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EDITED BY THE HONORARY SECRETARY,  
CAPTAIN F. W. H. PETRIE, F.R.S.L., &c.

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not inconsistent with Holy Writ and with truth. This is a part which the Council have to perform. If they have performed it to the satisfaction of the Institute they feel that they have reason to be grateful, and they ask the members of the Institute, whom they represent in this respect, to excuse any inadvertency, and not to be quick to find out in that which is put forth, something with which they may not agree, but rather to be ready indulgently to accept for the better part all those truths which are being brought forward for discussion at the meetings of this Society. We cannot discuss the truth without, in some degree, giving pain to those to whom what we discuss is new. All light when it first comes to us dazzles the eye; but when the eye is accustomed to that light we very often find that that which only seemed to dazzle us when it first came upon us is, in truth, a medium by which we see more clearly, and can by it understand more truly and more scientifically and more religiously those great truths which it is the purpose of this Society to bring forward and to show that they are—I will not say consistent with—but that they are in truth part of that great body of truth of which we should desire a close understanding, feeling sure that all truth, whether it arises from scientific inquiry or from religious study, comes from one great source—that source of light with whom is no shadow of turning. (Cheers.)

The Earl of SHAFTESBURY, K.G.—I will now request the Lord O'Neill to be good enough to deliver the Address he has kindly prepared.

The Right Hon. the Lord O'NEILL then read the following Annual Address :—

### *ON THE CREDIBILITY OF THE SUPERNATURAL.*

1. **A**LL unbelieving writers appear to me, in so far as I am acquainted with their works, to assume, without any attempt at proof, that the supernatural is incredible. Thus, with some of them, the fact that a miracle is recorded in a passage of Scripture is alleged to be sufficient to warrant its being pronounced unauthentic. Or the fact that an historical event coincides with an alleged prediction of it is pronounced a sufficient proof that the supposed prediction was written after the event, and therefore that the book containing that prediction falsely pretends to a prophetic character. Or, again, if a fact recorded by a confessedly uninspired historian is found

to be inconsistent with a fact stated in the Old or New Testament, the latter is coolly pronounced to be erroneous. I propose to offer a few observations on this subject, limiting myself to objections of a physical or metaphysical character, and to but a few even of these, as our time is short.

2. I took occasion, in a paper which I had the honour to read to this Society in last June, to refer to Professor Tyndall's oft-repeated assertion (made at the Midland Institute, at Birmingham, in 1877, and also on other occasions) that the principle of conservation of energy in the world of matter leaves no room for spontaneity to mingle with what he assumes to be the *necessary* play of the forces of nature. The only thing like a reason which he gives for this is, that *man's* power over nature is not creative, but only distributive. It is, however, easily seen that this is no reason at all. No one believes that man has any creative power over nature. What the theist maintains is, that (not man, but) God, has a creative power over nature; and this position is not in the least affected by Dr. Tyndall's observations. It is true that he calls the play of the natural forces *necessary*, which may convey the idea that the Deity has no more creative will than man; but he gives no proof that such is the case. He quietly assumes it, as indeed he is compelled to do, there being in fact no proof of it possible. In the Appendix, Note A, will be found some remarks lately communicated to me in a letter by one to whom, I doubt not, the members of this Society will be ready to pay attention—the Rev. T. Romney Robinson, D.D., Professor of Astronomy at Armagh, and which he has kindly permitted me to make use of on the present occasion.\*

3. The real question is, How did the forces of nature originate? To say that they are self-created is a contradiction. It means that they acted before they existed, which is absurd. They must therefore either be self-existent, or created by external agency, these being the only other suppositions possible. And the supposition of creation by external agency implies also self-existence, since the Creator must either be self-existent, or must owe His existence, more or less remotely, to a self-existent Being. The question, then, lies between a self-existent Creator, and a self-existent phenomenal universe. Those who believe in the latter have to encounter a similar difficulty to that of those who believe in an intelligent Creator. If they ask us, How came God to exist? we ask them in turn, How, *without God*, came matter and force to exist? Philo-

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\* See Appendix A.

sophy, unaided by any other source of knowledge, is as little able to answer one of these questions as the other.

4. But an objection is sometimes made, on metaphysical grounds, to the very idea of creation. It implies, it is said, a First Cause, which is inconsistent with the idea of an absolute Being, such as God must be supposed to be, because an absolute being has no relation to anything, and, therefore, a being between whom and the universe there is the relation of cause and effect, cannot be an absolute being. To my own mind, if I may venture to say it, metaphysical arguments which deal with the First Cause, the Absolute, and the Infinite, are not very convincing. Even in the most certain of the sciences—mathematics—we find that we are out of our depth when we arrive at infinities. We cannot, therefore, expect to grapple with infinities in regions less sure and definite. Dean Mansel, in his “Limits of Religious Thought,” takes this view. He observes, that the contradictions to which we seem to be conducted by such speculations manifest themselves in *opposite directions*. They are analogous to those in which we find ourselves involved when we endeavour to contemplate space and time in all their generality. We cannot conceive either space or time as finite, because, however far we extend them in idea, we can find no bounds to them. Neither, on the other hand, can we conceive them as infinite, because our minds cannot grasp infinity. That we are in a similar strait when we try to reason about the First Cause, the Absolute, and the Infinite, Dean Mansel shows in the work just referred to. The contradictions, he observes, are apparent, not real; and he thus distinguishes between apparent and real contradictions. “The latter (the real) are one-sided, and necessitate a belief in the opposite direction; the former are two-sided, and appear to press equally in opposite directions, from both of which together we find it impossible to exclude belief. Thus, to take an example of the unilateral (one-sided) kind, I find a contradiction in the conception of a circular square, and I cannot believe in its possible existence; but then, on the other hand, I am compelled to believe that every existing square is not circular. Whereas, to take an example of the bi-lateral (two-sided) kind, I find a seeming contradiction in the conception of an absolutely first or last moment of time; yet I find it impossible to believe that neither of these can be true, and I find it equally impossible to believe that both can be true. The reason of this distinction is obvious. The former class of contradictions exists between attributes, both of which are within the limits of positive thought. To constitute a real contradiction, it is necessary that we should have

a distinct conception of both the repugnant members. Where no such conception exists, the object is *above* reason, but is not *opposed* to it: we may be warranted in believing the fact of its existence, though we are unable to conceive the mode" (*Limits, &c.*, p. 67, note).

5. Thus the apparent contradiction involved in the belief that an absolute Being should be placed in the relation of Cause to the universe, arising, as it does, from our inability to comprehend the Absolute and the Infinite, supplies no argument whatever against the Scriptural doctrine that "God created the heaven and the earth." It only shows the imperfection of our understandings, and justifies Dean Mansel's words when, in another passage of his book, he speaks of "those barren, vague, meaningless abstractions in which men babble about nothing under the name of Infinite" (*Limits, &c.*, p. 61). Mr. Herbert Spencer gives a lengthened quotation from this work of Dean Mansel's, on the subject of the apparent contradictions of which I have been speaking, but draws from them a different conclusion, namely, "that the power which the universe manifests to us is utterly inscrutable" (*First Principles*, p. 46); whereas the Dean, acknowledging that it is inscrutable to unaided reason, would have us to go to another source of information, *viz.*, Revelation.

6. It is to be observed that Mr. Spencer, in a subsequent portion of his book, reduces everything to Force as the *ultimate of ultimates*—as that Power, in fact, which guides the universe, and which he has pronounced to be "utterly inscrutable." It may be presumed that he has satisfied his own mind that there is no contradiction between the alleged inscrutability of that Power, and his pronouncing the Persistence of Force to be an *axiom* (*First Principles*, pp. 192b and 192c, 3rd ed.). But I confess myself unable to see how the two assertions can be compatible. If Force be utterly inscrutable, how can we know that persistence is a quality of it? We are, indeed, aware that the unit of force has not been known to vary throughout human experience. But it would require something beyond and above experience to justify the assertion that it can never vary under any circumstances, not even at the volition of a Divine Being. I ventured to make some remarks on the alleged axiomatic character of the Persistence of Force in the paper already alluded to, and need not now repeat them.

7. To deny the supernatural is to strike at the root of all religion. We must endeavour, however, to give a clear account of what we mean by the supernatural. It is, as the word denotes, something which is above, or beyond, nature. But what, again, is nature? The word, as I conceive, applies

to whatever is made known to us either by our individual consciousness, or by our senses; in short, the *ego*, and that portion of the *non-ego* which we call the phenomenal world. The supernatural extends to the remaining portion of the *non-ego*—that is, incorporeal spirits, including, of course, the Deity; these not being perceptible by the senses, unless miraculously made to be so, but believed in upon other grounds. But although pure spirit is not an object of sense-perception, its acts and influences may be so; of which we have a notable example in the fact, acknowledged by all Christians, that the phenomenal universe is perceptible to the senses, while its Creator is veiled from our sight, hearing, or touch. In the phenomenal world are to be included the various forces with which matter, both animate and inanimate, is endowed, as volition, muscular power, electricity, gravity, &c., all of which forces are made known to us by their power to produce in us some bodily sensation or perception. These powers and forces are a part of nature, and are not to be included in the idea of the supernatural.

8. The Supernatural may be conveniently divided into—1. Supernatural beings, as spirits (including the Great Spirit of all); and 2. Supernatural occurrences, as miracles. Of the former, as has been observed, our senses afford no direct evidence, but they bear indirect witness to their existence by enabling us to perceive the effects of their action. The latter are occurrences which, as they require for their production some power beyond that of man, or of nature as influenced and directed by man, are to be attributed, in whole or in part, to the action of a supernatural being or supernatural beings.

9. As to the existence of God, it seems to me almost incredible that any thinking person should consider it more probable, apart from Revelation, either that matter should be self-created, or that it should have existed, with all its "promise and potency," from eternity, than that it should have been created by an intelligent, conscious, and powerful Being. It has become the fashion with some to disparage the argument from design, or (to use a word recently suggested) from *adaptation*. The difference between the two expressions seems but slight, inasmuch as adaptation—i.e., such adaptation as is displayed in the universe—argues design. One or two isolated instances of adaptation might, we may grant, be accidental. But the universe is a system of adaptation from one end to the other, and this could not possibly be accidental. A key might accidentally fit into a key-hole for which it was not made. It might even turn the bolt, if the lock were of a very simple construction, without our being warranted in saying positively

that it was designed for that purpose. But in proportion as we suppose the wards to be more complicated, the smaller is the probability that the adaptation could be accidental. In fact, in the case of what we should call a good lock, i.e., one of a very complicated construction, we have the utmost practical certainty that the key which opens it was designed to do so. But this is not all. In order adequately to illustrate the case of nature, we must suppose thousands of locks, each opened by its own key and by no other, which multiplies what we have already seen to be a practical certainty by a number equal to the number of the locks. Now this, I venture to say, is the kind of certainty we have of design in the adaptations that are to be found in the universe. They exist in myriads. Some remarkable examples of them are brought together in Whewell's "Bridgewater Treatise on Astronomy and General Physics." One of these is the adaptation of the muscular powers of all animals to terrestrial gravity. If the unit of this force were considerably greater than it is, no human being, or other animal, endowed with its present muscular powers, could leap or walk, or even crawl. If, on the other hand, the unit of gravity were considerably diminished, say to what it amounts to in the moon, the exertion now required in order to jump a foot high would carry us 80 feet upwards into the air. Another example may be found in the quantities, respectively, of oxygen and nitrogen in the atmosphere, as compared with our breathing faculties. Were these elements mixed in other than their actual proportions, life could not long continue. Again, if the temperature of the sun were to any great extent increased or diminished, life could not exist on the earth unless the frames of men and animals were altered accordingly. These and thousands of other examples might be mentioned, in which the *arbitrary quantities*, as they are called,—i.e., the quantities which might have been different from what they are,—are so adapted to each other as to make life and its conveniencies and comforts possible; and so great is their number that it seems wonderful that any thoughtful persons should deny that they are the result of design. And since design necessarily implies a designer, it follows that there must be an intelligent Creator of the universe. How it came to pass that such a Creator should exist, is of course a mystery far beyond our ken. We are quite unable to go back farther. But this is no reason why we should refuse to go back as far as our reason will take us by the hand. To refuse to acknowledge the Deity because we cannot account for His existence would be most irrational. Were we to disbelieve everything that we cannot account for, we should believe in nothing.

10. Thus far I think we may assert that Reason and Philosophy conduct us, unaided by Inspiration. And since belief in God is belief in the supernatural (the Deity being veiled from our direct observation, and therefore being outside the phenomenal world), there ought not to be much difficulty to those who have proceeded so far, in admitting the existence of other incorporeal spirits, such as angels. It is unnecessary to say that our belief in God, founded on philosophical reasoning, is amply confirmed by Scripture. But for the existence of subordinate spirits we are thrown more completely upon the testimony of Scripture. Those, however, who have arrived at belief in God, and have in so far admitted the existence of the supernatural, need not hesitate to receive that testimony. The Creator of all matter must Himself be immaterial, and to those who believe that one immaterial Spirit exists, it seems as easy to admit that He should create other spirits, as that He should create matter.

11. Thus much as to supernatural beings. We have now to consider supernatural occurrences, or miracles. I have said (sec. 8), that these are to be attributed, wholly or in part, to the agency of a supernatural being, or beings. The first miracle of all is the creation of the universe, which we attribute to the agency of God. It was no *violation* of the laws of nature. Rather, it was the *commencement* of those laws. It was something *beyond* nature, but not *against* it. This is the view of miracles in general, which is now usually adopted. Any deviation from the ordinary course of nature is attributed, not to a violation or suspension of her laws, but to the introduction of some higher law which, acting together with the ordinary laws of nature, produces (to borrow a metaphor from mechanics) a *resultant* different from that which the ordinary laws, acting by themselves, would lead us to expect. "We should see in a miracle," says Archbishop Trench, in his valuable work on the subject, "not the infraction of a law, but the neutralizing of a lower law—the suspension of it for a time by a higher. We continually behold in the world around us lower laws held in restraint by higher, mechanic by dynamic, chemical by vital, physical by moral. Yet we do not say that there was any violation of law, or that anything contrary to nature came to pass: rather, we acknowledge the law of a greater freedom swallowing up the law of a lesser."\* The Archbishop then goes on to mention some instances, as the

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\* Trench on *Miracles*, Preliminary Essay, ch. ii. p. 17.

power we possess of raising an arm, by which the law of gravity is not annihilated or violated, but is only counteracted by the higher law of the human will; the preservation of animal substances from decay by means of salt, which does not destroy any chemical laws, but only restrains and holds them in suspense; and so forth. These and similar occurrences bear a strong analogy to miracles, from which they seem to be distinguished chiefly by the fact that we witness them every day. But my power to raise my arm by an exertion of will is as inexplicable in its way as is the power of God to cure a disease or to raise the dead. We do not call it a miracle, because it lies within human power, and so may be witnessed at any time; and human power only extends to the moving of our own bodies, or of other matter through the intervention of our bodies, whereas the will of the Deity, as Christians believe, can affect all matter without any intermediate means, as is observed by Professor Jellett, now Provost of Trinity College, Dublin, in a passage which, in my former paper, I took occasion to quote from his Donnellan Lectures on the Efficacy of Prayer. But the power of our wills over our bodies, though a matter of every-day experience, is as *unthinkable*—to use a word much in fashion with unbelieving philosophers—as is the power of the Deity to work a miracle.

12. The difference between a miracle and an occurrence which, though equally inexplicable, is yet not considered miraculous, is thus further stated by Archbishop Trench.—“All is wonder. To make a man is at least as great a miracle as to raise a man from the dead. The seed that multiplies in the furrow is as marvellous as the bread that multiplied in Christ’s hands. The miracle is not a *greater* manifestation of God’s power than those ordinary and ever-repeated processes: but it is a *different* manifestation. By those other God is speaking at all times to all the world: they are a vast unbroken revelation of Him. . . . But in the miracle, wrought in the sight of some certain men, and claiming their special attention, there is a speaking to them in particular. There is a voice in nature which addresses itself directly to them, a singling of them out from the multitude. It is plain that God has now a peculiar word which they are to give heed to, a message to which He is bidding them to listen” (*Preliminary Essay on Miracles*, ch. ii., pp. 11, 12).

13. There are also occurrences which, although they may be accounted for by natural causes, are yet of a miraculous character, from the fact of their having been predicted by one who has no natural means of knowing beforehand that they would

take place. Thus, although nothing is more natural than that a man should carry water into a house, yet the fact that our Lord was able to tell Peter and John that they should, at a particular time and place, meet a man bearing a pitcher of water into the particular house at which He was to celebrate the Passover with them, was a remarkable miracle. In the same manner, although there was nothing contrary to nature in a fish having a piece of money in its mouth, yet our Lord's being able to tell Peter that such should be the case of the first fish that should come to his hook, gave a miraculous complexion to the event. A similar observation may be made with regard to some of the plagues of Egypt, which might in themselves have arisen from natural causes, but were marked as the finger of God by the fact that Moses was inspired to predict them. To miracles of this nature, Archbishop Trench applies the epithet "providential."

In the foregoing observations, I have used the expression "Laws of Nature," for convenience, and because they are in general use. I would, however, refer again to the Appendix (Note B.) for some remarks on this expression selected from the same communication of Doctor Romney Robinson to which I before referred.

14. To return, however, to miracles in the proper sense of the word. Bishop Watson says, as quoted in Mant's Bible,— "I think it idle, if not impious, to undertake to explain how the miracle was performed; but one who is not able to explain the mode of doing a thing argues ill if he thence infers that the thing was not done. The machine of the universe is in the hand of God. He can stop the motion of any part, or of the whole, with less trouble, and less danger to injuring it, than any of us can stop a watch."

15. The miracle specially referred to in this quotation is that described in Joshua x., when the sun and moon are said to have stood still while Joshua was pursuing the defeated kings. And as that miracle has been made the subject of much adverse criticism, it may be well to say a few words about it. We need not discuss the various views of commentators as to the facts related. Some point to the fact that the passage is professedly a quotation from a book of whose inspiration we have no proof, namely, the Book of Jasher. Others look upon the circumstance as figuratively described, and take the words to mean nothing more than that Joshua prayed that the destruction of the enemy might be accomplished before sunset, and that God answered his prayer. And reference is made to Homer's Iliad (ii. 412) as recording a similar case; Agamemnon being there represented as praying that the sun might not go down until he had sacked Troy. These views, as I

have said, it is not necessary to our present purpose to discuss, as we are only concerned to show the *credibility* of the miracle, the question of its actual occurrence being beyond our immediate scope. Whatever interpretation we may put upon the passage, our object is gained if we can show that the miracle *may* have occurred.

16. Let us now hear some of the objections. It is said that the apparent standing still of the sun and moon must involve the supposition that the diurnal revolution of the earth came to a stop; this, again, involving, as a consequence, the jerking off of all its inhabitants, and of everything resting on its surface, on the well-known principle that whatever is in motion must continue to move in the same direction, and with the same velocity, until something interferes with that motion. In this case the attraction of the earth would cause a deviation from what would otherwise be rectilinear motion along the tangent to the parallel of latitude on which each thing or person had been situated, and would cause them to revolve round the earth in ellipses or other conic sections, instead of moving in a straight line. Since nothing of this kind took place, the story is not, they argue, to be believed. But surely if the phenomenon was effected by a cessation or diminution of the earth's motion round its axis, the same power that caused this to take place could prevent such a consequence from ensuing as that which has been sketched out. The prevention of that consequence would not be at all a more wonderful exertion of power than stopping the earth's revolution would be. But is it not rather presumptuous to pronounce that a miracle must have been wrought in a certain way, if at all? How can we take upon us to say that the one in question could only have been effected by an interference with the earth's rotation. An increase in the refracting power of the atmosphere would cause the heavenly bodies to remain in sight for a much longer time than usual; and that, without any jerking off of the inhabitants of the earth. Besides, it seems possible that the phenomenon may not have lasted so long as is generally supposed. It appears to have commenced after the defeat of the five kings by Joshua, and while Israel was in pursuit of them. It would therefore be sufficient that daylight should continue until the enemy was overtaken, which might not require a very long time. It is true that the narrative, as it appears in the authorized English version, states that the sun "*stood still in the midst of heaven, and hasted not to go down about a whole day.*" But this translation does not seem to convey accurately the meaning of the original. It is stated in Doctor Adam Clarke's note on the

passage, and also in Calmet's *Dictionary of the Bible*, that many learned Hebraists understand by "the midst of heaven," not the meridian, but that part of the sky which is midway between light and darkness, namely, the horizon, and which forms a natural division between the upper, or visible, heavens and the under heavens, which are invisible, as being beneath the apparent horizon. The word in Hebrew, which is translated "the midst," is *chetsi*, i.e., division, which quite bears out this idea. Again, it is observed that the words translated, "hasted not to go down about a whole day," mean "hasted not to go down, *though the day was completed.*" This would give a very intelligible meaning to the whole narrative, viz., that Joshua, believing that the enemy, unless completely destroyed, would afterwards rally, and seeing that the sun was near going down, commanded it (of course under inspiration) to remain above the horizon as long as daylight should be required to enable him to complete the destruction that had been commenced. This, as already observed, might not require a very long time—perhaps not more than one or two hours—and an increase in the refractive power of the atmosphere, either through its increased density, or through an increased accumulation of moisture, would be quite sufficient to prolong the light of day for that time.

17. An objection to this reasoning has, however, been raised which at first sight might seem fatal. It is known that Bethoron, near to which place the miracle is said to have occurred, lies to the west of Gibeon, and therefore, if the sun appeared to Joshua to stand still over Gibeon, it would seem that it must have been standing in the eastern part of the heavens; from whence it would follow that it was then early in the day. But Calmet, who enters very minutely into this part of the question, shows that the fact of Joshua and his army being on the west side of Gibeon is not inconsistent with its being near the time of sunset. Gibeon was situated on a hill; and the rays of the setting sun would shine upon it. If, then, by any means, those rays could be caused to retain their horizontal direction for some time, they would still shine upon Gibeon. It would be by no means an unusual figure of speech to put the sun itself for the rays or light of the sun; and thus the setting sun might be said to stand still on Gibeon, not meaning that it was directly over Gibeon, but that its light continued to shine upon it.

18. As to the moon, it is said that the sense of the original language is satisfied if we understand that she *maintained her brightness* while the miracle lasted, not necessarily remaining stationary, but emitting the same effulgence. Calmet states some good reasons for believing that she was at the time in

her second quarter, and nearly full. The miracle, he observes, could not have occurred exactly at full moon, because in that case the moon would have been below the horizon when the sun was above it. This, I may observe, is not *strictly* accurate; for in consequence of the inclination of the moon's orbit to the ecliptic, the moon, even when full, might be above the horizon at the same time with the sun, provided that she were at a considerable distance from either node. But the inclination of her orbit being only about five degrees, this could only last for a very brief time—so brief as not practically to invalidate Calmet's reasoning. The miracle, then, could not have taken place at full moon. Nor, again, could it have taken place at new moon, because then the moon does not shine at all. Again, if we suppose it to have occurred shortly after new moon, the moon would set very soon after the sun; and, moreover, her light would be very feeble, as would be the case all through her first quarter. The only time, therefore, at which she would be of use towards the accomplishment of Joshua's object, would be when she was in her second quarter; probably when nearly, but not quite, full moon. Taking the moon's age to be in accordance with this conjecture, the miracle cannot be supposed to have occurred soon after sunrise, as the moon would not then be visible. She would, in fact, only become visible a short time previously to sunset, and would then continue to shine all through the night. This confirms the conclusion before arrived at, namely, that the miracle took place about, or near, the setting of the sun. If it had been in the morning, as some suppose, it is difficult to believe that Joshua should be under any apprehension lest daylight should not last sufficiently long to enable him to complete his pursuit of the enemy.

19. The probable *time of the year* leads also to the belief that a not very large increase in the refraction of the atmosphere would be sufficient for the miracle. There is reason to suppose that it was not far from midsummer, at which time the sun is at a shorter distance below the horizon at midnight than at any other time of the year. Joshua had crossed the Jordan on the tenth day of the first month, i.e., about the 5th of April. If we allow a little more than two months from this for the taking of Jericho and Ai, and the ceremonies at Ebal, we are brought to about midsummer, as we have just said. And at that time of the year in Judea (which is at about  $35^{\circ} 30'$  north latitude) the longest day, including the morning and evening twilights, lasts about eighteen hours. If, then, the light proceeding from the sun could be maintained during the remaining six hours, the object of the miracle would be attained. And

this could be accomplished by increasing the refractory power of the atmosphere, or by producing a kind of mirage, such as is frequently occasioned by natural causes, and by means of which objects below the horizon are occasionally seen as if at a considerable altitude above it.

20. A few words must be said in reference to Hume's argument against miracles, and Paley's reply to it, although the members of this Society must be familiar with both. Hume's argument is this: It is contrary to experience that a miracle should be true, but not contrary to experience that testimony should be false; whence he infers that no human testimony can in any case render a miracle credible. Upon this Paley observes that there is an ambiguity in the expression, "contrary to experience," which is calculated to mislead. "Strictly speaking," he says, "the narrative of a fact is *then* only contrary to experience when the fact is related to have existed at a time and place, at which time and place we, being present, did not perceive it to exist. . . . Here the assertion is contrary to experience properly so-called; and this is a contrariety which no evidence can surmount. It matters nothing whether the fact be of a miraculous nature or not." He means, of course, that this makes no difference *in the case just supposed*, because any fact, whether miraculous or of an ordinary kind, would, in that case, be absolutely incredible. He then continues: "And short of this (i.e., of such a contrariety to experience as he has just described), I know no intelligible signification which can be affixed to the term 'contrary to experience,' but one, namely, that of not having ourselves experienced anything similar to the thing related, or such things not being generally experienced by others. I say 'not generally,' for to state concerning the fact in question that no such thing was *ever* experienced, or that *universal* experience is against it, is to assume the subject of the controversy." The remainder of Paley's remarks may be thus condensed: If the objection to the credibility of a miracle be founded on its non-conformity (for "contrariety" is not the proper term) to *general*, as distinguished from universal, experience, there can be no reason, granting the existence of a God, to reject it. For "the force of experience, as an objection to miracles, is founded on the presumption, either that the course of nature is invariable, or that if it be ever varied, variations will be frequent and general." Whoever believes that there is a God will admit that the course of nature is the agency of an intelligent Being. Let it, then, be so called, and it might be expected that such a Being, on occasions of peculiar importance, should interrupt the order which He had appointed, and

yet that such interruptions should occur but seldom. In fact, if they often occurred, they would not be miraculous.

21. Thus far, as to miracles being contrary to experience. A little consideration is also due to Hume's second assertion, namely, that it is not contrary to experience that testimony should be false. This assertion is much too vague to have the significance which Hume would attach to it. The actual question is, Does experience furnish us with examples of men inculcating the highest morality and exhorting to speak truth every one with his neighbour, and yet imposing on the world a gigantic fraud in recording Christ's miracles, especially that culminating one of all, His resurrection; and that, for no advantage to themselves, but, on the contrary, to bring on themselves imprisonments, scourgings, and death, with no hope (in the case supposed) of an improved condition in a life beyond the grave? If testimony borne by such men, and under such circumstances, could be shown to have ever been false, there might be some ground for the second part of Hume's argument. But it may be safely asserted that such a case has never been known. It would, in fact, be a contradiction to suppose that such men as Christ's Apostles should be guilty of a gross deception. The only other supposition by which their testimony could be invalidated is, that they were enthusiasts, deceived by the ardour of their own imaginations. This also has been well refuted by Paley. Their slowness of heart to believe that their Lord was risen until they had exhausted every proof of it, shows anything but a proneness to deceive themselves. Moreover, the non-production of His dead body affords the best proof that His resurrection was an actual fact, and not a mere phantom of imagination. In Paley's words, "The presence and absence of the dead body are alike inconsistent with the hypothesis of enthusiasm; for, if present, it must have cured their enthusiasm at once; if absent, fraud, not enthusiasm, must have carried it away" (*Evidences*, part ii., ch. 8).

22. It has been frequently observed that Paley's own argument in behalf of miracles contains a fallacy. And if we confine our attention to his formal statement of it, I think this must be admitted. He says, "Now, in what way can a revelation be made but by miracles? In none which we are able to conceive. Consequently, in whatever degree it is probable, or not very improbable, that a revelation should be communicated to mankind at all, in the same degree is it probable, or not very improbable, that miracles should be wrought" (*Evidences*, section 3 of Preparatory Considerations). This is true, provided that in estimating the probability that a reve-

lation should be given, we have taken into account the necessity that it should be accompanied by miracles. For, otherwise, this might destroy the probability of a revelation. If, for example, miracles were utterly incredible (as Hume supposes), the fact that a revelation cannot be given without them, so far from imparting to the miracles the probability which would otherwise attach to the revelation, would make the revelation itself incredible. It would be what logicians call a destructive conditional syllogism, in which the major premise states the sequence of one proposition (denominated the *consequent*) from another (called the *antecedent*). If the minor premise denies the consequent, the syllogism is destructive, and the rule is that the conclusion must deny the antecedent. Or if the minor premise is constructive, i.e., if it affirms the antecedent, the conclusion must affirm the consequent. Put in this form, the major premise in the present case is, — “If a revelation be credible, miracles are credible.” Hume would take for the minor premise the proposition — “Miracles are not credible”; from which, if it were true, the conclusion would necessarily be, that “a revelation is not credible.” Paley, on the other hand, would take for his minor premise — “a revelation is credible,” the conclusion from which would be that “miracles are credible.” Now, as this conclusion is in direct contradiction to Hume’s minor premise, it is incumbent on Paley to show that the latter is false. This he does afterwards in the manner already described, and therefore I think he may fairly be looked upon as having made out his case. But until he had shown Hume’s objection to be without foundation, his syllogism, formally stated, could not be considered conclusive. This is the only thing approaching to a flaw that has, so far as I am aware, been discovered in *Paley’s Evidences*, but it is only one in form. Substantially his reasoning is unanswerable. It has lately become fashionable with some to decry Paley and Butler, and other books which deal with the evidences of Christianity as antiquated, and unsuited to the advanced theories of our own time. This seems to be for no other reason than because they argue the question so clearly and unanswerably as to dispel the vague mistiness in which those advanced theories are shrouded. And I venture strongly to recommend all whom my words may reach, to peruse these books, if they should not have already done so, and make themselves thoroughly acquainted with the reasonings they contain. This will be the most effectual means of guarding themselves against being lost in the quagmires of a pretentious and hollow scepticism.

*SUPPLEMENTARY REMARKS.*

Since this address was printed, my venerated friend, Doctor Robinson, of Armagh, to whose suggestions I was already so much indebted, has pointed out to me an omission in the argument from Adaptation given in pp. 16 and 17. I ought to have recognized the fact that that argument is sometimes met by the principle of "the 'Survival of the Fittest.'" Professor Tyndall, in his Belfast Address, gives some examples from Mr. Darwin's book on "The Origin of Species," to show that this writer was fully aware of, and duly appreciated, the multitudinous adaptations which are to be found in what we call Nature. And in reference to this he observes, that "it is the mind thus stored with the choicest materials of the teleologist that rejects teleology."\* The principle of the Survival of the Fittest assumes that innumerable combinations of atoms once existed, of which a very few, comparatively, were adapted to the surrounding circumstances. These few are supposed to have been preserved, while by far the greater number, not being so adapted, perished. From this it is argued that all is *haphazard*, and that there is no need to suppose an intelligent Creator, the combinations which endured being endowed with a power of self-adaptation, whereby they settled themselves into permanency. Now this is a mere gratuitous assumption; for it can never be proved that combinations originally existed which perished out of existence, leaving no track. Moreover, if we should grant that such was the case, we are still confronted by the questions, "How came these atoms to exist? and how did they get the power to combine?" There can be but two hypotheses. Either they existed from all eternity, or they were created by an intelligent Being; for the only two other suppositions are so irrational that they may well be dismissed—namely, that they were created by an unconscious or unintelligent being, or that they created themselves. Now, the question which of the two former hypotheses is the true one, is not decided by granting the principle of the Survival of the Fittest. For there is nothing against reason in believing that an intelligent Creator should adopt that principle. To a certain extent we see that the fittest combinations do alone survive. Animals and plants that once were suited to certain climates have become extinct, or have been compelled to seek

\* For the sake of some readers, it may be as well to state that "teleology" means the doctrine that there is a design or purpose in Creation.

other abodes in consequence of the climates having altered. Again, weaker animals have been banished or greatly diminished in number by stronger ones gaining the mastery over them. But all this need not prevent us from believing them to have been brought into being, and endowed with their various qualities, by an intelligent Creator. Many persons, of whom I profess to be one, consider the latter to be by far the more philosophical hypothesis, even apart from the testimony of Scripture. That matter, with all its promises and potencies, should either have been eternal or have come into existence of itself, or, lastly, have been created by unconscious agency,—all these suppositions are considered quite unphilosophical by many who have fully as good pretensions to judge as have their opponents.

Dr. Robinson observes that there are combinations to which the principle of the Survival of the Fittest cannot apply, as for example, *water*. In his letter, necessarily brief, he does not further explain this. But I think it may be presumed that his meaning is, that water, considered as perfectly pure, and free from any matter which it may hold in solution, is everywhere the same, and is never unfitted to its surroundings, nor can any one portion of it be more or less able to endure than another. Wherever it exists, it is precisely the same chemical combination of its two elements. And, moreover, no amount of heat or of cold can destroy it. Subjected to any amount of cold at or beyond the degree of freezing, it exists as ice; and subjected to any degree of heat at or beyond the boiling point, it exists as vapour, its chemical composition being always preserved, and its liquid state being always capable of being restored by an alteration of the thermometrical conditions. I am unwilling to trouble my friend, Dr. Robinson, for an explanation of this, as he has been already so kind, but better chemists than myself can judge whether the conjectural explanation above given is the correct one.

Dr. Robinson, in the letter above alluded to, gives some additional reasons, beyond those stated by me, for holding that Joshua's miracle was not caused by a cessation of the earth's rotation. Some of those who attribute it to this cause remark that a sudden suspension of all terrestrial inertia would account for it, and for the things on the earth's surface remaining steady, without involving the necessity that one miracle should be supplemented by another. On this Dr. Robinson remarks that if all terrestrial inertia had been suspended, the battle could not have been carried on, inasmuch as it is owing to inertia that an arrow or dart can reach its destination, or that even a blow can take effect.

P.S.—Doctor Robinson has since been so kind as to explain to me his meaning when he says that the principle of the Survival of the Fittest does not apply to water. The following quotations from his letter will help the reader to see the substance of his explanation. He says—“Water has qualities which cannot be explained by the ‘survival’ hypothesis, but which have a remarkable adaptation to the occupation of the Earth by living beings.” Some of these qualities are, “the specific gravity of frozen water, and the point of its greatest density—these moderate the cold in high latitudes; the low temperature at which it is vaporized, on which depends the whole system of springs and rivers—but for it, all the earth above sea level would be an arid waste; yet more, the vapour is little transparent to non-luminous heat, and therefore protects the earth from the cold of excessive radiation—and in the hands of man this vapour has become an instrument of power, whose extent imagination can scarcely fathom!” Lastly, “The power of water to dissolve a great number of substances without altering their constitution, makes it an element without which neither animal nor vegetable life could exist.” And he adds, “If any one thinks that these qualities were the result of accident, I can only say of him, in the words of Scripture, that he is ‘under a strong delusion.’” I would just add, that Dr. Tyndall, in his lectures on heat, tries to disparage the argument for Design derived from the point of greatest density in water, by pointing out one other substance which behaves similarly. But surely the fact that water is *one* of two exceptions—or even one among a greater number, had such been the case—to the ordinary rule, when so much depends upon its being an exception, cannot be supposed to weaken the argument for Design.

#### APPENDIX A.

On the doctrine of Conservation of Energy, the Rev. T. Romney Robinson says (referring to the heat produced by the collision of two equal non-elastic bodies),—“If these bodies be such as soft clay or putty (in which case they should rather be called viscid than non-elastic) a very large portion of their *vis viva* is expended in changing their figure, for they flatten and cohere; and I am not aware of any experiments having been made to ascertain whether any, or how much, heat is evolved in the process. But it is also possible to conceive two ultimate atoms of matter colliding. They are unelastic because incompressible, and their figure cannot be altered; and we can conceive no other result than that their motion must be destroyed. And this is a matter of some importance, because in the kinetic theory of gases the molecules must be supposed to be elastic; or else in their collisions they would ultimately come to rest. Now this bears on the constitution of the ether, to which it is the present fashion to refer all physical

forces. But the ether must be intensely elastic ; and that elasticity cannot be supposed to proceed from any kinetic arrangement, for that would require the atoms of the ether, themselves, to be elastic ; and we have no choice left us, except we adopt the hypothesis to which Challis refers, of an infinite succession of ethers, each constituting the elasticity of its predecessor, but to suppose these atoms, the ultimate elements of all material forces, to be endowed by the Almighty with repulsive power when He said, " Let light be ! " Thus, in Dr. Robinson's view, the only tenable supposition is that with which the passage just cited concludes, namely, that the atoms of the ether have been endowed with repulsive power by the Creator. Professor Challis, in the remarks which he did me the honour to make on my paper of last year, states that he at one time inclined to the theory of successive ethers, but has since abandoned it. The theory finally adopted by him may be found, given in his own words, in p. 79 of the number of the journal of the Victoria Institute for March, 1881. On referring to that place it will be seen that he does not admit that the ethereal atoms are endowed with repulsive forces. He holds that after having arrived (as he has done by his mathematical researches) at the conclusion that the pressure of the ether is proportional to its density—in other words, that it is equal to its density multiplied by an ever-constant factor—we have taken all the material agency into account ; and that the constancy of that factor—the only thing not accounted for by such agency—owes its origin to non-material agency, i. e., Mind : and that this is quite in accordance with the well-known fact that while sound, light, &c., are, in one point of view, material conditions, our *perception* of them can only be accounted for by admitting that there must be a non-material or spiritual agency also.

Again, Dr. Robinson says :—" With respect to the Conservation of Energy it seems to me that the statements about it have not been weighed with sufficient care. It is by no means generally true that one form of energy can be immediately transformed into another. For instance, every writer or lecturer nowadays talks of magnetism being converted into electricity and *vice versa* ; but this is not the fact. A magnet may stay beside a wire for ever without producing any signs of electricity ; but if it be moved to or from the wire a current appears, the intensity of which is found, even on the largest scale, to be in exact proportion to the moving power expended. Again, chemical affinity can produce electricity, light, and heat ; but not magnetism. And even in this case motion is necessary to bring the combining bodies into contact ; and as to the greatest and most universal of all forces—gravity—it, as far as we know, cannot be transformed into any other form of energy. . . . These and similar matters make me think that in the transformation of forces we have not got to the bottom of the matter ; and it must be kept in mind that very often the ultimate agent in the transformation is human will,—for example, setting an electric generator in motion or charging a battery. And this fact might lead us to a far wider and more elevated conception of the universal influence of the highest of all wills (that of the Creator), as connected with the absolute existence of energy itself."

Unless I could boast of such an acquaintance with the whole range of the physical sciences as Doctor Robinson himself possesses, I should consider myself presumptuous were I to offer any opinion on these views in detail. But I think it will be at least admitted that he has brought forward some good reasons for refusing to look upon the doctrine of Conservation of Energy as having become fully and finally established.

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## APPENDIX B.

Second extract from Dr. Romney Robinson's letter :—

"I have a great dislike to the words 'Nature,' and 'Nature's Laws.' The first we got from the Romans, and I fear that something pagan still clings to it. It is too often spoken of in common parlance as a power that rules the world. Even a man like Darwin is guilty of an abuse of words when he talks of *Natural Selection*. Selection implies intelligence, will, and power of action. Nature possesses none of these, and even Mr. Wallace felt the absurdity of the phrase and replaced it by 'the survival of the fittest.' Darwin went so far (if my memory does not deceive me) as to say that the wonderful eye of the mammal was created or formed by *Natural Selection* out of a streak of pigment possessed by some supposed primordial ancestor. He does not say how that ancestor got that streak.

Nullum numen habes si sit prudentia : Nos te,  
Nos facimus *Natura* deam, cœloque locamus.\*

"As to its laws, I would only add that they are no laws at all. Take for example the so-called law of gravity ; it is simply an expression of the observed fact, that masses of matter act on each other at a distance with forces proportional to the sum of the masses divided by the square of the distances between them. We find that this holds good for terrestrial bodies, for the sun and his planets, and a few double stars. But beyond that we can affirm nothing except by conjecture. We might call it a law because we believe it exists by the decree of a Supreme Lawgiver. But the phrase would be absurd in the mouth of an atheist."

A. McARTHUR, Esq., M.P.—I rise to move "That our best thanks be presented to the Right Hon. the Lord O'Neill for the Annual Address now delivered, and to those who have read papers during the session." (Loud applause.) A very pleasing and a very easily-acquitted duty falls upon me. I am requested to move that our best thanks be presented to Lord O'Neill for the Annual Address he has just delivered. His Lordship has already received the thanks of the meeting, and I am quite sure that all who have heard the paper we have listened to will very cordially agree with this motion. I wish to express my own very great pleasure and profit at listening to the address, and I beg to move the motion that stands in my name.

Rev. R. THORNTON, D.D.—After the admirable example of brevity which Mr. McArthur has set, I must not detain you many minutes ; but still the great satisfaction I feel in regard to the paper we have just listened to—and I entirely acquiesce in the feeling and tone of that paper—leads me to trespass upon you for a little longer period than Mr. McArthur has done. I am very glad indeed to find that Lord O'Neill has followed the sound system which I believe I myself introduced into this Society, of fighting the enemy, and of meeting him face to face on his own ground. A long time we had to be a little apologetic ; we were obliged to show our

\* In these lines, quoted from the Tenth Satire of Juvenal, the word "Natura" is substituted for "Fortuna."

*raison d'être*. Then the tide turned. I believe I was the first person who put on the gloves. Lord O'Neill grapples fairly with the question. We are now told that the supernatural is incredible, and everything is natural. "Well," Lord O'Neill says, "what is the natural? What do you mean by the natural?" And he clearly shows, I think, that beyond the region of sense there is something—a reason-sphere, or whatever you please to call it—into which the intellect of man may penetrate. I am sure we must all be very glad indeed to find that he has had the courage to grapple with such a subject, and hope that this is not the last paper we shall have from him upon so interesting a matter. Therefore I may fairly ask you to accord your best thanks to Lord O'Neill for his very interesting, and well-reasoned paper. (Cheers.) But there are others to whom we have also to return thanks. His paper is one of many. "*Micat inter ignes luna minores*": if we can call them *minores*. If you look at the list of papers contributed, you will find that those papers have not only been diversified in character, but extremely valuable in point of matter. Some have been upon geological subjects, and I am very glad that we have had such papers, which have shown that the Mosaic cosmogony is not affected by mere scientific hypotheses. As Sir Joseph Fayrer has well and truly told us, science is one thing, and theology is another. They are twins, but still they must not be regarded as exactly one and the same. As long as we are content to let science take its right position, and theology and religion their right positions, there can be no antagonism. Whenever we introduce theology into science, and science into theology, we shall most assuredly get into terrible confusion. Let us remember, as we have been told to do, that scientific men are engaged in the pursuit of truth, and that we theologians—here I speak for myself as a professional theologian—are engaged in the pursuit of truth also. Do not let us say that we are antagonistic to one another. Let us still show that we are both engaged in the pursuit of truth, one in one direction and the other in another. Depend upon it the time will come when we "shall know as we are known," and when we shall see, although at the time we did not know it, that we were all tending towards the same point. (Hear, hear.) I have only to say that I second the resolution with great satisfaction.

The motion, having been put, was carried by acclamation.

LORD O'NEILL.—I beg to express my sincere thanks for the kind reception my paper has met with—a reception going far beyond what I could possibly have expected. I may here say that a book has come to my knowledge within the last few days which, had I seen it sooner, would have aided me very much in what I have done, and that is a work written by Dr. Wainwright, entitled "*Scientific Sophisms*." I have had time to look into it sufficiently to enable me to say that I think it a most valuable contribution to the literature which it is the endeavour of this Institute to encourage. (Hear, hear.)

Admiral E. G. FISHBOURNE, C.B., R.N.—I have to propose a vote of thanks to our noble President, and I do so with great pleasure, knowing the immense support he has been to this Institute. (Cheers.) I question very much whether it would have been in existence if he had not thrown himself as cordially as he did into its work by consenting to take the position of President. But we are not only indebted to him for his past services, but also for his presence here to-night, and I am sure you will accord your thanks to him with all the more sincerity when I tell you that this is the third meeting he has attended to-day. (Hear, hear.) His Lordship took the chair at a Harrow meeting this morning; he subsequently occupied a similar position at a meeting in behalf of the Zenana Mission; and he is now here, presiding over this meeting. (Cheers.)

Rev. F. C. COOK, D.D.—I almost owe an apology to the meeting for taking upon myself to say what every member of this Institute would have said with equal sincerity, namely, that I have great pleasure in seconding the vote of thanks to our noble President. He has been permitted to see many of the societies he has founded arrive at a mature and healthy age, and must be rejoiced to see how this Institute has increased and prospered under his presidency; but at this hour of the evening I will not take up the time of the meeting by saying anything more than that I am glad to have the opportunity of seconding the motion.

The motion was carried amid general applause.

The PRESIDENT.—It has been my lot very frequently to receive a vote of thanks for presiding in this chair, and I have often thought it my duty to say that I did not deserve anything of the kind, inasmuch as I do not think I am “the right man in the right place.” I accepted the position of President only because I was one of the founders of this Institute. I remember the time when, in a back room in Savile-row, Mr. Mitchell delivered an Address to a very scanty audience, and it was from that small beginning that this Society has gone on until it has attained its present proportions. But still the Institute is not indebted to me in any way, either for my exertions or scientific attainments, or for any fitness I may possess, to occupy such a post. I can only attribute what the Institute has been pleased to do with regard to myself to the old habit which is so essentially characteristic of Englishmen. We are so very conservative that we cherish even an abuse for a long time, and do not give it up until it is positively wrenched from us; and this is the only ground on which I can conceive why I have retained the occupancy of this chair. I must, however, congratulate you on the progress the Institute has made, on the great effects it has been enabled to produce, and the constant persevering and patient way in which it is holding on its course, and will, under God’s blessing, be enabled to resist a great deal of the error and mischief with which at the present day the opponents of the truth are deluging the land. Our noble lecturer, Lord O’Neill, at the end of his Address this evening, urged very strongly

that both young and old should study the works of Paley and Butler. I have been told that in the universities the works of my ancestor, commonly called "the characteristic Earl," are now much more studied than the works of Paley and Butler. I am sorry to hear it, for a greater "prig" in literature I do not believe to have existed. (Laughter.) I have attempted to read his works very frequently: I have dipped into them one after another; but have never had sufficient strength of will and courage to go through with them; they are so full of conceit and pretentiousness. At the time at which he lived a certain ornate style prevailed, and I believe that his acceptance was owing a good deal to the fact that it was unusual then for men of his rank to deal in such matters. But I must say that in my opinion, if the man who could lay down as a broad proposition that ridicule is the test of truth—which is the proposition laid down in his works—can be called a true and trustworthy philosopher, I am bound to say that I view with dismay those intellects and hearts that have taken to the study of the works of my ancestor, and rejected those of Paley and Butler. But as brevity is the order of the night, I will not further detain you. I should get out of my depth if I began to talk on scientific matters. I can only say that I have a positive reverence for science; and if I had not been called away to other things, I should have given myself to the study of science, because whenever I hear a scientific discussion I lick my lips with enjoyment. But I made my choice in another direction, and consequently I feel that I am hardly fit to hold the post I now fill; but to your consideration and kindness—and probably to some respect for me, as having been at the outset one of the very few who started this Institute—is owing the fact that I now continue to retain my position as your President. (Cheers.)

[The members, associates, and their friends then adjourned to the Museum, where refreshments were served.]