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The Evangelical Quarterly

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MIRACLES AND THE LAWS OF NATURE

THERE is among all peoples a desire which seems to be inherent in the human mind, to *explain* what we see around us. What are the heavenly bodies, what causes the rain and the lightning, how did plants and animals originate? Such questions as these and a thousand more, are the problems amongst the older peoples who were closer to nature than we now are; and the most puzzling inquiries about the nature of things, are among the first questionings of children. This desire to explain, is the basis of much of the mythology of the ancients, which deals largely with how and why things are as we find them. In modern times, science has endeavoured to offer more reasonable explanations for the causes of things. Yet if we were to take an extreme view, and refuse to make use of every modern appliance that we cannot completely explain, we should be cut off from many conveniences. Very few people know much about the electrical principles involved in the telephone or the radio; and even for scientists, the truth is that we are using many appliances that we do not fully understand. It would be equally unreasonable, therefore, to make the sweeping statement that we will not believe in any miracle which we cannot fully explain by the ordinary laws of nature; especially when the miracles in the Bible are always set before us as having a rational purpose in view.

One of the most prominent features in the progress of science in recent years, is the discarding of theories and explanations that were formerly accepted. We need therefore to be cautious, because explanations may be based on a supposition which is more or less unfounded. A theory in science is quite allowable however; indeed, it would be difficult to make any investigation without some theory to work upon. Yet any theory must be regarded as only provisional; for science by its progress is not gradually finding explanations for all that has come to be known in the physical realm; but on the contrary, its researches

and inventions, during the last half century, especially, have brought out a vast array of new discoveries which require to be explained. Scientific men are therefore dropping in large measure the endeavour to explain things ; because our knowledge in going deeper and further afield, is ever discovering new regions which are quite beyond our explanation. For, when we reach the inner nature of many things which formerly appeared simple, we are brought to realize that our view of them had been quite too superficial ; and that possibly there may be more yet in the background behind what we now know. Yet surely these discoveries should give us a greater reverence for the Creator, who devised all these wonders which we can only explore.

We may see in all this the wisdom of the Scriptures in not entering into explanations of natural occurrences. Miracles likewise are stated to be an act of God, in the same way that all happenings in nature are attributed to Him as the great First Cause. It is He who makes the sun to rise ; He stills the stormy waves, and the lightnings are His. The Scriptures do not therefore *explain* miracles, any more than they explain the rainbow or the whirlwind. Would it not be wise on our part to adopt this same attitude, and to be less anxious to find explanations for miracles ? For, if we try to offer an explanation for them, the scientists warn us that our clever theory may soon prove to be superficial and inadequate.

We do well also to admire the self-control of the writers of the Bible, in avoiding so entirely the explanations which were current in the mythology of their day. Not only so, but their accuracy in describing natural occurrences, gives enhanced value to their evidence in regard to miracles. For it is more than remarkable that the descriptions of nature which they give, are so invariably correct ; especially when we find, down to our own time, that writers and poets, as well as artists, make so many mistakes by depicting what they could never really have seen ; or saying in a flight of fancy, what in fact is untrue. An artist may put a rainbow in the landscape for effect, where it is physically impossible for it to be, in relation to the shadows in the picture. He could never have really seen what he depicts. Astronomers have made it a pastime to pick out instances, even in an observant writer like Dickens, in which he refers to the moon in positions it cannot have. In poetry, it is usual to claim "poetic licence" in the fanciful direction, when what is said

is not true to reality. But the poetry of the Bible, with all its stirring figures of speech, so graphic and pictorial, stands quite above the need for excuse, even in the strict light of science. We find likewise that miracles are described just as they were seen to occur; and the testimony of such writers is all the more credible when they are so invariably correct in all that they describe. In all this, we may surely recognize an over-ruling guidance given to these writers, even in what is merely descriptive; which is one aspect of divine inspiration.

HOW MIRACLES ARE REGARDED

There are three attitudes that we find towards miracles. There is (1) the Believer, who is quite content to say: If God is the Creator, He can do anything, and there is no difficulty about His working miracles. As Sir Ambrose Fleming remarks: "Can we refuse to admit that God can control the energies He has brought into existence? Even King Nebuchadnezzar was led to acknowledge that 'He doeth according to His will in the army of heaven, and among the inhabitants of the earth; and none can stay His hand, or say unto Him, What doest Thou?' " (2) There is next the Scientist, who says: When we are surrounded by so many marvels that we cannot understand, why should we say that miracles are impossible? Indeed, if we define a miracle as something that we can neither comprehend nor explain, all the realms of science are becoming more and more miraculous to us, as we advance further. (3) Then, thirdly, there is the scholar who takes the Modernist view. What he advocates is this: Get rid of the miraculous in the Bible, and the Gospel will be widely accepted; for the miracles are the obstacles that stand in the way of this.

We have then this strange situation, that it is not the men of Science who object to the miraculous in the Bible, but religious leaders who are Modernists. These go so far as to say that any who believe in miracles are Obstructionists that are unwilling to accept the results of scientific and literary research. This is evidently an unfair accusation, for it is unbelief that blinds the eyes; and the Bible does not discourage learning and investigation. Moses was "learned in all the wisdom of the Egyptians". Solomon not only "spake three thousand proverbs", but "he spake of trees, from the cedar tree . . . unto the hyssop"; and "he spake also of beasts, and of fowl, and of creeping

things, and of fishes". Daniel and a few others were selected for further instruction, because they were "skilful in all wisdom, and cunning in knowledge, and understanding science". The reproach was brought against the Apostle Paul: "Much learning doth make thee mad." The Bible does not extol ignorance; and credulity is the child of superstition, which the Scriptures everywhere denounce.

THE LAWS OF NATURE

The most common objection to miracles is that the Laws of Nature are fixed and unalterable; and if a miracle occurs, these laws are broken, set aside, or upset. If we give careful thought to this view, we will find that it is so one-sided or partial, as to be really misleading; because there is another principle everywhere in nature, which is this: The higher levels dominate and over-rule the lower levels beneath them. This is eminently true when we reach the realm of life, whether plant or animal life, above the level of the merely mineral or inanimate.

To make this clear, we may recall the three broad divisions in nature: (1) The Mineral or non-living, which in chemistry is termed inorganic; (2) Plant life, or the vegetable kingdom; and (3) Animal life. Above these three, there are mental and spiritual forces and powers which in a limited degree are possessed by man, seeing that he was made in the image of God; but spiritual powers extend beyond and above the human level. We find then in these various realms, that the higher can over-rule the laws in the realm below. Let us take a commonplace example on the human level. A child falls to the ground and bruises itself; the mother says: "Child, you have disregarded the law of gravity and have fallen; and by falling on a hard surface you have bruised yourself, which is another law of nature. You cannot expect me to interfere with the laws of nature, which are fixed. So there you are." Is this a right interpretation of nature? Is the mother a slave to the lower mechanical and physical laws? By her muscular power, which is above these, she lifts the child up; yet in doing so, she does not set aside or suspend the action of gravity, but merely undoes what gravity has done. By her intelligence, on a higher level still, she can even do something to alleviate the pain of the bruises, which were caused by the law of mechanical impact.

It will help us very much in our understanding of miracles, if we follow out this great principle of over-ruling laws, in the relation of each realm of nature to the one below. The action of these laws is usually most evident in their chemical relations ; and we must ask forbearance if we explain some chemical reactions for the benefit of those who may not have much knowledge of the subject. We must take chemistry in its widest sense ; for the whole visible universe is composed of the chemical elements ; the stars above, the rocks and the forests, as well as our own bodies, are all made up of the elements with which chemistry deals.

UPLIFT BY VITAL FORCES

In the world as it now is, the means by which plant and animal life are sustained constitute cycles of interacting agencies that are very complex. It will therefore make our subject more simple if we go back to a time before there was life on the earth, and follow the successive stages of plant and animal life in relation to each other. When the land first rose from a universal ocean, the world was made up entirely of mineral substances, among which water and air must be included. This is a stage in the progress of the earth which is indicated in Genesis and is also generally recognized amongst Geologists. There was nothing then in the world except what is technically termed inorganic material. The whole world was under the dominance of the laws of physics and inorganic chemistry, and nothing could take place naturally which did not conform to those laws. There was light and heat, clouds and wind, rain and lightning ; rivers could run, and waves beat on the shore.

One of the outstanding laws from primitive times in the inorganic world was the propensity of oxygen, which by itself is a gas, to combine with the other chemical elements. The substances that result from these combinations are mostly liquids and solids, such as water and rock ; for somewhere about half the weight of the rocks of the world, as well as the sands and clays, is made up of oxygen in a state of combination with other elements. Also, more than three-quarters of the weight of all the oceans and rivers of the world consists of oxygen ; for water is a combination of oxygen with hydrogen in which the oxygen has by far the greater weight. The wonder is that there should be enough free oxygen left over, which is not combined with

something else, to make the air fit for animals to breathe. This remarkable fact affords an example of the foresight of the All-wise Creator, in providing beforehand for the requirements of the future. It was indeed a far future at the time; for the plant life which came next upon the stage, has no need of oxygen for its support. On the contrary, the plant sets oxygen aside and even gives it out during the chemical processes which it carries on. Plant tissues only become oxidized after death during their decay. There is thus a complete break between vegetation and the mineral realm below; which confounds evolutionary theories, and brings out strikingly the "miraculous" character of the use which plants make of inorganic substances, as we shall see next.

PLANT LIFE

When this life came upon the scene, an entirely new set of laws began to operate. The simplest requirements of a plant, are water and carbonic acid, a gas everywhere present in the air, which is a combination of oxygen with carbon; water is another compound of oxygen, with hydrogen. What the plant must do to live, is to take up water by its roots and absorb this carbonic acid gas; and it decomposes these and rebuilds their constituent elements into other compounds with which it nourishes itself. Now, on the lower inorganic level with which the plant has to deal, the law is that oxygen combines with carbon; yet the plant or tree is able to overcome the natural affinity that these have for each other, and separate the combination into its original elements; and it is through this remarkable achievement that the plant obtains the simplest kinds of nourishment for its maintenance.

Vegetation, even in its humblest forms, thus presents a marked contrast to what existed previously. For all vegetation consists of cells which if they are to live at all, must contain chemical compounds that were unknown before in the inorganic world.¹ Not only so, but any plant, if it is to increase or grow, must have nourishment; which can only be obtained from inorganic material by reversing the chemical laws which in the former ages were the only ones in force. It is thus that it manufactures starch and sugar from the three chemical elements (hydrogen, oxygen and carbon) which it obtains from water

¹ Notably, the substance called protoplasm, in the comprehensive sense which is now given to that term.

and carbonic acid. Starch and sugar are representatives of a large class of the simplest of nourishing substances (the carbohydrates) ; but higher grade nourishment still is required, especially if the plant is to reproduce itself by means of seeds. This superior nourishment consists of nitrogenous compounds (the proteids) such as the gluten of wheat, and similar substances in peas, beans and other seeds. The power of the seed to live and grow depends upon these proteids.

It is thus evident that vegetation belongs to a higher realm altogether than the inorganic ; because the primary chemical laws governing the inorganic world, are reversed in their operation by plant life. By so doing, plants not only sustain themselves and provide the high-class nutriment required for their reproduction, but they are a prophecy and a preparation for the land animals that were afterwards to appear upon the face of the earth. For the whole support of these animals, the cattle, the birds and even the insects, is derived directly or indirectly from the food products which the vegetable kingdom supplies ; since the carnivorous creatures feed upon others which subsist on vegetation. Those that display the most vital activity, such as the birds, live chiefly on seed and grain, which supply the highest grade of nourishment that plants have to offer. Science thus recognizes that plant life must have been first, before animal life ; which is the order set forth in the first chapter of Genesis.

When we ask how the plant performs this miracle of rearranging the chemical elements into higher-class substances, we find ourselves brought face to face with one of the greatest marvels in nature. The plant can only accomplish this transformation on which its own nourishment and growth depends, by means of a substance named *chlorophyll*. This word is merely the Greek for " leaf-green " ; which serves as a name, because in reality we know little about it.¹ This chlorophyll, under the action of light, enables the chemical changes to take place that we have referred to ; and it appears that without it they would be impossible, and no plant could grow. For, in the humblest type of plant, which is only microscopic and consists of a single cell when mature, this one cell contains chlorophyll (or granules

¹ " It is certain that chlorophyll plays some part in the process of assimilation, and that its presence is essential ; but how it acts in assisting the process is unknown ; its physical and chemical properties, so far as they are known to us, affording no certain clue to the solution of the problem ". Watt's *Chemical Dictionary*. Its mode of action is " very imperfectly understood ". *Encyc. Amer.* of 1922. Further research (edition of 1929) has only brought to light additional complications.

called chromatophores, not always green). It is necessary to seaweed as much as to land plants ; though in some of these its colour is different. It may be thought that there is an exception to this rule when a root may be made to sprout in the dark and become a blanched plant, but this apparent growth is not real ; for it merely uses up the substance in the root, and when this is exhausted, it dies. No plant growth, due to added substance from without, can take place without chlorophyll. It would appear therefore that all vegetation depends upon it, as a means by which the necessary chemical transformations take place for their nourishment.¹

In following the progress of the world, we have thus seen that the beginning of plant life introduces a new force, which is able to stoop down from the higher platform on which it stands, and raise the lower inorganic substances to its own level. When thus transformed, the plant can incorporate these products into itself, for its own upbuilding. In making this transformation, it requires the help of light and heat, and these older forces are thus shown to have new uses, previously unrevealed. We recognize also that the chemical elements, which for ages had remained in an inorganic condition in inanimate compounds, were so designed originally by the Creator as to be capable of forming the high-class combinations required for food products, fibre and tissues. Nor is this honour bestowed upon the more complex ; it is a few of the humbler chemical elements, near the lower end of the series, that are thus used for the highest purposes ; and this is further seen in later ages, when animals came into the world ; for it is these same few elements, and these the more simple ones, that form the greater part of their bodies.

We do not find therefore that the chemical elements rose gradually to their highest complexity, and thus formed a high-grade material from which plant life could arise. All our latest knowledge in chemistry and physics points quite in the opposite direction. The new energies and powers of plant life are in no sense an outgrowth of what preceded them ; for they dominate all that they found in the world when they appeared, and put it under tribute. Light and heat, sunshine and rain, the material elements themselves, are all taken hold of by plant life and put to new uses, to serve the purpose of this new order

¹ We here leave out of consideration the parasitic plants which obtain their nourishment ready-made from higher types, or feed on their decay. For these do not require chlorophyll and are often colourless.

of things. In relation to the inorganic world which went before, the realm of vegetation is quite miraculous. We may well accept the explanation that the Bible gives us; that this new stage in nature was brought into being by the command and the power of God. For, "God said, Let the earth bring forth grass, the herb yielding seed and the fruit tree yielding fruit after his kind . . . upon the earth; and it was so" (Gen. i. 11).

ANIMAL LIFE

When animal vitality came into being in the world, we discern a new force of another type which can lay hold of plant material and raise this to higher levels still, speaking from the point of view of chemistry, which best brings out these distinctions. For the animal feeds upon vegetable material and transforms it into higher compounds, much in the same way that the plant in its sphere, deals with the inorganic elements. The simplest example will make this clear; for the sheep with only grass to eat and water to drink, can turn these into blood and muscular flesh, as well as brain and nerve material. Such substances are quite out of reach from the level of plant life.

To understand the further uplift from the plant level which animal vitality is able to accomplish, we need to distinguish definitely between these two types of life. The best distinction between plant and animal is shown by the two different ways in which they obtain their nourishment; for this distinction holds as far down as the simplest forms. "A typical green plant is able to live independently of other organisms and to build up its substance from simple gases in the air and inorganic salts in the soil or water. A typical animal, on the other hand, is not able to exist apart from other living organisms, since it is not able to build up its substance from simple chemical constituents (as a plant does), but must be supplied with ready-made proteids in its food, for which it requires other organisms, either plants or animals."¹ This may be put more concisely still: "A gap separates vegetable and animal life. These are necessarily the converse of each other; the one de-oxidizes inorganic substances and accumulates nourishment; the other uses up this nourishment by oxidizing it, and expends it in activity".² For, the animal maintains its bodily heat and develops much of its muscular energy, by oxidizing the plant products which it eats;

¹ *Encyc. Brit.*, eleventh edition; article: "Protozoa."

² Sir William Dawson, in *The Story of the Earth and Man*; eleventh edition, p. 326.

just as heat and power are produced from wood or coal when they are oxidized by burning them.

This essential distinction holds even amongst the innumerable animals and plants that consist of a single cell ; for it is only when a cell contains chlorophyll that it is able to live directly upon inorganic material. A very simple example of the way that an animal nourishes itself, is afforded by the *amoeba*. We can see under the microscope this one-celled animal which merely wraps itself around its food, so that for the time being it seems to become all stomach ; and actual digestion takes place. The food it thus eats, is a one-celled plant (a diatom or a desmid). Animals with more specialized organs, have a mouth and a stomach to deal with their food ; but the method of nutrition is the same throughout the animal kingdom. It scarcely needs to be explained that when animals live by eating others, those that they feed upon have already formed their substance from vegetable materials.

It needs to be mentioned however, that there is a strong tendency to confuse the distinction between plant and animal, which we find in many text-books and even in reputable encyclopædias. This results from a bias in favour of Evolution ; as those who hold that view are ever seeking for some " primary ancestor " of both the plant and the animal. The search for this is made amongst the one-celled creatures ; and because we cannot always discern clearly what goes on within these single cells, in the correlations between vitality and chemistry, advantage is taken of this on behalf of Evolution. For it would obviate one of the most pressing difficulties in maintaining that theory, if it could be shown that both types of life were primarily of one kind ; and the attempt is made to prove this where our knowledge is most obscure. We have to be on our guard therefore, against many statements in educational works ; for those who hold to Evolution as a primary idea, are strongly tempted to confuse the issue. What is stated may thus be quite biassed, and even misleading to the unsuspecting student.

We cannot play fast and loose with one-celled creatures, merely because they appear to us to be simple ; for they are just as definite in their types as the higher plants and animals. If it were not so, the whole investigation of disease germs (which belong to this realm) would be futile ; for a typhoid germ might become the germ of some other disease. Nor can we assume that

one-celled organisms are necessarily the most primitive ; for there are several categories of them which require plants or animals of higher type as their foster parents, before they could exist. All this could be explained at length with examples from large groups of one-celled creatures. But at present, we merely wish to point out the main characteristics of plant and animal life among them.

The outstanding distinction between the animal and the vegetable is brought out in the account of the creation in Genesis, where we are informed that vegetable life is not only distinct from animal life, but that it preceded it in time. If the light that is thus given to us were more generally accepted, we should be saved from much futile speculation, and our investigations would be guided into sane paths, leading to trustworthy results. We can explain this to a child ; there must be first the grass and then the sheep ; and God thus made provision in advance for His creatures before He created them. This successive order holds all the way down to the one-celled creatures ; for the most minute animals feed upon diatoms or other vegetable cells which were in the world before them. These diatoms are everywhere present in both fresh and salt water ; and they afford the most important source of food for some of the smaller animal forms, which in turn support fish life.

We may thus realize that when animal life came into the world, it laid claim to lordship over the whole vegetable kingdom, whether in the sea or on the land. It put vegetation under tribute to it, and demanded from the plant the products which it had elaborated (the carbohydrates and proteids) and devoured these as its food. The animal, however humble it might be, was able to raise these food products to higher levels still in the chemical scale ; and to produce from them flesh and blood, nerve and brain, as well as the secretions required for digestion.¹

The methods by which animal life accomplishes these results, are still quite beyond the limits that research has reached. For "the chemical changes which go on in the body are of a very complicated nature, and as yet little understood". Many animal substances are so complex that it is not possible for science to determine the chemical combination in which they exist. The brain may be taken as an example of this ; for it consists of

¹ In these, there are a few additional elements (besides lime in the bones) which are in relatively small quantities ; notably sulphur and iron, as well as phosphorus, chlorine, sodium and potassium, which are the basis of the acids and alkalis in the body.

“an intimate mixture of the most complex substances known to the chemist”.¹ Besides this complexity, there is nerve control; by which any deficiency of a substance is made up by extra secretion from some organ, to maintain a proper balance. In such matters, it may well be said that “we know not how”; yet in general we see clearly enough that animal life has the power to take hold of the simpler materials in its vegetable food, and raise these to a level in the organic scale which is quite above anything that previously existed upon the earth. We may well reverence the Creator who has devised these wondrous powers, and placed them under the control of the vital forces which reside in the animal body.

When animal life came into being upon the earth, it demonstrates to us again (just as the plant did before it) the possibility of using what already existed, for new purposes. We may take two primary things to illustrate this; light and air. When light first shined out of darkness at the command of the Creator, He “saw the light that it was good”. We have already noticed how “good” it was in relation to the growth of plants, and its good qualities become more fully revealed when animal life came into the world. For the eye of the animal brings out the properties of light which enable it to be used to see with. Its capability of refraction, and other equally remarkable characteristics (such as the various wave-lengths of which it consists) give it the power to transmit the shape and colour of distant objects to the eye. It is thus not only the eye itself that is marvellous, but also the wondrous properties of light, which it must have had from the first, and which make sight possible when the time for this arrives. The air also, is found by the land animal to be suitable to breathe, due to the foresight of the Creator in composing it originally of the elements necessary for this purpose; and not only so, but air has the further power of transmitting sound by its vibration. Sound, in the earlier ages, was merely unmeaning noise such as a crashing rock or the plash of breaking waves; but the animal makes use of it to signal to his fellows; which even an insect can do. The animal thus shows that light and air are capable of new uses which the plant knew not of.

The Scriptures explain that the animal kingdom was brought into being by the command and creative power of the Almighty

¹ In any of the substances in the brain, the amount of the various elements (C,N,H,O and P) can be determined as percentages; and from these, a chemical formula can be calculated. But what actual molecular combinations the formula represents, is still conjectural.

(see Gen. i. 20, 21). The new forces in animal vitality place it in a higher realm than plant life ; and the superior powers, such as sight and hearing, with which the animal is endowed, are evidently unknown and impossible in a world of vegetation alone. All this has an important bearing on the miraculous ; because a miracle may be largely due to some entirely new use of the forces or the materials already existing in the world. No scientist would assert that there cannot be any properties in force and matter which still remain unknown to us. Why then may not even existing things be utilized by divine intelligence to accomplish the purposes of God, in ways that are entirely beyond our comprehension ?

HUMAN INTELLIGENCE

In considering the three great realms of nature, the inorganic or non-living, the vegetable kingdom and the animal kingdom, we have seen that the uplift which one of the higher realms is able to give to those below it, is quite in line with miraculous power. The way that previously existing forces, such as light and heat, can be put to entirely new uses, also illustrates the character of some miracles. We recognize also that the Creator had bestowed upon elementary materials and primary forces, useful powers and properties which only reveal themselves in later ages when they come to be required in the progress of creation. This again is very similar to the unsuspected properties of existing things which divine miracles often bring to light.

With the creation of man, another new power, unknown before, comes into the world ; namely, intelligent thought controlled by free will. In earlier times, plant life had dominated the inorganic world, and animal vitality had made plant products subservient to its own use ; and it is perfectly consistent with these stages, that this new power should dominate the whole, and work new miracles of intelligent invention, quite impossible to the lower orders of creatures. We read accordingly in Scripture that God said of men : “ Let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth.” We need not enlarge upon the powers of man’s intelligence, when they are daily set before us in the current news ; for indeed, the praise of man is overdone, and thankfulness to God forgotten, for these God-given powers.

Even without considering the higher spiritual capacities of

man, it is evident that the human mind by its intelligence can control or over-rule many of the laws of nature, and turn them to serve his own ends. In doing this, man does not "interfere" with the laws of nature, or even suspend their operation. For example, it is a law of physics that water cannot run up hill; but by confining the water in a pipe, and applying suitable mechanical force, the water can be made to run up hill and fill a reservoir at its summit. Many problems in electrical transmission are solved in much the same way; yet no law of nature is violated, any more than when a motor car climbs a hill in opposition to gravitation, or an aeroplane defies the resistance of the air and the wind. The control of disease may be taken as another example. The "law" of the disease is that it runs its course, which in many cases would lead to death. But the law of its progress is not so fixed and unalterable that nothing can be done but to watch the effect which follows from its cause. For medical skill can divert the ordinary course, and mitigate the virulence of the malady. It may be that this is done by giving support to the vital forces of the body or re-inforcing their action; but whatever the method, the cure is not due to any interference with the laws of nature; but rather, it affords a further illustration of the principle we are considering, that the higher power of vitality can be enabled to modify and overcome the lower laws of disintegration and decay, which if left to take their own course would end fatally.

DIVINE MIRACLE

When we thus see throughout the various realms of nature, the great principle that higher forces can dominate and modify the laws of the realms below them, is it not reasonable to recognize that divine power, which is super-natural in the sense of being above all, can accomplish what is quite miraculous from the lower standpoint of human intelligence? In performing these miracles, the Almighty may surely make use of any of the elements or forces throughout His universe if He so please; or if not, He may accomplish His purpose by the highest force in existence, the exercise of His own will-power. In so performing a miracle, it is not necessary to suppose that God "violates" the course of nature or "interferes" with its laws; any more than we need suppose this to occur between one realm of nature and another, all the way up from the primary elements, in the successive steps

that we have followed. As Sir Ambrose Fleming, the noted Scientist, remarks regarding the miracles of the Bible: "Many of them, especially in the Old Testament, seem to have been, not a suspension or reversal of normal operations of nature, but a control or guidance of them for divine purposes."

Yet in dealing with divine action of any kind, we must not forget that we are in a higher realm altogether than all that we ordinarily include in the natural. For in the spiritual realm, the supreme considerations are love and compassion, justice and truth, and other attributes of God. Everything else must give way before such divine ideals and, miracle or no miracle, they must have their accomplishment. We may even see some reflection of this among men, and in human affairs. We say: "Love laughs at obstacles"; and it was said in Roman law: "Let justice be done though the sky fall." Nature itself must stand aside to make way for such exalted ends. And in the Scriptures, is it not for just such ends and purposes that miracles are wrought; to give help in extremity, to heal the afflicted, to strengthen wavering faith? It is surely out of place to accuse those who believe in divine miracles, of being credulous or weak minded. Indeed, when we give consideration to the miracles of the Bible, and the circumstances attending them, we will find that they answer of themselves the difficulties that may arise in our minds concerning them; if we view them in the light of the spiritual ends which they accomplish.

The purpose of God regarding man is, that His Will should be done on earth as it is done in Heaven. But man, since the age of innocence at the beginning, is entirely incapable of accomplishing this purpose by himself. It can only be accomplished in him by the uplift of divine power. For it is the Spirit of God that stoops down from above and lifts man out of his moral helplessness, where he is bound by the lower laws of self-interest and self-pleasing, and has gone astray by taking his own way. May we not perceive in this the same principle that we have found exemplified throughout the various realms of nature? The Scriptures indeed, make use of comparisons from nature to enable us to understand these things. The man who undergoes this wondrous transformation by divine power is said to be "born again", and this new birth is the outcome "not of corruptible seed, but of incorruptible, by the Word of God, which liveth and abideth for ever". Those who are thus regenerated become "new creatures",

and the power of God in accomplishing this is explained to be the same energy which He put forth in creation when He "commanded the light to shine out of darkness". They are also enabled by the same power to "walk in newness of life", instead of being as formerly "under the law of sin and death".¹

It needs to be emphasized that this is not high theological doctrine, but a transformation of men that is actually taking place at the present day. It is a divine miracle, which is yet a fact that must be faced and accounted for, as much as any occurrence in nature. Anyone who will read the current Missionary magazines or the record of the Bible Society, will find frequent instances of the new birth amongst the most degraded of men, brought about by the preaching of the Gospel, or even by the reading of the Scriptures alone; and their transformation cannot be gainsaid. Amongst those brought up in paganism, instead of the constant dread of evil spirits, there is the peace of God keeping the heart and mind; cruelty turns to kindness; the blood feud gives place to forgiveness, a thing before unknown; the harsh and domineering conduct of husband to wife softens down into loving co-operation.

This uplift of human nature to a higher plane of life by a Power from above, is in marked contrast with the views of Evolution, which teaches us to expect that only after several generations of good influences, a degraded tribe may develop to a civilized level. Even then, the civilization that is reached may not be accompanied by moral improvement; for it is well known that in the natural course of things, uncultured peoples are more apt to pick up the vices of civilized men than to adopt their virtues.

We may obtain a further insight into the operation of laws that are quite above the ordinary natural level, if we consider prayer in relation to the promises of God. It may help us in this to note that in the pagan religions, we do not find anywhere the idea that a god has made a promise to hear petitions. Among the Greeks, Apollo was specially the god of helpfulness; his emblem being the Sun, which is so obviously helpful to the human race. But his help could only be obtained by offerings and persuasion; just as a judge by bribes might be influenced to render a favourable decision. The whole matter was thus viewed from the ordinary human level. How wondrous then is the revelation in Scripture, that the Most High God has promised to hear and

¹ John iii. 3, 5, 6; 1 Peter i. 23; 2 Cor. v. 17; 2 Cor. iv. 6; Romans vi. 4 and viii. 2.

answer prayer! For a promise belongs to the higher realm of the spiritual, where it stands related to faithfulness and truth, and points upwards to the purpose and the Will of God.

Yet the sceptical question is often asked: Can the laws of nature be set aside, in order that a prayer to God may be answered? It is then inferred that prayer is useless; because what we ask might interfere with the course of nature. But we have seen throughout nature that higher laws can over-rule those on a lower level; and when we consider this in relation to prayer, we may find that the whole aspect of such questioning is profoundly modified, if the petition that is offered is based on a promise which God has made; for this at once brings higher spiritual laws into operation.

We may more readily see this if we begin with a promise in the affairs of men. A commercial company borrows money for which it issues bonds, accompanied by a promise that interest will be regularly paid. If this promise is not kept, the company must go into liquidation with its activities given over to other hands. Everything must give way before this promise. Take again a promise made by a nation, in an international treaty. Rather than break such a promise, a self-respecting nation will go to war. The ordinary work of its millions comes to a standstill, and their energies are turned into the new directions of military equipment and warfare. The whole material organization of the nation must be re-arranged to make good the promise. Can we suppose then, that the Lord of All will allow His promise to fall, or that His word can go by default? It is surely evident that these higher considerations, these "laws of the spiritual realm", must hold sway over all that lies below them. The purpose and the promise of God must be accomplished, though heaven and earth pass away. What confidence we can have in prayer therefore, if our petition is in line with that purpose; for "this is the confidence that we have in Him that if we ask anything according to His Will, He heareth us" (I John v. 14).

THE MIRACLES OF THE BIBLE

Let us now give consideration to some of the miracles recorded in the Bible, to see what their characteristics are, in relation to these various laws. We will soon find that they are not only in harmony with the higher laws of the spiritual world, but that

they bring to light what these laws are ; just as we have found already that when any new forces have come into operation, they reveal what was previously latent or unknown. The "laws of the spiritual realm" in their truest and highest sense, are the attributes of God ; His love, His pity and compassion, His readiness to help ; and on the other hand, His righteousness and justice. These are the motives from which miracles spring as their source ; and miracles by making these manifest, bring honour and glory to God.

It is quite in keeping with these principles, that the miracles of the Bible are not mere wonders and marvels to astonish us. This is the leading feature of the fabled miracles of antiquity, as for example, the Labours of Hercules ; but it would be a mistake to suppose that the miracles described in Scripture have this for their main object. We find indeed that the Lord Jesus refused to perform "wonder-miracles". He would not cast Himself down from a pinnacle of the Temple, during His temptations by Satan ; He would not give the Pharisees a sign from heaven, by causing some wonder to appear in the sky. Such things we might call purposeless miracles, unjustified by any beneficent result. It may therefore be said in general, that the miracles of Scripture have always a reasonable purpose.

We may therefore note that the way in which miracles are described in Scripture, shows the entire absence of any desire to place an exaggerated emphasis on their astonishing character. We find merely a plain and even dignified statement of what took place, as seen by the writer of the account, or by those who were present. An example may be taken to illustrate this ; when Christ stilled the tempest on the Sea of Galilee. We have the simplest and most straightforward description of what occurred, without any exaggerated amplifications ; even though those concerned were fishermen who must have been specially impressed by such a miracle, as indeed we are told that they were. No explanation is offered ; no suggestion of any natural cause. As to how the storm became a calm, the narrative records all that the disciples who saw it were cognizant of at the time : "He spake and it was done ; He commanded", —and it took place. Yet the scope and significance of this miracle are remarkable. There is deliverance in extremity ; an answer to a definite petition ; the power of the Deity controlling nature ; the uplift of faith to higher conceptions. These are some of the

spiritual purposes that justify the working of a miracle. Such purposes are equally evident in miracles of healing ; where they bring out the divine attributes of compassion and helpfulness.

It is consistent also with the absence of unmeaning wonders in the miracles of the Bible, that natural means are sometimes made use of to accomplish the purpose which God has in view. For example, at the Red Sea, the people of God were in extreme difficulty and saw no way of deliverance from their pursuing enemies. We are told that the Lord caused a strong east wind to arise, and by its means He opened a path for His people through the sea. Why should not God thus use the forces of nature if He please, instead of employing more extraordinary means ? Yet critics take advantage of this to make it appear that nothing miraculous occurred. Yet we see the control of the Almighty over nature, in causing the stormy wind to fulfil His word. The higher purposes are also manifested, in His power to help and to save those who look to Him ; as well as in His judgment upon the army of Pharaoh, which came at last after long forbearance with his disobedience and his want of repentance. The attributes of God are thus revealed.

A similar miracle, when the Israelites crossed the river Jordan after the forty years in the wilderness, may also exemplify the use of natural means. For it has been suggested that the drying up of the Jordan may have been due to a landslide which blocked the river. Whether this was the case or not, we are shown once more that all the forces of nature are dominated by higher spiritual laws, which cause things to happen at some specially opportune moment, for the accomplishment of the purpose of God. This is again shown by the earthquake at Philippi in the days of the Apostle Paul, which had high spiritual ends for its outcome. May we not perceive in these things that all the lower laws throughout nature are subservient to the spiritual and the divine, which is above all ? For truly the mercy and the justice of God must have their way, whatever there be in the lower realms of nature that must stand aside to admit of this. Our faith is thus strengthened in knowing that all things are in the hand of God, to turn this way or that, to meet the needs of those who trust Him ; or to fulfil the petitions that they bring before Him, in the way that He sees to be best.

The Scriptures indeed tell us that even the plans and projects of mankind may be swayed or over-ruled to fulfil God's purpose.

The obstinacy of Pharaoh for example, was used to manifest the power and glory of God. (See Exodus ix. 15-17.) The defeat of the counsel of Ahitophel against David, and the refusal of Rehoboam to listen to the appeal of his people, proved that "the cause was from the Lord", in leading to the fulfilment of His promises. The Lord may even raise up a man specially to carry out His Will; as when Cyrus the King of Persia was made an instrument in the hand of God to restore the Hebrew people to their land after their captivity in Babylon (see Isaiah xlv. 24, 28, and xlv. 13). Thus even the plans and schemes of men may be brought into subservience to the higher requirements of the justice and faithfulness of God.

FURTHER CONSIDERATIONS

To indicate concisely some of the further considerations that this subject opens up, we may append as a supplement the summary of an address by Sir William Dawson, former Principal of McGill University in Montreal. It was given many years ago to an assembly of students of the University. It is helpful when a mind such as his, so thoroughly trained in Natural Science, points out the harmonious relation of the miracles of the Bible to the general laws governing God's universe :

"As used in the Bible, and with reference to God, the term 'miracle' is restricted to the putting forth of divine power, superhuman in its nature, and with some spiritual end as its purpose. Miracles are not, therefore, infringements of either natural laws or spiritual laws; for both of these are included in God's kingdom under His dominion, and His kingdom is not divided; yet spiritual law over-rules natural law. Miracles are special combinations and associations of these laws for special purposes.

Miracles are thus under laws of their own, some of which can be learned from the revelation given in the Scriptures. These laws are such as the following :

(1) Miracles depend on the exercise of knowledge and power higher than those of man.

(2) God Himself and spiritual beings under His control, employ in miraculous acts natural energies.

(3) Higher laws and energies control and supersede lower laws and energies in such operations, just as the vital forces in plants and animals modify the laws of non-living material.

(4) Miracles appear only at critical times in the career of peoples or the life of individuals, in the furtherance of God's great programme of salvation.

(5) Although miracles are entirely subject to divine control, they may be influenced by human faith and volition under the limitations mentioned ; for faith can remove mountains.

All these points are fully illustrated in the teaching and works of Christ ; and they may also be seen in the mighty works performed by the agency of Moses ; who in this, as in other ways, is an eminent predictive type of the Saviour.

The Scriptures also speak of the latter days, in which prophecy points to events that would seem to be altogether miraculous, in so far as we know beforehand. The great crisis at the end of the age may be characterized by such events ; and the Second Coming of Christ will be a great miracle. We may be sure that the miracles of those days will be suited to the time, though different in kind to any which preceded them, and probably greater in scope and magnitude."

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