

THE MYSTERY
OF
LIFE AND MIND

With Special Reference to "THE WORLD OF LIFE,"

By A. R. WALLACE, F.R.S., Etc.

BY THE

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NOTE.

THIS paper does not profess to be more than a compilation drawn from various sources ; and for a fuller discussion of the subjects of which it treats references may be made to "The World of Life," by *A. R. Wallace, F.R.S.*, and also to the following papers in the Transactions of the Victoria Institute.

- "The Nature of Life," by *Prof. L. S. Beale, F.R.S.*,
Vol. 32, T.V.I.
"On Vitality," *Ditto* Vol. 33, ,,
"On the Unseen Life of our World, &c." *Ditto* Vol. 35, ,,
"The Living God of Living Nature." *Ditto* Vol. 35, ,,
"The Genesis of Nature," by the *Rev. G. F. Whidborne, F.G.S.*
Vol. 33.
"The Being of God," *The Ven. Archdeacon Sinclair*, Vol. 36.
"The Preparation of the Earth for Man's abode,"
Prof. L. Lobley, F.G.S., Vol. 38.

Also to

- "The Riddle of the Universe," *Prof. Hæckel*.
"The Life of the Universe," *Prof. S. Arrhenius*.
"L'Evolution Creatrice," *Prof. H. Bergson*.
"The Origin of Species," *Darwin*.

The writer trusts that this short statement of various views, and the conclusions reached upon a great subject, will have the more weight in that they are not merely the pronouncement of a single individual who can claim no special authority to write as an expert.

ANALYSIS.



I. INTRODUCTION.—Man as a rational being must from his earliest existence have questioned Nature as to its meaning.

(b) We to-day are asking similar questions, and seeking an answer to "the Riddle of the Universe" and to its greatest problem "What is Life?"

(c) The Materialistic tendency of much Scientific thought.

II. Three ways of accounting for the existence of things.

1—Chance. 2—Necessity. 3—Design.

(a) Chance or Accident an unreasonable solution.

(b) Necessity equally irrational.

(c) The Atheistic teaching of Hæckel and others.

(d) The theory of Design; the Universe the "Externalization of the Thought of God" the only reasonable explanation of the Mysteries of Nature.

(e) All Nature "a Manifestation of Creative Power, a Directive Mind, and an Ultimate Purpose."

III. A. R. Wallace's conclusion, viz., The only adequate Cause of all, "A Ruling and Creative Power; and Man, the summit of a fore-ordained Evolution, could not as an intellectual and moral being have been the result of Natural selection."

IV. "The World of Life."

(a) Two distinct states of Matter: The Living and the non-living.

V. The question "What is Life?"

(a) Wallace's definition, insufficient, this describes its manifestation, not what Life is.

(b) No Chemical analysis can discover it.

(c) Hæckel, Arrhenius and others look on Life as the product of Matter. Even Consciousness is relegated to the domain of Physics, etc.

(d) Hæckel's admission of a Psychic side to Matter, and speaks of Matter, and Spirit, or Thinking Substance, of "Unconscious atoms yet possessed of Sensation and Will!"
An amazing contradiction.

(e) Prof. L. Beale's definition of Life-power as distinct from all material properties and Forces.

VI. The seat of Vital Action.

- (a) Structureless living matter, between which and all Physical agencies and forces, the difference is absolute.
- (b) Life cannot have originated spontaneously.

VII. The origin of Man an evidence of Infinite Power and Purpose.

VIII.

- (a) The Marvel and Mystery of Living Matter, The Bioplasts.
- (b) Bioplasts and their work manifest Directive Force.
- (c) What Power gives the living Protoplasm Life, and organized it?
- (d) The processes by which the Living body is built up, unintelligible without the assumption of a Directive Organizing Power.
- (e) An eternal Material Universe an impossibility.
- (f) Life depends upon God, it is the cause of Organization, therefore antecedent to it.
- (g) Must be connected with Spirit and Thought.
- (h) The cause of Life independent of the Organism.

IX.

- (a) The theory of Evolution not Atheistic, but the very reverse.
- (b) Difficulties unsolved by Evolutionists.

X. Wallace's conclusions as to the Adaptation of the Earth for Man.

- (a) Evidences of Adaptation.
- (b) They postulate not only Force but Guidance.
- (c) Mind and Purpose behind all Natural Phenomena.
- (d) The Ultimate Purpose, "the development of Mankind for an enduring Spiritual existence."
- (e) The Material World subserves Man's progress.

XI. Man a Spiritual being, and differs not only in degree but fundamentally from the lower animals.

XII. Wallace's view as the Manner of God's working.

- (a) The existence of Grades of Spiritual beings above Man (*Angels*).
- (b) May not God have created the Universe through Angelic agency?
- (c) The Cosmos a Manifestation of God, but through the agency of many grades of Ministering Angels.
- (d) The teaching of the Bible upon the Ministry of Angels.
- (e) The Infinite God the Ultimate Cause.

CONCLUSION,

The Faith of the Ancient World.

The Creed of the early Egyptians.

"God is the End and the Beginning of all things."

A true Faith which is the answer to the Unbelief of to-day.

LIFE AND MIND.

I.

AS soon as Man's intellect was awakened, and he became capable of abstract thought, his Mind must have been turned towards something more than the mere supply of his animal wants and desires; it must have been affected by those mysteries of nature which were everywhere about him. He could not have failed to notice the wonderful variety of both animate and inanimate existences; the strange differences between the Living and the Non-living, and above all between himself and all other living beings; and he could hardly have failed to speculate as to the meaning of all these things; What was their origin, and their purpose?

(b) We to-day are still engaged with the same or similar questions. The modern man of Science and the Philosopher find themselves confronted by the same great mysteries, and are engaged, even as were the speculators of the by-gone ages, in seeking for a solution of "The Riddle of the Universe" and of its greatest problem, the difference between living and dead matter, the question What is Life? Is it a principle or an agency like the so-called "physical forces," or as they are more generally termed "forms of energy?" Can we compare Life to Heat, to Light, to Electricity, to Magnetism, to Chemical or to Mechanical action?

(c) During the past century there has been a tendency of Scientific thought towards a purely physical explanation of all Life, and Vital Action; even Thought, the operation of the Human Mind, has been included: and it has been suggested that Life has arisen in Non-living Matter, in obedience to changeless and resistless physical laws, bringing about, amidst the clash of moving atoms, the Evolution of Life, Thought, Emotion and Will; or as an alternative that the power of Life is immanent in all matter; Will, Consciousness and Intellectual actions being but forms or modes of matter and motion. The Materialists tells us that "Matter itself is equal to do all that is implied in the doctrine of Final Causes, that Matter contains a self-originated something, which is

called 'Natural Law,' and is possessed of Material Energy, an in-working quality, which, independently, of non-material guidance, has realised all living forms which ever were or are now on the earth or in the sea, Life itself therefore being regarded as one of the qualities of Matter."*

II. Now there are three ways of accounting for the existence of things as they are; Either they are the result of 1, Chance or Accident, or 2, they are of Necessity, or in the 3rd place they are of Design, that is are the Work of Mind.

(a) That the Universe is the work of Chance or Accident is too wild a theory to be for a moment accepted by any reasonable being. That a "fortuitous concourse of atoms" could have evolved the marvellous Order of Nature, and have given rise, not only to that Order, not only even to Organization and Life, but to all the phenomena of rational Thought, Consciousness, and Will, is surely inconceivable.

(b) But equally inconceivable, it will seem to many, if not to all, is the theory that all things are of necessity what they (c) are, and that the Universe never had a beginning: Yet this is the teaching of HÆCKEL and ARRHENIUS: the latter says "The Universe in its essence has always been what it is now. Matter, Energy, and Life have only varied as to shape and position in Space," and this Atheistical view is upheld by HÆCKEL, who tells us that "Matter and Force are different aspects or attributes of one and the self-same thing, which he calls 'Substance,' Substance being, he supposes, uncreated and eternal; and all things are imagined to have evolved through the working of forces belonging to eternal matter. All individual forms are regarded as but transitory accidents, or modes of "Substance."

(d) The alternative to these theories is that the whole universe, in all its aspects, is the work of a Designing Mind, and is, as it has been strikingly expressed, "the Externalization of the Thought of God." "All the facts and phenomena of natural and physical science are but as the steps of a ladder planted on earth, but reaching unto the Presence of Him who has made all."*

* Prof. Duns.

(e) This is the only rational explanation of the great Mysteries of Nature, and it is the one that has commended itself not only to Theologians, but to many of the greatest Scientific thinkers and Philosophers, who have found themselves compelled to see, the more deeply they have studied the universe, that from beginning to end, from the primordial electrons of the Atom to the circling Planet, from the structureless Bioplast to Man, through all, in all, there is, as WALLACE expresses it with no uncertain voice. "A Manifestation of Creative Power, a Directive Mind, and an Ultimate Purpose."

III. ALFRED RUSSELL WALLACE, one of the most eminent leaders of scientific thought, at the close of a long life spent in the Study of Nature, has told us that this is his deliberate judgment, the outcome of his researches in that "World of Life" to which he had devoted himself. Another great man, LORD KELVIN, speaks to us as clearly, he says "Overpoweringly strong proofs of Intelligent and Benevolent Design lie all around us, and if ever perplexities, whether Metaphysical or Scientific, turn us away from these for a time, they come back upon us with irresistible force, showing to us through Nature the influence of a free-will, and teaching us that all living beings depend on one ever-acting Creator and Ruler."*

We will now turn our attention to some of the evidence which has led WALLACE and other eminent Students of Nature to hold these views, and to conclude that the only adequate cause of all that we see around us is "A Ruling and Creative Power to which the Universe is due; and also that Man, the summit of a fore-ordained evolution, as an intellectual and moral being, could not have been the result of Natural Selection. The only adequate cause of all is to be found in the Universe of Spirit—in Mind.

IV. Let us look at that "World of Life" of which WALLACE (a) writes. We must all of us agree that in the universe there are two distinct states of Matter, "the Living and the Non-living. Two states of Nature, one living of Power, the other non-living of Matter only. One temporary, ever changing, the other permanent and indestructible—One, we may say governed by the Living God, the other also under the will of God, but subject to the dominion of non-living Law.

* Lord Kelvin, T.V.I., Vol. 31.

(b) V. What then is Life? WALLACE has defined it as "that Power which, primarily from air and water, and the substances dissolved therein, builds up organized structures, which are preserved in a continuous state of decay and repair, by the internal circulation of fluids and gases. They reproduce their life, grow from youth to age, die, and decompose into their constituent elements, and so form a continuous series of similar individuals." Yet this is but to tell us of the Manifestation of Life, not what Life in itself is. No analysis of the living substance can discover it,—the substance may be subjected to chemical analysis, but Life will be no longer present, it will have fled with the death brought about by the attempt to find it; and though the Chemist can tell us all about the constitution of the dead matter, and about the various elements of which it is built up, he will not have discovered what Life is. Prof. LIONEL BEALE says "there exists in all living a Power of making definite arrangements, a governing, a guiding power,—a power which compels component material particles (atoms) to take certain definite positions with respect to one another, but which operates only in living matter,— a Power which somehow exercises in life a control over the materials, which control is lost the moment the matter ceases to live." * This Power is a factor which acts on matter, but it does not come from Matter. It ceases to act when living matter dies." * "Life is the name we give to the determining and Directing Power that moulds the protoplasms by means of the forces of Nature to certain definite ends. Life thus stands revealed to us as Mind, and this Mind the Mind of (c) God," † HÆCKEL and those of his school of thought look upon life as the product somehow of Matter, acted upon by chemical, electric, or other Physical forces, and regard Consciousness itself as but one of the phenomena of Physics and (d) Chemistry. Yet HÆCKEL himself is driven to the thought that there must be in what he calls "Substance," beyond the merely material, something of a psychic character; for he says "the two fundamental forms of substance, Ponderable Matter and Ether, are not dead, and only moved by extrinsic force, but they are endowed with sensation and will; and Matter cannot exist and be operative without Spirit, nor Spirit without Matter," and so his final conclusion is that "Matter, or infinitely extended Substance, and Spirit (or energy) or Sensitive

* "Vitality." T.V.I., Vol. 33.

† Prof. A. T. Schofield, T.V.I., Vol. 29.

and thinking Substance, are the two fundamental attributes or properties of the all-embracing essence of the world, the Universal Substance; and so he talks of Unconscious Atoms as being possessed of Sensation and Will. As WALLACE well says, he holds to the amazing contradiction that the thinking, infinite Substance is itself unconscious, and that all we see in Nature is the result of Chance; but as PROF. J. H. BARNARD well says "If human language has any meaning at all, Intelligence implies Consciousness. If there be a purpose in any process, it must be a purpose *in* and *for* some Mind. There is no conceivable sense of the word Intelligence or Design, which can exclude Consciousness; an unconscious intelligence is as much a contradiction in terms as a round square."*

(e) "Life power," says PROF. L. BEALE, is distinct from all material properties or processes, all the laws of matter are compensated or suspended, as long as Matter is alive, but come into operation the instant the living matter ceases to live: and the distinction between Life and Non-life all through our world is absolute; no Chemist can explain the difference between one particle of living matter, and the same particle when life has ceased." "There is good reason for concluding that every form of *non-living* matter might have existed for infinite ages, and under any number of conceivable physical conditions, without the most minute speck of the simplest *living* being evolved."

There are vast differences pointed out between Life and the physical forces; we can measure these by their manifestations. We cannot so measure Life; we can measure Heat, Electricity, Magnetism, Mechanical Power, we cannot thus measure Life. We can convert the modes of energy into each other, as we do with our steam engines, our electric light and power stations, but who can transform any of these into Life? We can destroy Life, but we cannot convert it †

LORD KELVIN says "Mathematics and Dynamics fail us when we contemplate the earth, fitted for life, but lifeless, and try to imagine the commencement of life upon it. This certainly did not take place by any action of Chemistry, or

* Dr. J. H. Barnard, T.V.I.f Vol. 26.

† "We cannot convert Thought into exact quantities, equivalents of mechanical force.—J. Frieke.

Electricity, or crystalline grouping of molecules under the influence of Force, or by any possible kind of fortuitous concurrence of atoms. We must pause face to face with the mystery and miracles of the creation of living creatures." *

VI. "Structureless living matter is the only seat of action (a) of that factor Life, between which and all energy, forces and physical agencies the difference is absolute. There is no (b) gradation from one condition to another. This wonderful Life-power cannot have sprung up spontaneously on the earth; and WALLACE well says in a recently written letter, "an honest and unswerving scrutiny of Nature forces upon the mind this certain truth, that at some period of the earth's history, there was an act of Creation, a giving to the earth of something which before it had not possessed, and from that gift, the gift of Life, has come the infinite and wonderful population of living forms." †

"No rational explanation" says the REV. G. F. WHIDBORNE, of the origin of primæval protoplasm has ever been given, except the creative action of an Outside Power. Still less is any rational explanation of the endowment of primæval protoplasm with evolutionary capacity conceivable, except by the action of an Outside Power." ‡

"Life-power has been handed down from living particle to non-living particle through the ages, without a break, though modified now and again by the influences of external conditions, as well as in obedience to the original capacity of the power with which it was endowed at the time of its creation." How can we help seeing the evidence of a Designing Mind in this?

VII. Look too at Man himself: "the living matter of the embryo of Man and that of animals is "we are told," undistinguishable the one from the other; and yet in each we see from the first development of the germ, that it must have been endowed with its own special properties, according to which it became Man, or brute-beast, or plant; and how can we fail to see the unceasing operation of Infinite Power through the whole world of Life, enabling the living particles

* T.V.I., Vol. 31.

† Letter to the "New York World," 1910.

‡ T.V.I., Vol. 33.

to grow and produce others; the Vital powers of each series being different from and more advanced than those of their predecessors." Again, look at the marvels wrapped up in each minute particle. "Living Matter consists of innumerable minute structureless particles, called Bioplasts, which are to be seen in the tissues of living creatures, and varying in size, and proximity to one another in different species. As we have said, no living particle of Matter can be chemically analyzed, "formed matter is *no longer living*, cartilage, fibrous tissues, hair, nail, horn, once formed, are dead and nearly dry; living matter is invariably structureless and colourless."

VIII. "No one can tell from any given particle what will be (a) the structure or properties of the tissues and substances to be formed by it." But how marvellous it is that these apparently homogeneous Bioplasts should be so constituted that each should do its own special work in building up the organism; that some should produce matter of one kind, others matter of another kind.—Some build up Muscle, others Nerves and Brain, some are engaged in forming bone, others hair or (b) feathers or nails; each has its own special work. Is all this mere Chance, the fortuitous concourse of the Atoms? Must there not be a Creating, Directing Force, determining what shall be the different forms of Bioplasmic life, and which has caused those myriads of cells to work harmoniously together, (c) each doing its own particular work? "What Power" asks WALLACE, "gave the living Protoplasm Life? What Power determines the Cell-mass to this or other well-defined shapes? Who or What guides or determines the Atoms of the Protoplasmic molecules into new combinations chemically, and new structures mechanically, which all the Chemists and Physicists of the World are powerless to produce, even when they have the ready-formed Protoplasm given them to start with? Yet all these marvellous processes take place in Nature, and do build up the living body of each organism."

(d) "This orderly process is," says WALLACE, "quite unintelligible without some Directive Organizing Power constantly at work in, or upon every chemical atom, or physical molecule of the whole structure, as one after another they are brought to their places, and built in, as it were, to the structure of every tissue of every organ, as it takes form and substance in the fabric of the living, moving, and in the case of animals, sensitive creation. What we must assume is, not merely

a Force, but some agency which can and does so apply and guide, direct and co-ordinate a great variety of forces, mechanical, chemical, and vital, so as to build up that infinitely complex machine, the Living Organism. What we absolutely require, and must postulate is a Mind far higher, greater, more powerful than any of the fragmentary minds we see around us,—a mind not only adequate to direct and regulate all the forces at work in living organisms, but, which is itself the source of all those forces and energies, as well as of the more fundamental forces of the whole material Universe.* Without this, Life, as we know is altogether unthinkable, an eternal material Universe under blind laws is an impossibility. Everything but the Absolute and Unconditioned must have had a beginning." A beginning for all finite things in time is demonstrable, and this beginning implies an antecedent cause, and it is impossible to conceive of that cause as other than an all-pervading Mind, which (f) both dominates and transcends Matter." "Life," says BEALE, "depends not upon any forces of non-living Nature, but upon the Almighty; and there is not a particle of living matter of any kind which can be explained except on the view that it depends upon God."

(g) PROF. HUXLEY, with all his Agnosticism felt compelled to acknowledge that "Life is the cause of Organization," if so it must be antecedent to it, and can only be conceived as "connected with Spirit, and Thought,—with the cause of the directive energy everywhere seen in the growth of living (h) things." "If Life is the Cause, not the Consequence of Organization, we may believe that Mind is the cause not the consequence of brain-development. The first implies that there is a Cause of Life, independent of the Organism through which it is manifested, and this cause must be eternal.—and if Eternal Life is the Cause of Life—so, it is rightly said, Eternal Mind is the Cause of Mind." We cannot then reasonably explain the phenomena and development of Life, without postulating some Guiding Power over the forces which have brought about the result.

IX. We cannot now discuss, at any great length, the question as to how the Almighty Mind and Will brought about the existing forms of the natural world, or what part Evolution and Natural Selection may have played in the ordering

* "The World of Life."—Wallace.

of living beings; but we may observe in passing that (a) even extreme Evolution and Natural Selection, that is the tracing back of existing nature to one Protoplasm, could it be proved to have taken place, would in no way affect our Religious Faith, for as the REV. J. F. WHIDBORNE well says, "It is so utterly impossible that it could have been the Life-history of Nature as we now see it, except it were altogether under the guidance of a Governing Power outside itself, that it almost more predicates Theism, than does any other method by which it is conceivable that the present state of Nature could have been effected." If then Evolution has brought about the present order of Nature, it would not relegate all to Chance; the wonderful adaptation to environment, the fitness of special organs for special purposes, which are seen everywhere, and which, by whatever means or process of change these may have been brought into existence, are clear evidences of Thought, and therefore of Design. There are some who may sneer at what they term the "Carpenter Theory" of the Universe, but is that which it implies the less true? If we can see the adaptation of means to an end in Man's work, we do not say "O, that is a mere matter of Chance," but we at once recognise underlying the complicated machine, or the simple tool, the previously-existing plan, the evidence in them of a set Purpose, and from this we rightly assume that a Thinking Mind, a Personal Thought, not blind unreasoning forces, must have been the ultimate cause of what we see. Does it not stand to reason that you cannot bring out of a thing that which has not been first placed in it? in other words "you cannot *evolve* that which was not first *involved*."

Say then that all the complicated and varied phenomena of nature around us, that we ourselves, so far as our animal nature is concerned, are the outcome of the primordial "structureless germs," the Atoms; if we are what we are, and if other things are what they are, it is because all that we and they have become, was wrapped up in a germ, was in it in the beginning, was involved by One who planned all from the first, for all that we see implies Thought, Intelligence and Design, and therefore a Personal God.

(b) That there is much in Nature which seems to support the Theory of Evolution must, I think, be admitted, and it is a useful working hypothesis, still it is as yet only a theory,

and there are many difficulties to be met, and problems to be faced, which no Theory of Evolution can overcome or solve. Amongst these we may note those formulated by Du Bois Raymond.

1. The Nature of Matter and Force.
2. The Origin of Motion.
3. The Origin of Life.
4. The Evidence of Design in Nature.
5. The Origin of Sensation and Consciousness.
6. Logical Thought and Language.
7. The Freedom of the Will.

WALLACE has much to say on some of these matters and he himself points to things which no Evolution or Natural Selection can explain, for instance, he says "Evolution can explain a great deal, but the origin of a feather," "the masterpiece of Nature," he calls it, "and its growth, this is beyond our comprehension, certainly beyond the power of Accident to achieve." Again "the scales on the wing of a moth have no explanation in Evolution, they belong to Beauty, and Beauty is a Spiritual Mystery. What is the origin of Beauty? Evolution cannot explain. Sane and honest Evolution does not concern itself at all with beginnings, it merely follows a few links in a fairly obvious chain, as to the chain itself, Evolution has nothing to say." *

X. In connection with the evidence of Design and Purpose in Nature we are asked to notice the wonderful adaptation of the Earth during the successive Geological ages, for the special forms of Life that have been developed: and when we consider some of the leading features of this Adaptation, we can scarcely fail to see how utterly inconsistent they are with any Chance or Mechanical theory of the Universe; how evidently they Manifest a Designing Mind.

(a) Look for a moment at some of these facts of environment which have been noted, and which point so clearly to Purposeful adaptation. What do we see?

1. "Such a supply of Solar Heat and Light as is compatible with the existence of Organized Life."
2. "A wonderfully constituted Atmosphere, suited to Terrestrial Life."

* Letter to the "New York World."

3. "An Average Rainfall."
4. "The provision of Nutritive Material in the earth's crust for the requirements of living existences, both Plants and Animals."
5. "The remarkable constitution of Water."
6. "The Inter-relation of Plants and Animals, as to Nutrition and Respiration."
7. "The Seasons, and the alternation of Day and Night."
8. "The Variety of Soil and Climate."
9. "The varying Contour of Land and Sea."
10. "The immediate preparation for Man in the Tertiary Ages, with its complete change of Plant and Animal Life."*

(b) These are striking facts, and we must surely see that they could not be merely accidental or undesigned, and WALLACE well says :

"If all Life-development—all Organic forces—are due to Mind-Action, we must postulate not only Forces, but Guidance, not only such self-acting agencies as are involved in Natural Selection and Adaptation through the survival of the fittest; although inanimate effects, no less than animate must have a Cause, but that far higher Mentality which foresees all possible results of the Constitution of our Cosmos; that Constitution which, in all its complexity of Structure, and of duly co-ordinated Forces, acting continuously through Æons of time has culminated in the present result."

(c) "Beyond all the phenomena of Nature, and their immediate Causes and Laws, there is Mind and Purpose, and the Ultimate Purpose is, so far as we can see, the development of Mankind for an enduring Spiritual Existence." "Man is the crowning product, the only being" it is truly said "who can appreciate the hidden forces and motions everywhere at work, and can deduce from them a Supreme and Over-ruling Mind as their Necessary Cause. This is enforced by such facts as the infinite number and variety of living and even non-living products, which serve man's purposes, and his alone; supplying his material wants, gratifying his higher tastes, rendering possible his advance in Art and Science, the highest proofs of his superiority to the brutes."

(d) For this it is that "the Material World supplies all possible aids it can give for the training and education of Man's higher intellectual, moral, and æsthetic Nature; and we may look on our Universe in all its parts, and during its whole existence, as slowly but surely marching onwards to a predestined end." So "If there is a Ruling Creative Power to which the existence of our Cosmos is due, and if Man, if we, are its one and unique highest outcome, able to understand and to make use of the forces and products of Nature, in a way that no other animal has been able to do, and if further, there is any reasonable probability of a Continuous Life for us, in which we may still further develop that higher Spiritual Nature which (e) we possess, then we have a perfect right, on logical and Scientific grounds, to see in the infinitely varied products of the Animal and Vegetable Kingdoms, which we alone can, and do make use of, a preparation for ourselves, to assist in our Mental development, and to fit us for a progressively higher state of existence as Spiritual beings."* And surely (XI) we are Spiritual beings, not merely animals; as the Rev. G. F. WHIDBORNE truly says "the Material Organism is after all not the whole animal. The organs are not the senses which they habilitate, and by which they are worked; and the organs are for the senses, not the senses for the organs. The brain does not evolve talent, but talent evolves the brain." PROF. H. BERGSON in his striking work "L'Évolution Créatrice" dwells on this fact, he says he believes that "the Mind is distinct from the brain, there is a connection between a state of consciousness and the brain, so also there is between a coat and the nail on which it hangs, but does the shape of the nail give us the shape of the coat? No more then, we may conclude, because the physical fact is hung on a cerebral state that there is any parallelism between the two series physical and psychological. The Psychical is much wider than the Cerebral."†

XI. WALLACE himself, evolutionist as he is, holds firmly to the essential difference between Man and the lower animals, he says that "it is altogether beyond his comprehension how any Student of any part of the Universe can declare, as so many do, that there is only a difference of degree between himself and the rest of the Animal world. I hold" he again says "that there was a subsequent act of Creation, a giving to Man,

* Wallace "The World of Life."

† See note at the end."

when he had emerged from his Ape-like ancestry, of a Spirit or Soul. Nothing in Evolution can account for the Soul of Man, the difference between Man and the other animals is unbridgeable, the Soul was a separate Creation." †

ST. GEORGE MIVART tells us that "we ought utterly to reject the conception that mere anatomy by itself can have any decisive bearing on the question as to Man's nature and being as a whole. To solve this question recourse must be had to other studies, *i.e.* to Philosophy, and especially to that branch of it which occupies itself with Mental phenomena—Psychology."

We have now seen that it has been upon no light grounds that WALLACE, and many other eminent Students of Nature, have been led to the conclusion that the Universe could not (XII) have come into being, nor existed, as it has done, without an Intelligent Cause. WALLACE believes in an Infinite God; but in addition to this he has propounded in his latest work "The World of Life," a view as to the manner of God's working, which may seem to many, one which is both novel and somewhat startling.

(a) Whilst forced, as he tells us he is, by the fact that our Earth has developed Life, and Mind, and ourselves, to the assumption of an Infinite God, he thinks that "the Organizing Mind which actually carries out the development of the Life-world, need not be infinite in any of its attributes. His idea is that "the vast, the infinite chasm between ourselves and the Deity is to some extent occupied by an almost infinite series of grades of intelligent beings, with powers and duties akin to our own, but far greater; and that there is thus a gradual ascent from Man, upward and onward, through an almost endless legion of these beings to the First Cause; through Him these endless beings act and achieve, but He Himself may have no actual contact with our earth." "Each successive grade having" he thinks "higher and higher powers in regard to the origination, the development, and the control (b) of the Universe; and that there may have been a vast system of Co-operation of such grades of being, from a very high grade of power and intelligence, down to those unconscious or almost unconscious 'Cell-souls' posited by HÆCKEL." He

† "Mathematics alone are sufficient to prove in Man the possession of a faculty nonexistent in other creatures."

says "he can conceive that God foreseeing and determining the broad outlines of a Universe, which would in due course, and with effective Guidance, produce the required result, might have impressed a sufficient number of His highest Angels to create by their will-power the primal Universe of Ether, with all those inherent properties and forces, necessary for what was to follow. The next Subordinate Association of Angels would so act upon the Ether as to develop from it the various Elements of Matter, which under the influence of such Laws and Forces as Gravitation, Heat and Electricity, would thence-forth begin to form those vast systems of Nebulæ and Suns, which constitute our Stellar Universe. And then we may imagine these hosts of Angels watching the development of this great system, for such millions of ages as would be required for the full development of a Life-world from Amœba to man. The Spirit-workers would on this earth, when it had reached a suitable condition, begin that process of Organization, which implies Life as its Cause."

(c) WALLACE thinks that this conception of delegated powers is "less improbable than that the Infinite Deity, not only designed the whole of the Cosmos, but that He Himself alone is the consciously acting power in every cell of every living thing that is, or ever has been upon the Earth. And whilst the vast Whole is a Manifestation of His Power, perhaps of His very Self, yet it is so by the Agency of His Ministering Angels, through many descending grades of Power, of Knowledge, and Wisdom, Infinite Grades of influence of higher beings upon lower; and that this vast and wonderful Universe, with its almost infinite variety of forms, motions, and re-actions of part upon part, from Suns and Systems, up to Plant-life, Animal-life, and the Human living Soul, has ever required, and still requires the continuous co-ordinated energy of myriads of such Intelligencies, and Man, himself at his best, a little lower than the Angels, is, like them, destined to a permanent progressive existence in a World of Spirit." *

(d) To whatever extent any may be disposed to accept or reject these views upon Creation, we must all of us admit, if we do not set aside the teaching of the Holy Scriptures, that there are in the Universe Spiritual Intelligencies besides Man; Beings over and over again referred to in the Bible; and we

are there taught that by God's appointment they have special duties and work to perform in connection with this World and with us Men.

Our Lord Himself speaks to us in no uncertain terms of the Ministry of Angels, and of the interest they take in Human life.

Both in the Old Testament and in the New, we are told how God has made, and still makes use of Angels in connection with the control of Physical forces, and specially so in regard to their actions on Man. The Angelic Powers who kept the Gates of Paradise were the fore-runners of those who executed the judgments of God upon the cities of the Plain, and upon the first-born of Egypt, and long afterwards smote Jerusalem with the flaming sword of Pestilence; whilst they also guarded, guided and helped God's faithful servants, from the days of the Patriarchs to those of the Apostles.

The Apocalypse seems to tell us that in some way the physical forces at work in the World may be under the control of Angelic powers; and mysterious, even visionary as it may appear to us, there may be a great and literal truth underlying those words which speak of the "Angel of the Waters," of the one who has power over the Sea, of those who pour out the vials of God's wrath, and who exercise mighty power over the elements. It cannot therefore be thought absolutely incredible that the Almighty God may even have made use of His Angels, of those Spiritual Powers, which we know exist, in bringing about the execution of His Purpose and Design in the Creation of the Universe.

(e) But however this may be, the Infinite God must ever be acknowledged as the One Ultimate Cause, Whose Will alone created existence, the Whole Universe of Matter, the Whole realm of Mind and Spirit, whether manifested in the highest Angel, or in Man, whether found in the non-living elements of Matter or in "The World of Life." And as ARCHDEACON SINCLAIR has well expressed it, "Since the day when in its earliest cradle the Human race first meditated on the Riddle of Existence, it has been the province of a well-grounded Faith, not merely to believe in God, but to hold devout Communion with Him, and to learn that He is not only Power, but Light, not only Light, but Love."

CONCLUSION.

In the dim and distant past there were those in so-called Heathen lands whose Faith might well put to shame the Unbelief of to-day. It is not only to the Bible that we may look for the proof of this assertion; we may turn to an ancient Egyptian Papyrus, one of the oldest writings in the world, written, we are told, some thousand years before Abraham was called from Ur of the Chaldees. In the tomb of an Egyptian Priest, Ahabanuk, was found a copy of a book of prayers, in this we may read these sublime words, the Creed of the old Egyptian.

“There is a Most Holy One, the Creator of the fulness of the Earth, A Ruler of Days; He is the God of Gods, The Exalted Maker of the Stars, and of the Heavenly Hosts, which are praising Him above our head.

The Creator of the exalted race of mighty Princes and Governors who sit in judgment, who condemn the wicked. He is the Ruler of the World. The Light which convicts the evil doer. The Judge of every deed. The Preserver of the Laws. He is the Light, with Him is no Night. He dwells in the exalted land of Light. In Him is joined together the Glory of the Sun, and the Glory of the King of the World. The Most Holy One lives. He seeth as ye see, He heareth as ye hear. He standeth as ye stand. He sitteth as ye sit.

Let the Lord God be exalted in His Holy Temple, and be worshipped on bended knees. For He is the End and the Beginning of all things.”*

This is indeed a true Faith. And “it is Faith which tells us that the Eternal is Mind and not merely Force, Love and not merely Mind, and which raises us Men above the brute, and brings to maturity within us the Life for which we were intended.”

* “The Being of God.” Archdeacon Sinclair, T.V.I., Vol. xxxvi.



NOTE.



* With regard to the Brain and Intelligence PROF. H. BERGSON in his work "L'Évolution Créatrice," writes :

"Certes un psycho-physiologiste qui affirme l'équivalence exacte de l'état cérébral et de l'état psychologique, qui se représente la possibilité pour quelque intelligence surhumaine, de lire dans le cerveau ce qui se passe dans la Conscience, se croit bien loin des Metaphysiciens du XVII^e Siècle, et très près de l'expérience. Pourtant l'expérience ne nous dit rien de semblable. Elle nous montre l'interdépendance du physique et du moral, la nécessité d'un certain substratum cérébral pour l'état psychologique, rien de plus.

De ce qu'un terme est solidaire d'un autre terme, il ne suit pas qu'il-y-ait équivalence entre les deux. Parce qu'un certain écrou est nécessaire à une certaine machine, parce que la Machine fonctionne tant on laisse l'écrou et s'arrête quand on l'enlève on ne dira pas que l'écrou soit l'équivalent de la Machine. Il faudrait, pour que la correspondance fût équivalence qu'à une partie quelconque de la machine correspondît une partie déterminée de l'écrou, comme dans une traduction littérale où chaque chapitre rend un chapitre, chaque phrase une phrase, chaque mot un mot. Or la relation du cerveau à la Conscience paraît être tout autre chose,—et semble bien indiquer que la relation de l'un à l'autre est précisément celle de la Machine à l'écrou."

"L'Évolution Créatrice." p. 383.