the seat of the Soul." In Genesis we have the Hebraic pictorial description of Eve being separated from Adam, and all animals, except the very lowest forms, such as earthworms, have by now differentiated their sex; many trees and plants have also succeeded in doing this; for instance, the Sallows, where the yellow palms of the male blossoms are on a separate tree from those of the green female blossoms. The majority of trees and plants are however still in the hermaphrodite stage, having the stamens and pistils in the same flower; but it is interesting to see how Nature is trying to help them gradually to differentiate their sexes; if the pistil is fertilized

by pollen from a stamen in the same flower, the resulting seedling will be much weaker than if the pollen came from a different plant. Nature has endowed trees and plants with many ingenious devices for preventing this in-breeding and, in many cases, making sure that fertilization shall only be possible by pollen brought by insects or by the wind from different plants of the same species; in a great number of plants, where the stamens and pistils exist in the same flower, the stamens or male element matures before the female pistil is ready for fertilization, and these plants are therefore called *proterandrous*. The Spindle tree, *Euonymus europæus*, and the Lime tree, *Tilia europæus*, are examples of these. In some cases, which are however comparatively rare, called *proterogynous*, the pistil or female element develops before the stamens; examples of these are the common Figwort, *Scrophularia nodosa*, and *Aristolochia* the Pipe plant; the latter example exhibits a

marvellous procedure for preventing in-breeding. The flower, with the shape of a meerschaum pipe, consists of a long tube with the bowl at the end covered in, except for a narrow opening which leads into the tube: the opening is closed by stiff hairs pointing inwards which allow insects to enter after honey but prevent their return, and they are kept prisoners there until the pistil has passed its time for fertilization; when this has taken place, but not till then, the stamens mature and cover the insects with their pollen; the hairs also at once shrivel up and allow the insects to escape and thus to carry the fertilizing pollen to the pistil of another flower. In the common Berberry, *Berberis vulgaris*, we have another curious method of promoting cross-fertilization and at the same time ensuring that the insects are well powdered with pollen. The bases of the stamens are highly sensitive and, when touched by insects, the stamens, which were at first lying down flat, spring sharply up

and strike the insect; by this action the stamens not only cover the insect with pollen but in most cases frighten it away to another flower. In others, such as the Hollies, we have a marked step towards differentiation, because in most holly trees either the stamens or the pistils do not mature; in the latter case no fertilization can of course take place as the flowers only have the male element, and in the former case, where only the female element matures, the pollen would have to be brought from another tree. This is the explanation why so many holly trees in the country never have any berries when there is no other tree in the near neighbourhood. Before passing from this subject it may be well to realize how much we owe to Insects, and especially to Bees, for the propagation of nearly all our garden vegetables and the production of fruits in our orchards; as well as for the beautiful colours of flowers, their scent and even their honey. Flowers have not only developed special colours for the

purpose of enticing bees to come to them, but in most cases have succeeded in storing up a supply of honey for them, so that, when the colours have fulfilled their part, the bees find something still more enticing which induces them to push their way right into the flower and thus accomplish its fertilization. Many flowers are ornamented with stripes or lines which almost invariably lead to where the honey is deposited; these honey guides are absent in night plants where, being invisible, they would be useless as a help to insects.

There are countless marvels to be seen in nature's process for the fertilization of plants but, although it is very bound up with our subject of Life, I must be content to give only one more example, in which the differentiation of sex actually takes place just before fertilization. In the case of the water plant *Vallisneria spiralis*, the female flower is at the end of a long spiral stalk which enables it to rise to the surface of the water. The male

flowers which are attached lower down are small and very numerous; these separate themselves entirely from the plant, rise to the surface and fertilize the female flowers among which they float; as soon as this is accomplished the spiral stalk contracts and draws the fertilized female flower down below the surface again.

Many living organisms have the power to create afresh a limb or sense organ which has been destroyed. Should an animal be attacked by disease, it is able to provide itself, and store up for future use, a fluid which is called an antitoxin because it is a powerful antidote against another attack; it is also possible now to provide or help the human body to provide itself, with several different antitoxins at the same time, by the process of inoculation, and it then becomes immune from those diseases, or has them only in a mild form.

Living organisms have also the power of adaptation to their surroundings, and

thus possess that all-important power, where life is to be maintained, of keeping itself always in harmony with its environment; without that power of adaptation, life would hardly be possible.

In the highest living organism, that of man, we have another marvellous phenomenon in Self-consciousness, by which he is able to differentiate himself from the outside world of his physical surroundings. I have already dealt with this in my chapter on "The Soul or Physical Ego," but there is another side of this subject which I did not touch, namely, the persistence of personal individuality of the physical Ego from youth to old age. It is difficult for most people to understand how this can be possible when we know that every one of the myriads of cells in the human body has been cast out many times in succession, not a particle of the original body remains; to all intents and purposes its identity has been completely destroyed, and yet the individual remains the same

entity with actual knowledge of its life and actions under its many previous different material existences. The physiological explanation of this mystery is somewhat similar to the reason why an acorn will always become an oak tree and the offspring of a cat will always be a kitten; although every one of the myriads of cells in the original human body has disappeared many times in succession, there is not a single cell in the present body which is not a direct descendant from one of the old cells, in a much more intimate sense than that of the acorn coming direct from its parent oak tree; the cells in the present body are in fact *identical* with those of its former existences, they are really the same cells, as they have been propagated by "fission" and not by "budding." The body in old age is therefore identical with that of youth, and this explains the persistence of personal individuality throughout life.

In the scheme of life which we are examining, there is something even more

wonderful than this persistence of personal individuality from youth to old age; every animal organism has its origin from a single individual germ, called the Spermatozoon, so minute that it requires a powerful microscope to make it visible to the human eye; and yet that original sperm-cell carries with it the multitudinous characteristics of its progenitor; it in fact contains not only the traits of character and individual physical properties possessed by its parent, but also those of the countless number of successive parents through which that particular life-entity has been propagated in past generations. We have been greatly helped in understanding this subject by the latest microscopic discoveries, especially in microphotographs taken by means of what are called monochromatic ultra violet rays, which extend far beyond the region of visible light. By these means we have been able to make visible, objects far smaller than could ever be photographed by light waves in the visible spectrum,

and have thus succeeded in emancipating our minds from the difficulty of grasping how so much could be transmitted in a cell of such minute dimensions. When we come to examine into the composition of that small cell, and find what myriads it contains of what may be called tablets, upon each of which records may be written, we see that the minuteness of size introduces no difficulty. Let me try and make this clearer. Although the sperm-cell from which man springs is far too small for human vision, it is much larger than many of those other cells which constitute the different organs of the body; for instance, it is thirty times larger in diameter, and therefore 27,000 times larger in size, than the liver-cell; but each of these liver-cells contains 64,000 millions of living units in the form of protein and other granules; each of these units has 5000 atoms and each atom is, as we have seen, similar to a solar system, the centre of inconceivable activity. Heredity, the name

given to the process by which the sperm-cell transmits the characteristics from the parent to its offspring, is therefore what may be called the memory of the cells; and when we think of the myriads of separate living bodies which have a place in that minute germ-cell, every one of which is capable of receiving and therefore of transmitting impressions, the difficulty of understanding what at first seemed to be an impossibility passes away and in its place there comes over us, first, a feeling of awe and wonderment at the marvels, exhibited by this life-force, which surround us on the physical plane and, then, when with humility we have realized and acknowledged, as we did on page 16, the limitations of our physical Ego, namely, the inability of Intellection to pierce beyond the finite objective, there suddenly dawns upon us, through the window of Introspection, a stupendous thought,—the absolute conviction that, growing up within us or in intimate connection with our very being, there is

a wonderful real personality, which is as divine as the Great Spirit because it is akin to, is in fact a part of Him; and which, as it becomes nourished and gains strength, enables us to realize that, in very truth, we are one-with-the All-Loving, and that we are therefore integral working units in the carrying out of the scheme of Creation, however many mistakes or false steps we may make on the way:—

> "There's a Divinity which shapes our ends,
> Rough hew them how we will."

There are two other aspects of the same subject, namely, firstly, the extraordinary prodigality of life to be found in nature, where physical life seems to be held of almost no account in the Scheme of creation: this will be referred to in the chapter on "Death"; and, secondly, the apparent incompatibility of perfect Justice, perfect Love and perfect Mercy, all of which we must attribute to the Creator, when we think of the millions of children in the slums of the earth who

never have a chance of gaining that knowledge of the All-Loving, which is necessary for the growth of the real personality of each one of us, and therefore for the attainment of what is called Everlasting Life; this will be dealt with in our concluding chapter on "the Spiritual Outlook."

Let me now point out another aspect of our subject. Apart from the constituents of water, carbon is the principal food required by living organisms; in fact the very existence of life upon this earth is entirely dependent upon the power of the Chlorophyll corpuscle to separate carbon from carbonic acid gas. There are millions of these globules in the leaves of trees and the stems and leaves of plants: it is from these that the leaf derives its green colour; a number of these minute corpuscles are often contained in the same cell and, when in sunlight, they are continuously in motion rolling round the centre of the cell. Nobody who has witnessed this wonderful

action, under a high magnification, in the leaf of, say, *Vallisneria spiralis*, an aquatic plant already referred to, will ever forget the wonder of the first peep into this busy workshop of nature. The Chlorophyll corpuscle derives its energy from the Sun; it is able to absorb and make use of those rills in the ether which emanate from atoms in our central luminary, but we have absolutely no knowledge how it is thereby able to decompose carbonic acid gas and retain the carbon; it must be a process quite different from any mode of chemical analysis used by us in our laboratories, and yet the whole vegetable kingdom throughout *this* world is continuously manufacturing, by this process, and storing up great stocks of carbon in one form or another; it is upon this store that the animal kingdom directly or indirectly depends entirely for its food; it is in fact the mainspring or explosive for starting and carrying out all actions. The human race, though it uses these stores in most cases direct for purposes of

food, also makes use of animal food, but all animal food must have been originally formed by feeding directly or indirectly upon those stores of carbon. When stating above the fact that the whole vegetable kingdom utilizes the sun's energy for storing up carbon, I purposely confined that statement to *this* world, because we are very apt to jump to the conclusion that life on our neighbouring planets, or on those of other solar systems, must be on the same basis as we experience here. Now the protoplasmic cell, which is the physical basis of life on this globe, is a compound of carbon and the constituents of water, namely, oxygen and hydrogen, with traces of ammonia, phosphorus, sulphur and certain salts, but the principal ingredient is carbon and, as we have seen, the vegetable kingdom is only able to provide the necessary large quantities of this product through having in the Chlorophyll corpuscle a special chemical transformer, for breaking up the carbonic acid gas of our atmosphere by means of

energy received from the Sun. It is however quite conceivable that in other worlds, the energy coming from their central Suns, though, as we know, identical with ours, may be used for separating quite different chemical compounds; and the element or elements thus prepared may be utilized there, as the food or fuel, for a new order of Life, totally different from that which we are accustomed to here in the vegetable and animal world. Under such conditions the very chemistry, and therefore functions and forms of all living beings, would be totally different from our earthly ones. We indeed know from stellar-spectroscopy, that not only our Sun but also all stars and therefore the planets surrounding them, are composed of the same elements as we have here; however far away in space one of those elements may be situated, the torrents of emanations which come from its atoms are identically the same as those we find coming from similar atoms in our laboratories;

but just as an electric cell, for producing a continuous flow of electric force, may be constructed in a great many different ways by the combination of different elements, so it is conceivable that life cells may also be built up of elemental compounds quite different from those contained in the proteins; and, in the place of the Chlorophyll corpuscle which dissociates carbonic acid gas and stores up the carbon necessary for those proteins, there would be formed a corpuscle for breaking down another chemical compound and storing up the food necessary for a new form of life-force. As the Chlorophyll corpuscle is able to respond sympathetically to, and thus utilize those particular rays from the Sun which are in harmony or syntony with its own modes of vibration, so the new corpuscle may have a "Chord of Life" as far above in frequency that of Chlorophyll as Life is above Light, or Light is above the Hertzian waves; it would then be able to utilize a much higher pitch of emana-

tions, resulting in a life-force, and therefrom an intelligence, so far beyond anything we are accustomed to in the present stage of infancy of the human race, as to be altogether past our comprehension.

I have already referred to the wonderful way the study of embryology has shown us the path by which our present physical frames have been gradually built up from the lowest forms of living matter, and how all sense organs have been formed by the folding over or infolding of the skin, and, in the chapter on the "Soul," we examined the constitution of the brain and tried to understand its mode of action; but perhaps the most wonderful thing that embryology has taught us is the steps by which that brain, the seat of intelligence, has been developed. The first appearance of that which, after millions of years of development, was to become a brain, was the advent of the spinal cord, and the earliest example we have of a rudimentary spinal cord without a brain is in the lancelet or amphioxus, a low form of sea life; in the

next stage, the end of this cord has expanded into a vesicle which shows signs of dividing into five parts; in the next stage, that of the primitive fishes, those parts have become distinctly separated and, in the higher fishes, they become the five cerebral vesicles which eventually constitute the true brain of the higher animals. After the higher fishes we reach the stage of the amphibia, the lizards and reptiles, namely, the first land animals with more developed brains; these first appeared in the carboniferous period when the great coal measures were formed. It was at this period that the Vertibrates split up into two divisions. The Mammals and Birds have as common ancestors the latest fishes or earliest amphibia and, up to that stage therefore, the development of the embryo is similar in both, but after that stage we see them separating, the mammals developing through the lizards and the birds through the reptiles.

When we have fully realized all that embryology has taught us, and have

further seen that, depicted in the different strata comprising the earth's crust, there is also a detailed history of the past, showing the same succession of forms of life as found in the embryo of every animal organism in the present; we are forced to bow the head in reverence and recognition of the handiwork of the Creator in the marvellous unity of design to be found running through the whole universe, from the smallest atom up to the highest form of life; we are forced then to acknowledge, as a mighty fact, that the scheme of creation, in spite of apparent checks, is steadily and irresistibly progressing towards a definite goal; and we cannot help but realize as we have never done before that we, the highest product of that scheme, have a great responsibility imposed upon us, as members of the brotherhood of man and heirs to the Fatherhood of God, to help forward the good work with all our powers towards its appointed end.

Before concluding this subject we will

examine just one more aspect of Life, namely, that which has to do with the length of our sojourn here. We have already seen that Life-force is purely physical, it is a vibration or frequency in the ether similar to, but probably far beyond in rapidity, those other frequencies or forms of energy which we call Radiant Heat, Light, Electricity, Magneticism, etc., and has its origin like them from the kinetic energy inherent in matter. All forms of Life, whether animal or vegetable, are built up of the same protoplasmic cell. I have already given examples * showing how these two forms of Life attract each other, by sympathic action, when their modes of frequency are in perfect harmony, but repel each other when they are discordant, and, with the fresh knowledge which has come to us in the last few years by the study of radio-activity, we seem to see clearly that my surmise was correct when in 1912 I expressed the belief that " we were on the

* *Science and the Infinite*, p. 81 *et seq.*

verge of a great discovery and that the first indications were being revealed to us through the investigation of the Biology of Insects." I had seen this discovery coming years before, (*vide Ars Quatuor Coronatorum*, Vol. XI, 1898) but it has only lately materialized sufficiently to enable me to describe it in concrete form. I have referred to this under "The Physical Film" as the secret we are winning from matter, and I will now carry this subject a step further. In the same book * I showed that every material body, if treated sympathetically, may be shown to have not only its own characteristic fundamental note but also certain other notes, or what may be called traits of character, which belong to it alone, and which are manifested to us by modes of vibration in the air; so also each form of life, according to the elements contained in its proteins, has not only its characteristic mode of frequency but has numerous other traits of character which it has

* *Science and the Infinite*, p. 89.

either inherited or acquired by experience, and these as a whole may be pictured as a *chord* (in etheric music) characterizing that particular form of life. In a cabbage, an oak tree, or any other member of the vegetable kingdom the "Chord of Life" would be of a comparatively simple character, but the fundamental frequency would be different and unchangeable for each, thus ensuring that the offspring of the first must always be a cabbage and that of the second an oak tree.

On page 180 I have tried to picture the composition of the atom of Uranium, and we saw, in that miniature solar system, 238 planetary bodies revolving at different distances round the centre. As these bodies are all moving at the same rate, namely, 186,000 miles per second, it follows that the nearer to the centre a planet is, the smaller its orbit, and therefore the greater the number of complete orbits or vibrations it would make in, say, a second of time; and conversely those

further from the centre would make fewer vibrations, and we should therefore have 238 different modes of frequency emanating from that atom. We thus see again, this time at the very basis of matter, the same presentation as we found in that of Life, namely, in the form of a great chord, I call it a chord because the analogy of sound is applicable; what we call pitch in sound is identical with colour in light —they both depend upon the number of vibrations or frequencies which come, by means of the air into the ear, and by means of the ether into the eye in, say, a second of time, and light is identical with all the other multitudinous wireless waves* which we are able to examine and measure, both below and above the about half Octave which we call light, because it comprises the whole compass of our organ of sight. The " Chord " of Uranium may therefore be said to be composed of 238 different modes of vibration, or etheric notes, in addition to its fundamental note,

* *Science and the Infinite*, p. 147 *et seq.*

or it may be that the fundamental note is itself the resultant mean of all its other vibrations. This aspect of the atom presents another marvellous proof of the unity of design running through all creation, from the simplest form of matter up to the highest complexity of Life, and we can understand how, as I have already suggested,* matter itself may be seen to be a third aspect of life in association with that of the Animal and Vegetable.

We have already referred to Vegetable life, and we will now examine the higher form of Animal or Human life under the same aspect. There is practically no dividing line between the zoophytes and the phytozoa, the animal-like plants and the plant-like animals; there are indeed many living organisms which are on the borderland between the two, having characteristics of both animals and plants; such as, for instance, that lovely green spherical organism called *Volvox globata*, which, with its thousands of vibrating

* *Science and the Infinite*, p. 67.

filaments on the outside and numerous young volvoces inside, is ever rolling through the water, and is the delight of every lover of microscopical pond life. This organism has several times been classified as a plant, altered to an animal, and then reinstated as a plant; it is now classed as one of the Confervoid Algæ (plants), but quite recently it was included among the Infusorial Animalculi. The old method of classifying as plants those organisms which absorb carbonic acid gas and give out oxygen, and as animals those that breathe in oxygen and give out carbonic acid gas, has had to be discarded, because, as already pointed out, in their lowest forms there is really no hard and fast demarcation between these two forms of life, they are all built up of the same protoplasmic cell; as however we advance, in our examination of higher and more complex forms of animal life, we see that, whereas what I have called the "Chord of Life" in plants is comparatively simple, it being composed of

only those traits of character which have been handed down to it by heredity from a parent of like simple form, the "Chord of Life" of animals, especially of the higher forms, is much more complex; the human, for instance, is composed of not only those traits of character which it has received by heredity from its highly complex parent, but also of all those numerous other traits which it has itself acquired by its own experience in life. It has in fact become a wonderful factor of influence for good among its surrounding fellow beings, and its full power is manifested when it meets with those whose "Chord of Life" is in harmony and therefore in sympathetic communion with its own. May we not indeed see in this an explanation of the wonderful attraction which one individual at times feels for another, though difficult to explain in words except as a sensation of having found its "affinity." Such a feeling of attraction, if real, is greatly strengthened by closer association, because by sympa-

thetic action and loving communion, certain traits in the one are modified or enlarged so as to become more in consonance with those of the other; this encourages the highest ideals of both and makes possible that perfection of human life which has the aspect of true prayer, namely, Love in Action, and is the "charm" of intimate association of man and woman in married life. In order to further grasp what this influence by sympathetic vibration really signifies in the scheme of Life, I shall try and put another aspect of this "Chord of Life" before you.

In the examples referred to above * we have seen that the reason why a moth invariably singles out and lays its eggs on the one particular plant which is able to nourish the caterpillars, when they emerge from those eggs, was that the "Chord of Life" of that plant was in perfect harmony with the chord of Life of that insect and that, in the proximity

* *Science and the Infinite*, p. 81 *et seq.*

of that particular plant, it would necessarily have a feeling of rest and happiness; which in itself would stimulate or vivify the life process of that insect and encourage it to fulfil its destiny in the direction of propagating its species; but when that insect was in proximity to other plants which were out of harmony with its chord of Life, there would be unrest and unhappiness amounting even to what we might call a feeling of antagonism, which would have the opposite, namely, a depressing effect upon its vitality. When we have fully grasped the significance of this we may, I think, use it for understanding what constitutes the action of poisons on the human frame. It is a curious fact, not hitherto possible of explanation, by either the chemist or physiologist, that whereas certain substances both organic and inorganic are eminently stimulating and nourishing, other substances, which in their chemical composition are almost identical with the former, are not only not nourishing

but have the disastrous effect of completely destroying the whole scheme of Life within us. To understand the reason of this we must go back to our insect hovering over a plant which is not in harmony with her chord of Life; we saw how she would in the proximity of that plant have a feeling of unrest and her vitality be depressed; she was fortunately able to fly away from those influences which tended against her scheme of Life, but we will now consider the effect of discordant action upon bodies that cannot fly away. I have shown* that if two heavy bars of iron are brought into perfect sympathy together, namely, that they give out exactly the same number of vibrations in a second, they can influence each other, with great power, over long distances; and if these two bars are now brought close together or even clamped together, they will still vibrate freely and give out a perfectly pure note. I showed also that if one of these bars is put even slightly

* *Science and the Infinite*, p. 91.

out of sympathy, and both are now started vibrating close to each other, but not touching, the evidence of antagonism and quarrelling between them is of an extraordinary character; the sound coming from them in heavy throbs very characteristic of a battle royal, although let it be remembered, that each bar by itself gives out a perfectly pure note, and the difference in pitch is so slight that even a trained ear could hardly recognize any difference in the two notes. Let us now see what would happen if we clamped these two discordant bars together and then forced them to vibrate in that proximity; if the power were sufficient to maintain them vibrating, both bars would in a very short time be entirely broken up; and this disastrous effect was caused entirely by the slightest alteration of one of the bars, which put it out of sympathetic vibration with the other. Bearing this last fact in mind we can now examine what constitutes the difference between a substance that is stimulating

and one that is poisonous, and therefore destructive to the human frame. The last twenty years has seen a marvellous extension, especially on the continent, of what is called Synthetic Chemistry; thousands of new substances, quite unknown before, and not to be found in nature, are being built up in our laboratories. A dictionary has been published giving the composition of over two hundred thousand different chemical substances, and a great division of these compounds is called the "Hydro-Carbons," because they are all formed synthetically of the two elements hydrogen and carbon in different proportions. The molecule of the first hydro-carbon has the signature CH_2 showing that it has one atom of carbon and two of hydrogen, the next CH_4 has one atom of carbon and four of hydrogen, then, C_2H_2, C_2H_4, C_2H_6; then C_3H_2, C_3H_4, C_3H_6, C_3H_8 and so on, adding one atom of carbon for each series and two atoms of hydrogen for each new combination. Each of these

new substances has special distinct characteristics widely different from those that have preceded them; but what interests us most is that, although in two successive series there is only a difference of one atom of carbon, the properties of these two are often diametrically opposite in their effect upon the human body; the one drug will be stimulating and markedly helpful for building up wasted tissues and restoring vitality, but the addition of only one more atom of carbon results in a virulent poison which is destructive of the very scheme of life.

Now in Nature's process of building up the different material atoms, by successive additions of cosmic bricks, we find a recurrence of similar characteristics at certain periods; these have been called Octaves because they recur after each eight elements, in the series formed by placing the Elements according to their atomic value, which value depends upon the number of cosmic bricks in their composition. The series commences with

hydrogen placed at unity, followed by the other elements in the order of their complexity, namely, their smallest numerical combining powers compared with hydrogen at unity. In the series of Hydro-Carbons, which are compounds of two elements, there are also to be seen these rhythmic recurrences of characteristics; pointing strongly to those characteristics having a collective numerical foundation, and being based upon the particular pitch or frequencies which we have seen is fixed for the atom of each element according to its atomic value, and which I have called its fundamental note. We indeed see similar conditions in the musical scale, which is also based entirely on the numerical ratio of vibrations, where we have, in the different octaves, periods of recurrences of sounds so closely allied to each other that we actually give them the same names though the notes, like the atomic values of the elements, have a totally different pitch or frequency.

We may now combine the results arrived at in our above examinations of the effects of sympathetic action between the Animal, Vegetable and Material, which I have already referred to as the three aspects of Life. In the case of an insect we saw that when her chord of Life was in perfect harmony with that of a plant, her life energy was greatly intensified, but was unsettled and depressed in the presence of a plant that was out of harmony; making it probable that, if that insect were forced to remain in its proximity for long, her vitality would have so suffered that not only her power to lay eggs but her very life would have been jeopardized; and should the young caterpillar be forced to eat that plant, it would surely be poisoned and die. In the case of the Material we also saw that when two harmonious bodies were closely associated they could exist peacefully together; but if rendered discordant by a slight increase or decrease in their mode of vibration, they became mutually destruc-

tive. We also found the same conditions paramount when we investigated the effects of certain drugs upon the human frame; an extremely small addition or subtraction of one of its component parts, a single atom of that carbon which is the essential element in all organic nature, increased or decreased its fundamental chord so that what was formerly in harmony, namely, capable, by sympathetic action, to stimulate or at all events to be innocuous, has now become so discordant that it acts as a destroyer of life; although the molecules of both substances are still composed of exactly the same kind of atoms and no others. One example will suffice to put this clearly before you: a meal of bread and water is a sustainer of life, but a drink of a solution of Prussic Acid would act as the deadliest poison, and yet both the meal and the draught are chemically composed of exactly the same kind of atoms. When this subject has been fully investigated we may be in possession of a knowledge

that will increase the span of human life indefinitely; the condition of what we call old age and infirmity may be warded off far beyond what we would at the present time call the limit of longevity. In youth and middle age the *phagocytes*, the policemen of the blood, are wonderfully energetic in fighting and destroying all enemies, such as Bacteria and Bacilli, which may from time to time try to gain a footing in the domain of the human body; but at a certain time of life, coincident with what is called old age, these policemen, or some of them, begin to degenerate; they not only get lazy and cease to do their duty, but actually turn traitors and go about helping to destroy rather than to preserve their community; having got into a morbid state they presumably, after clamouring, like our own working man, for better food, higher wages and less work, make up their minds that the sooner the community goes to pieces the better.

If you have followed my argument I

think you will see that the new knowledge we may hope to gain from the "Secret of Matter" should actually provide us with an "Elixir of Life"; which would quickly bring those policemen back to their senses, or, better still, by preventing their conditions of existence becoming too irksome, would have removed the original cause of their disaffection; thus ensuring their loyal and energetic co-operation, for the good of the community to which they belong, for a much longer period than has yet been experienced.

XII

DEATH

IN the last chapter we examined Life in its origin, then in its lowest and highest forms, and concluded by suggesting the conditions under which human life might be greatly prolonged beyond the threescore years and ten. We are now to consider that epoch, which sooner or later must arrive for each one of us, when our real spiritual personality, having outdistanced in some unknown fashion its further need of earthly ties, throws all material scales from its eyes and awakes, as though from sleep, to the wonderful existence which we shall consider in the last chapter. This is all there is in death for us; but as for the scales, the physical clothing, which, with all its patchings up, remodellings, imperfections

and faults, has fulfilled the task for which it was requisitioned and has in the process become worn out; it is cast off and sent back to Nature's workshop, from whence it, together with the cast-off clothing from countless other contemporary organisms, will be utilized for the weaving of new clothing for the next generation of animal and vegetable life.

It is an extraordinary fact that the human race, at least that part of it which ought to know better, because it has advanced in all those amenities of life which comprise civilization, has connected "fear" with this change, though uncivilized nations and all other living organisms are free from it. I shall show later on that Intellection, the growth of the self-consciousness of the Soul or physical Ego, has much to do with this aspect of death, though the primary cause of its prevalence in so acute a form in the present generation, where the fear amounting to terror takes the form of having to pass through "the Valley of

the shadow of death," is, as already referred to when treating of "the Devil," the result of the sacerdotalism of the middle ages; when the fear of the consequences of death was made an instrument for extorting large sums of money, from those who were dying, by the promise that such payments would ensure that the giver would escape the horrors and tortures of hell-fire. When dealing with "Prayer" we saw that the attempt to approach the Infinite by means of Intellection led to disappointment and unhappiness, even amounting at times to a feeling of His being indifferent to our requests; but when we looked from our Watch Tower all was changed to happiness and contentment. So may we see that we have been looking at the subject of Death in a wrong direction; we have been looking outwards instead of inwards, from the aspect of the "objective" instead of that of the "subjective," the finite instead of the Infinite; with the result that we are assailed with the fear

of the unknown, conjuring up all kinds of terror; whereas from our Watch Tower we shall see the foolishness of being afraid of that which is not only a perfectly natural process, but which, when it arrives, we shall find is a joyful experience and that, far from being something to be afraid of, it should be looked forward to rather with curiosity and expectation.

Let us see what Nature teaches us concerning our subject: the first fact that confronts us is that it is a natural law or process; it is universal except in the very lowest and simplest forms of life, where the monocellular animals and plants may be said never to die in the ordinary sense, except by accident, starvation, or catastrophic change of their environment, because those simple organisms propagate their species by dividing into two; it may well be said therefore that they do not die as, after division, there is no part of the original body but what is still alive in one of the two halves. It was only when these

simple cells became closely connected into colonies, and the colonies, by evolution, became more and more organized into complex bodies which acted as simple living units, that the Wisdom behind the physical film appears to have introduced death as an adaptation to get rid of maimed and useless bodies, which would otherwise have cumbered the earth. This was of course millions of years before *Homo sapiens* stood erect and took his place at the head of creation; but man still owes his very being to the existence in the present of those simple cells, which from the beginning have not been subject to death as a natural law. Every human being alive at the present moment has had his origin from a single sperm-cell of microscopical dimensions, and that cell having been propagated, from the beginning of life on this globe up to the present time, by the division of successive parent cells, is itself of immense antiquity; it is not only the oldest form of living matter, but contains the record of physical life,

along its particular line of descent, from the earliest dawn of organized matter; and the evidence of this, as pointed out when we were considering "Life," is lying open to our gaze, in the process of development of that sperm-cell during gestation; the different stages of the embryo being a replica of the past stages, through which all the progenitors of that cell have lived, from the time when the first sperm-cell came into existence.

Death as an adaptation is not so important in plant life as in that of animals; plants are required for food and can lose many leaves or parts without invalidating their power to flower and fructify, namely, to exist and propagate their species; whereas almost every part of even the lower forms of animal life is essential to their very existence; and here we come face to face with the absolute proof that, in the scheme of creation, Death is not only a natural process but a necessity for the continuity of progress. Physical life has

apparently no value in that scheme, as destruction, or what we call death, is of no account except as a prelude to the exhibition of fresh energy which, in the direction of "anabolism," is ever building up simple materials into the complex basis of protoplasm, of which all living bodies are formed; and then, in the direction of "catabolism," is ever breaking down those complex body substances in order to liberate the energy stored therein; but when we carefully examine what is really going on in Nature's workshop, we see clearly a wonderful method in all this destruction, a marvellous design running through all creation. The whole of Nature's dealing with life is based upon the sacrifice of the lower forms to enable those, that are further advanced in the scale of development, to live and carry forward the great scheme of creation.

Let us try to understand what this appalling prodigality of life means. In water, especially in fresh water ponds and rivers, Monads, Infusoriæ and Amœbæ,

the lowest forms of life, which swarm everywhere, are eaten by the Entomostraca and Rotatoriæ; these again become the victims of the larvæ of the Coleoptera, Libellulæ, Trichoptera, and of the numerous species of Gnats; these larvæ are in turn eaten by fishes and these become the food of man; even those larvæ which escape and turn into perfect insects and take to the air, are mostly eaten by birds which are also the food of man. A very small percentage of insects are left to propagate their species, but these lower forms of life are so prolific that there is never any shortage; in fact the supply and demand are so well balanced that should, by any chance or accident, there be a shortage of birds in any district, the result is a plague of insects. Plants have their food "cooked" for them by the lowest forms of vegetable life, the Schizomycetous fungi, which are the cause of ferments and decomposition in organic substances, and are the Bacteria and Bacilli of our biological

laboratories; some plants, such as our garden vegetables, become food for man direct, and we allow a sufficient number to grow to perfection so that we may have seed for next year's supply; but other plants and also animals become food for higher animals which in their turn are slaughtered and supply one of the most important of human foods. There are many incidents in this wholesale sacrifice which show a wonderful design underlying what looks like indiscriminate slaughter, and explain the curious fact that so little signs of death are visible in the world around us. No dead organic matter is left for long without the advent of a multitude of scavengers to clear it away; even the trunk of a fallen tree is taken in hand by numerous wood-boring larvæ, which drill their tunnels into the trunk, thus allowing the weather to enter and hasten its decay by introducing the Schizomycetes which, by the process of fermentation or decomposition, referred to above as "cooking," prepare it in such

a form that it can be used as food by the vegetable kingdom.

A dead bird in the country can never lie long above ground; there are, in the economy of nature, special undertakers, the burying beetles with large striped bodies, which are seldom seen until they are wanted. I have often watched for the arrival of these wonderful little insects; they must be ever actively hunting the country up and down for their quarry, because, after having placed a dead bird or mouse in the clearing of a wood, it was never more than twenty-four hours, and sometimes only a few hours, before they had made their appearance and started operations. If the ground is not too hard they quickly excavate the earth from under the dead body, so that within a few hours it sinks below the surface of the ground. There are many curious episodes to be seen in the workings of nature, but in all there is a wonderful purpose which can be discovered by patient study. In the present case these

burying beetles, which are always females, do not require the body as food for themselves but are preparing a store for their progeny. Before covering up the dead bird with mould, they burrow into the body and lay their eggs there; and it is the larvæ, which emerge from those eggs, which have the advantage of that burial, and use the carcase as food during the whole of their lives, until the following spring when they emerge as perfect insects, ready in their turn to take up their duties as nature's undertakers.

It is usual to look upon the autumn and winter as seasons of death in nature, because there is so little sign of insect and vegetable life; even big forest trees show no outward sign of being alive, their beautiful foliage dies and falls to the ground, but they are only dormant; it is the time when nature is taking her siesta after in some cases the strenuous work of the summer, and in others the exhausting process of fructification and preparing seeds for future generations.

Most insects, in the form of pupæ, are snugly put to sleep in the ground, or in special silken cots which are called cocoons, and show marvellous ingenuity in the protection they give the inmates against enemies and the inclemency of the weather; and from all of these they emerge in the following spring to commence the active life for which they are destined. In the autumn the ground is indeed strewn with myriads of dead leaves, but there is very little similitude to death in this when we examine them closely; in fact it is a sure sign that the trees, from which those leaves have fallen, have great vitality. When a tree is not flourishing, or when it is dying, the leaves do not fall off; if, for instance, a branch of a tree is injured or so broken that it hangs down, its attachment to the tree still keeps it alive, but the leaves do not fall off during the whole winter; the explanation of this curious phenomenon is that what we call the death of a leaf, is caused by the Chlorophyll globules, which

we have seen constitute the contents of that leaf and give it a green appearance, being drawn back into the stem to form the bud which is to push out new leaves in the following spring; and when the globules have all been withdrawn, the outer husk of the leaf is detached, but not otherwise. This action of drawing back the Chlorophyll globules requires energy which is supplied from the vitality of the tree; but if this vitality is impaired in any way, or cannot be utilized owing to the branch being broken, the leaves remain attached, as may often be seen, even into the following summer.

Let us now consider what death means to the human being, and how the fear of it has appeared in such an acute form in the last two hundred years. The most potent factor in the fear of death is, I suppose, the erroneous idea that the body which is put into the dark and silent tomb, to rot away, is our very self; whereas it has nothing to do with us except as representing the worn-out garment, like the

husk of the leaf referred to above, which is discarded naturally, and with it depart all the pains and frailties to which we have been subjected in this life. The fear of death is perhaps a natural thought from the limited aspect of Intellection, because that body with the self-consciousness of its Soul or physical Ego, is the only Self that we have known intimately, and which has been all in all for us in this life where we are governed so ruthlessly by the objective; but such a thought is impossible when, from our Watch Tower, we realize that that body which, as seen in our chapter on the "Soul," is made up of our organs of perception and conception, comprises only the physical machinery by means of which our awareness or self-consciousness was gradually built up. That finite consciousness which seems so real to us, in fact so truly *our* self in this world of unrealities, is only the shadow of our Real Self; it is the only possible presentation of the Spiritual part of us on the physical plane, where our

consciousness is absolutely limited to the horizon of that which has existence in time and space. That physical self has therefore no real existence, and when the worn-out clothing is cast off, or what we call death takes place, we wake to the absolute knowledge of our Spiritual existence; and in place of the self-consciousness experienced here, we shall have the consciousness of being the offspring of, and perfected in loving and knowing communion with, the All-Loving.

This last conclusion answers all other thoughts suggesting fear, because, in Reality of Being, there can be nothing imperfect, no sorrow or unhappiness, nothing evil, ugly or untrue, all imperfections and shadows have disappeared; this disposes of the doctrine that death was brought into the world by, and is therefore a punishment for sin, instead of being a law natural to all living organisms, and that we shall be judged and punished in the next world in a terrible manner for anything we have done amiss in this. As

death is only the absence of life, when viewed by Intellection, so we see from our Watch Tower that hell and also heaven are within us. Heaven is the presence of God within us when we are possessed by the All-Loving; hell is when that Love is absent, when, as referred to under "Prayer," God has forgotten us because we have wilfully shut the door by which He is always trying to enter to teach us to know and therefore to love Him.

Many people are puzzled by the absence of knowledge of the Spiritual self apart from the well-known Soul or physical Ego, and the following question is one of those I have received for elucidation.

"A friend of mine, who is one of the cleverest persons I have ever met, has, after mature consideration of the subject, come to the conclusion that there can be nothing after this life, that when the body dies there is an absolute end to our existence;—what can I answer?"

I replied that, from that person's point of view, it was a perfectly natural con-

clusion and that, in point of fact, he could hardly have come to any other. I have already under the heading of "The Human Being" explained that the Soul is the shadow or presentation of our Spiritual self on the physical plane of our sensations under the limited conditions of time and space, and constitutes the "I am" of our consciousness. When the body dies, the mind, or plane of consciousness upon which the Soul, the "form shadow" of the Spiritual is cast, is destroyed and with it necessarily ceases the existence of the Soul as a manifestation. If therefore we are governed by the objective, namely, if we look upon the Soul, though limited by time and space, as a reality instead of only a shadow, then the only possible conclusion we can come to, because we are confined to Intellection, is that death is the absolute end of our existence.

It is for the express purpose of answering such questions as "Why have we no definite knowledge of the Spiritual self

in this life?" that we have climbed up into our Watch Tower, from whence we can look at these difficulties with a much wider outlook. Let me here point out once more that the Soul, or "I am" of our consciousness, is absolutely confined, in all its perceptions and conceptions, to that which is conditioned in time and space; it can form no conception of the Infinite, which is free from those limitations, and can therefore have no knowledge of the Real Spiritual Self beyond the shadow or outlines thrown upon the plane of consciousness. As intimated in the commencement of this little volume, it is by mistaking the shadow for the reality, by looking outwards instead of inwards, by thinking that the finite can be compared with the infinite, that these problems become so difficult; it is the finite Intellect and the attempt to use it for a purpose not within its province, that has created the "Inconceivables" with which we have hitherto allowed ourselves to be troubled. Let me give an example which

will help to make this clearer. We will suppose a young and conscientious investigator of the physical sciences, who is not only free from any thought of religion or Spiritual matters but has been warned against them as foolish superstition; let us follow his thoughts; —after years of hard work he would have gained a knowledge of the forces of nature together with the unalterable laws under which they come into play; he thus reaches the stage of what is called a materialist; he sees from examination of the earth's crust, that the world has been going on under the same forces and laws for millions of years in the past and is still going on very well, without any signs of coming to a stop, for millions of years in the future; but he continues to investigate and, as he piles up more and more knowledge, he finds that, in whatever direction he directs his researches, he becomes gradually confronted by an inconceivable problem, and the longer he investigates the more

inconceivable that problem becomes; he is like an astronomer who is ever increasing the size of his telescope to try to fathom space; his vision is indeed enlarged by every increase of telescopic power, but whereas his vision increases by steps, his appreciation of the Immensity of Space increases by enormous bounds; until at last he, as also our Scientist, is forced to pause and acknowledge that "he who knows most, knows most how little he knows"; he then ceases to be a materialist and becomes an idealist; he has realized the limitation of his Intellect; he has had to acknowledge that the finite cannot attain to the infinite; we thus come back to our original question and see that the reason why we, the finite physical "I am" of us, can have so little definite knowledge of that Spiritual Self, of which the Soul is only the shadowy appearance in this world of shadows and illusions, is that it is absolutely beyond our ken.

Having thus realized that the Soul or

physical Ego, though so real to us in this life, is not our Real self, we are now prepared to examine another aspect of death which may help us to understand another problem. Let us go back, some eighteen hundred and eighty years, to that death scene which has influenced the lives of human beings on this planet so far beyond any other death in history, and listen to the words wrung forth: "My God, My God, why hast Thou forsaken Me?" A strange and piteous cry to those who were standing round, and whose every hope it seemed to shatter. The embodiment of this cry in the gospel narrative always seemed to me a convincing proof of the authenticity of the account of the Crucifixion, because it was so utterly different from what the writers of those gospels would have included if they were not faithfully detailing what they actually witnessed. That cry has been a stumbling-block for many generations, it has been the greatest weapon in the

hands of the opponents of Christianity; the argument which was used, and with some plausibility, being that Christ discovered, at the last moment, just as He was dying, that He had been mistaken in thinking that He was the chosen of God. It is strange that the meaning of the cry was not grasped, especially in the twelfth century when the great wave of Mystical thought was at its zenith; but even they seem to have been looking in the wrong direction, outward instead of inward, at the shadow rather than at the reality, and missed what I believe to have been the true explanation. It is a curious fact, many times confirmed by instances, that men who have died in their manhood, namely, when their physical life was still young in them but, from injury to some organ, their end was approaching, have been filled with doubts and fears, even to feeling forsaken at the last moment before death; and it was noted that this distressing state appeared however good

their former lives may have been. If one bears in mind what we have already said concerning death, I think we have a simple explanation of this sudden fear; the physical self is still strong in its consciousness of existence, the life of the body has not run its full course; it still possesses the potential for, say, a further thirty or forty years of existence; it is not a worn-out garment which can be cast off with ease and bring relief, but has a tenacity of holding very different to the relaxation accompanying natural decay. It is the Soul or physical Self, of manhood growth, which at the moment of death realizes suddenly that everything that is good and real in it, its very Spiritual possessor, in fact its God, is deserting it, leaving it for ever to crumble into dust and decay and to be the sport of every force of nature. The cry of Christ was not that of the Spirit, but the cry wrung from that human body which, though scarred with suffering, was yet

dying at only thirty-three years of age and therefore still in its manhood. To me the cry teaches two wonderful lessons which we are all too slow to learn and keep steadfastly in mind, namely, that the physical body is but a garment with which we are clothed for a short time here, we must not let it take too strong a hold of us so as to cloud our eyes from looking beyond the physical horizon; and that, growing up within us, there is a wonderful self, our χρίστος, which is the God of the physical self because it is one-with-the All-Loving.

To clear up the erroneous doctrine that death is a punishment for our sins, and that its advent is to be dreaded as a catastrophe instead of a natural process, I will ask you to consider one more aspect. If we had never had any experiences of sleep and had been warned that at a certain hour, towards the end of the day, we should pass into a state of oblivion where we should be absolutely

unconscious of life, with no knowledge of our surrounding, so helpless that we should be perfectly at the mercy of flies or any other enemy that might attack us; and if we were at the same time told that this fearful catastrophe was coming upon us, on account of the sins that we had committed; we should under such warning, and as the time passed on, be in a similar position to those whose life was drawing to a close and should have the same fears of the final act; we should also conclude that, as our consciousness of life was still very strong in us, there would have to be a great and agonizing struggle before the body could be overcome by the approaching overwhelming Nemesis and forced to give up that which it looked upon as its very existence. But when the time came for sleep we should be feeling weary and, at last, without any fear or struggle we should willingly lie down and allow unconsciousness to steal gently over us; we therefore, with our experiences, look upon

sleep, as we should also look upon death, as a blessed rest from the toil of our daily labour. Sleep is akin to death in that we lose in both the use of our corporeal senses and with them all limitations of time and space; it is, like death, a law of nature and it would be unnatural if we did not experience both of them.

Those who have witnessed a great number of death-bed scenes tell us that it is quite erroneous to think that there is any pain or conscious struggle connected with natural death; we should therefore look forward to death with calm confidence as the time when we shall have finished our work in this life, when we shall feel that we have fought a good fight, though perhaps not always as well as we might or would like to have done; and are prepared to lie down and take our rest from the cares of this world, which by that time will be becoming a burden upon our failing strength, in the sure certainty that, with the total emancipation from the weaknesses of the flesh, we shall wake

to an existence so wonderful as to be altogether beyond our highest flights of thought :—

> "Eye hath not seen, nor ear heard,
> Neither have entered into the heart of man,
> The things that God hath prepared for them
> that love Him."

XIII

THE SPIRITUAL OUTLOOK

WE have now arrived at the final stage of our investigation and can with clearer vision understand the wonderful Outlook which we have been able to command from our Watch Tower.

In our opening chapter, we saw the necessity of realizing that the human intellect is limited and therefore unsuitable for dealing with any thoughts beyond the horizon of finite shadows, before it became possible to unshutter our window and thus get a view of the realities behind the visible universe. We saw that the very fact of realizing that the intellect was limited to the horizon of the visible, finite or physical, at once made us aware of the existence of the

invisible, the infinite or the Spiritual, which had before that realization been beyond our ken. Our next step made us aware that we ourselves, our real personalities, were actually one-with-the Spiritual, and that it was therefore only necessary to open our eyes in the right direction, namely, inwards instead of outwards, to have the power of employing Spiritual discernment for sweeping away the Inconceivables with which the misuse of Intellection has surrounded us.

Our first view from the Watch Tower was directed towards the Reality, and we recognized the immanence of God throughout the Universe, because the whole of what we call Creation is the objective manifestation, on the plane of our consciousness, of the Thought or Will of the All-Loving; and as we are an integral part of that Thought, His "forgetting" us would be our destruction. He is ever trying to enter into our consciousness to lead us to know and therefore to love Him. The piteous cry:

"Oh that I knew where I might find Him" is answered by: "If with all your hearts you truly seek Him, you shall surely find Him," and the response is no longer piteous: "As the hart pants after the water-brooks, so does my soul pant after Thee, oh God." This led to our next subject, "The Human Being," followed by "True Prayer," where we examined the means by which that "being" could influence the All-Loving. We saw that prayer was not efficacious for obtaining physical advantages, but was a natural process of communion with God; its efficacy depended upon the knowledge or nourishment which the person praying had acquired from the All-Loving, and the act of true prayer therefore became "Love in action." We also saw the enormous and far-reaching power which, under those conditions, true prayer must possess, however feeble the act may appear to us, but it must always be in a subjective and not an objective form.

We next considered the subject of Heaven and saw that it embraces the same idea as Eternal Life; it is not a locality but a state of being in "loving and knowing communion," and our real personality attains to that state when it has realized its oneness-with-the All-Loving.

In the next two chapters I compared the two methods adopted by Intellection and Introspection in the examination of Creation as a whole; and I then showed that Intellection, or rather its misuse, was responsible for the setting up of the Devil as an evil god, or malignant power in connection with that Divine and therefore perfect "Thought" which we call Creation. We saw that apart from our finite way of looking at phenomena, which necessitates that all our conceptions must be based upon "relativity," there is no such thing as evil, no such thing as carrying our sins with us to be expiated in the next world. Our real spiritual self has indeed been created by

the All-Loving in His own Spiritual Image, but it is we, with our limited modes of thought, who have created in our own physical image the illusion which we call the Devil and all his works."

In the next chapter we examined what I have called the "Physical Film," first by Intellection and then by Introspection, and we then tried to understand what the physical universe really means, how it came into existence, and with what material it had been built up. To grasp this we had to consider the known characteristics of the Ether; in doing this we went far beyond the reach of Intellection, but again we found that all difficulties of understanding disappeared at once when viewed from our Watch-Tower. In conclusion I referred to the "Secret of matter" which we are winning from Nature.

In the next two chapters I showed how the Soul or physical Ego, namely, the "I am" of our Self-consciousness, had its beginning in the child and was gradu-

ally built up into a great community, not unlike a nation, but having the advantage of absolute unity of action because every one of its millions of inhabitants is, as it were, connected by telephone with the head governmental department, and is in touch with every other inhabitant by means of what may be called a great central exchange.

In our next chapter I gave my reasons for suggesting that Life force is purely physical, namely, dependent upon matter for its existence, similar to Electricity, Light, Heat, Sound, the vibrations of a tuning-fork, and even the swing of a pendulum, in so much that all affect our senses of perception by means of vibrating impulses. The characteristics bv which we classify each of these forces, is its mode or rapidity of vibration. In each atom of matter, of which there are millions in the smallest visible particle, there are a number of small bodies, alike in all atoms, which I have called "cosmic bricks" because the whole universe has been built

up of them. These bodies are revolving round the centre of each atom at an enormous rate, and each of these, according to its distance from the centre, is necessarily giving out pulsations of a certain definite pitch; the lower pitches are perceived by our senses as Radiant Heat, Light, etc., but the highest when they impinge upon a special combination of matter constitute Life force. Pulsations in the air only affect the ear and become sound when they impinge on specially provided nerves in the tympanum, or cavities in the cochlea, which can respond sympathetically with those pulsations, and have no effect if they are vibrating beyond the range of those nerves; the same applies to pulsations in the Ether which only become visible as light when, between certain definite limits, they impinge on nerves, or cells containing certain compounds of matter, in the retina, which can absorb and vibrate in sympathy with those pulsations; so also it would appear that protein, especi-

ally in its most complex form chromatin, is able to respond sympathetically to those particular high frequencies which emanate from matter; with the result that the protoplasmic cell, which is built up of protein, then manifests the phenomenon of life. If now we realize that every animal or plant has its own special chemical compound of protein, differing from the compounds of all other species, and that the atoms composing that compound have each its fundamental note according to the element to which it belongs, we seem to see that every species of animal or plant has what may be called its own characteristic "Chord of life" and this, in process of development, regulates all the forms characteristic of that particular species, thus necessitating that the offspring must be similar to the parent. As all animals and plants have the same life force, their "Chords of life" may either be in harmony or discordant; and I used this line of argument for explaining how poisons act upon the

human frame and how by eliminating all discordant, or by introducing an elixir of harmonious substances, human life might be lengthened far beyond its present limit.

In the following chapter we examined the question of "Death." We saw that it was not introduced into this world by sin but was a perfectly natural process, common alike to all animals and plants; we saw that the fear of death, which had been introduced by civilization, was based upon quite erroneous ideas and doctrines as to its meaning in Creation. We saw that it was not a passing from life to death, from consciousness to unconsciousness; but was indeed an awakening from sleep, a throwing off all material scales from our eyes, so thatour real consciousness instead of being bound down and clouded over by illusions and shadows, awakes to its true life in the Reality of Being.

In all the foregoing investigations we have seen the importance of realizing how limited is the horizon possible to Intel-

lection, namely, how finite is our outlook upon even physical phenomena. We find ourselves, as it were, facing a high wall, extending infinitely to the right and left, which completely shuts us out from all knowledge of our surroundings except what we can gain by looking through a narrow, perpendicular slit, or cleft in that wall, of say a few inches in breadth. We saw in our chapter on Life that our sense organs are limited in their perceptions to a very small range of pulsations and, beyond that limited range, there is no possibility of our gaining any knowledge of phenomena. Half a century ago Sir William Hamilton very aptly likened the whole universe of the phenomenal to a polygon of a thousand or a hundred thousand sides or facets, namely, windows looking out upon nature; and to only three or four of these we may be so organically related by our senses or faculties that we can use them for gaining knowledge of our surroundings. Since that was written we have made dis-

coveries and invented instruments to supplement those senses, and have thus slightly enlarged our slit in the wall; but the advance has only helped us to appreciate still more fully how little we know of the wonders with which we are surrounded.

In the foregoing views from our Watch Tower I have often, for want of a better expression, used and shall still continue to use, the word "seeing," though that is not really applicable to our unlimited vision. As already pointed out, all phenomena are the materialization of the great instantaneous "Thought" and are therefore objective to the limited or physical, but they are subjective to the unlimited or Spiritual outlook, namely, to that of our real personality. Let us try and realize this more clearly. In this life we are looking only objectively, namely, on the outside of phenomena; but when we have cast off our physical clothing, with its limitations of time and space, matter will cease to be objective, we shall cease

to analyse its form; we shall be looking upon it from the unlimited or spiritual outlook, namely, subjectively, and shall know the meaning of phenomena as integral parts of the expression of thought and, by synthesizing these parts, we shall know the whole Truth. All consideration of time and space will have disappeared and with them the phenomenon of succession; cause and effect will be one fact. Let me illustrate this by a homely example: a great cannon placed on Dover cliff is fired and throws a ton weight of metal on to Calais green; we call the firing the cause of that mass of metal going over that distance and the effect is the destruction which follows; but in this case we are only taking an infinitesimally small part of the whole line of universal causation. Let us consider the agents by which this particular event has been accomplished. By Intellection, under conditions of time and space, we can only think of one thing at a time, a point followed by other points in succession; we

have to think of this event as an isolated occurrence and insist that the firing of the cannon, or the cause, comes before the destruction, or effect; but to understand the whole cause we must begin with the creation of the bricks of the universe; and watch the gradual building up, by evolution in the inorganic period, of the atom of the element iron, of which the cannon and projectile were formed; of the atoms of the elements sulphur, carbon and nitre, of which the powder was formed; and above all the building up by evolution, in the organic period, of the frame and brain of the human being, who had not only designed and constructed the cannon, but had discovered and made use of what may be called the passionate "love" which atoms of sulphur, carbon and nitre have for each other. When union is made possible these elements take possession of each other in so violent a fashion, that the force generated can actually be used by man for such stupendous feats as is comprised in hurl-

ing a ton weight of iron over a distance of twenty miles in the short space of twenty seconds. We with our outlook limited by time and space can only understand cause and effect as being in sequence; whereas from our Watch Tower, when these limitations are removed, we see that the twenty miles of distance and twenty seconds of duration of the projectile's flight have no existence; and when we take all causes and effects, combined in what we call all events from the beginning to the end of time, we recognize that there is no such thing as sequence, the whole of Creation is one single event contained in the Now.

When we have grasped what the foregoing really means, we are prepared to solve the difficulty, raised by Intellection, in the case of those whose Spiritual self has not been nourished in this life and can therefore have no part in the life hereafter. As in the case of a child in this life, who is so badly nourished physically that it dies in early youth, and can there-

fore have no existence in mature manhood, so, without knowledge of the Good, Beautiful and True, the real spiritual self is not nourished and, when the physical body dies, there is nothing left to have an existence hereafter; the case is similar to that of the lower animals and plants. But it is difficult for us, whose thoughts are based upon relativity, to understand where the line could be drawn, separating those who have formed a spiritual personality from those who have not; because our limited minds are forced to think of only one individual or class at a time and to compare it relatively with other individuals, just above and just below in spiritual excellence, the difference in either case being infinitesimal. Some may see an answer to this particular difficulty in that cryptic utterance, "To him that hath shall be given, but from him that hath not shall be taken even that which he hath."

The problem seems to be made even more difficult owing to its magnitude, if we cite the millions of children that, through

no fault of their own, are born and brought up in the slums of the earth surrounded by all kinds of vice and ignorance, and when we realize that they never have a chance of Spiritual growth; but the answer to the question "Will these have what is called life eternal?" is, I think, plainly in the negative; it is not a question as to whether they have had a chance or not, but whether, when the physical is discarded, there will be anything left; namely, has the Spiritual self been wakened and nourished sufficiently to have an existence at all in the spiritual life? The plea of those who profess to believe in reincarnation, is that those lost ones will be given another chance in a better environmont, but this is surely based upon ignorance of the whole scheme of Creation as laid before us in the phenomena of nature. If we go back to the origin of every human being, we find that only one germ, out of millions of brother germs from the same parent, is by accident able to grow up to be a man;

and yet every one of those millions of lost germs was alive and possessed of the numerous traits of character of not only the parent but of his ancestors for countless past generations; because, as already pointed out, that very germ has been handed down from the beginning of life on this globe, it is a protozoon which is propagated by division; and its descendant is therefore the selfsame germ as its parent, carrying by heredity his very character and even blemishes, if any, of his corporeal frame. Every one of those millions of lost germs had the potential of becoming a perfect human being with a spiritual personality; but like those in the slums they never had a chance of gaining that knowledge which only could give them eternal life. Nature is indeed, as we saw in the chapter on Life, very prodigal of her offspring; physical life seems held of no account in the scheme of Creation except for carrying on the Race and having now and then by accident, when circumstances are propitious, a chance of

becoming itself, or helping to weave, the earthly clothing of the spiritual children of the All-Loving.

Some of my readers may still want to try and grasp what is the minimum amount of nourishment necessary for constituting a spiritual personality, which can have an existence when the physical perishes; and perhaps the most consoling, and therefore satisfying thought for them, is the one I suggested at the end of the chapter on the Devil; I pointed out there that there was still hope even in the case of the greatest sinner, provided there was still some spark of goodness left in him. If we follow the same line of thought, and use finite expressions to describe the infinite, we seem to arrive at the conclusion that the intensity of happiness, namely, Eternal life, which will be experienced in the next world, will vary, with each individual, according to the amount of nourishment and, therefrom, the capability of the Spiritual self to realize, more or less vividly, its oneness-with-the All-

Loving. Perfect contentment or happiness necessitates a perfect adaptation and correspondence with the environment, namely, when that stage is reached where ideals and wishes can no longer be formed beyond the power to attain them. Such a state is impossible in this life, but will be attained when all limitations and therefore existence of shadows and negatives have disappeared; when knowledge is no more based upon relativity and the perfected spiritual personality of each one of us enters into "Reality of Being."

Let us try and carry this subject even one step forward, though to do so we may have to use some expressions similar to those used in former chapters.

In passing from the physical to the spiritual outlook, the self-consciousness of the physical ego,—which contrasts its present with its past, its limitations or imperfections with its ideals, its efforts to carry out its own desires with the inexorable Divine Will, its dealings with action and reaction,—disappears and its place is

taken by the consciousness (not self) of being perfected in loving and knowing communion with the Absolute.

In the future life, where time has no existence, there will be "Reality of Being" without "becoming" and intense activity without successive action. Intellection would have us insist that the opposite of activity or change is a state of rest, but from our Watch Tower we can see that this is one of the illusions created by all our thoughts being subservient to time limitations. In the spiritual life, though we shall be in a changeless state for what we may call all eternity, there can be nothing but intense activity carrying with it the perfect peace of fulfillment of all ideals. In the finite objective life we have "becoming" with its antithesis *rest*, but in the unlimited subjective life we have Reality of being and perfect activity under the form of "Love in action" with its antithesis perfect peace and perfect happiness. This can be better understood if we

remember that in the physical world all activity, whether change, motion or becoming, necessitates work done or force expended, it is objective to our senses; whereas in the spiritual all activity is subjective, namely, what we, in our finite way of expression, would call thought or result of volition. Thought to the Omniscient is not as with us, under time limitation, progressive and therefore imperfect, but is all contained in the Now and must be perfect because it comprises all knowledge. Rest in the physical world is a non-existence of activity, as it were a cessation of being, and is therefore one of our negative illusions; but, in the spiritual, peace and contentment are not the negative but the accompaniment of perfect activity. The activity we must therefore predicate to Reality of Being, and therefore to our own Spiritual personality, involves no motion; it is invariable and changeless; it is so perfectly in harmony with and adjusted to its environment, if we can use such a

term to omnipresence, that no self-consciousness could ever arise to make time a factor in its activity and thus beget change or becoming. This is one of the "Inconceivables," created by the finiteness of our outlook, because owing to our self-consciousness, under physical conditions, we cannot imagine anything having any possible existence outside of or apart from time and space; and these conditions, as we have already seen, make movement or change the very basis of action.

In conclusion, True Introspection is not using our mind or intellect, except perhaps in a symbolic or mystical sense, it is the realizing our one-ness-with the Omniscient which unshutters our window and opens up for us the vista of an unlimited spiritual outlook; we then cease to look at the outside of phenomena but grasp the messages they are meant to convey; we cease to look upon our surroundings objectively and understand them subjectively as expressed thoughts.

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objective woof of nature, the mists and illusions of everyday life, but may, as we have seen, even aspire to understand the meaning of those wonderful messages which the All-Loving is ever trying to communicate to us.

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