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ORDINARY MEETING, JANUARY 6, 1873.

C. BROOKE, ESQ., F.R.S., VICE-PRESIDENT, IN THE CHAIR.

The Minutes of the last meeting were read and confirmed, and the following Elections were announced :—

MEMBER :—Captain M. S. Nolloth, R.N., United Service Club.

ASSOCIATES :—Thomas Ball, Esq., 217, Brixton Road ; Joseph Lush, Esq., Southsea ; H. S. H. Jones, Esq., C.B., Llynnon, Holyhead.

The following paper was then read by the Author :—

ON DARWINISM AND ITS EFFECTS UPON RELIGIOUS THOUGHT. By C. R. BREE, Esq., M.D., F.Z.S.

1. It is necessary for me to make two definitions—
 - (a) What I mean by “religious thought,” and
 - (b) What I mean by “Darwinism.”
2. In the expression “religious thought” I wish to include—
 - (c) The consciousness of a God, which is more or less innate in every human being.
 - (d) The existence of a God, as we prove it to reasoning minds, by the study of nature in all its varied forms.
 - (e) The knowledge of a God and Saviour derived from the Inspired Word of God.
3. In these definitions, while I exclude all doctrinal questions, I include that great portion of the human family which, more or less, believes in Divine Revelation and the Immortality of the Soul.
4. By Darwinism, I not only mean the hypotheses of its author, but the expansion which has been given to them by

other writers. Mr. Darwin and his disciples have taught in their works that

5. A primitive speck of matter originally came into being. Some admit that such primordial plasm was an act of creation; others, like Dr. Bastian, that it was evolved from not-living matter by the agency of physical forces. Professor Huxley has called it "Protoplasm," or the "physical basis of life." Professor Hæckel and Dr. Bastian believe that such specks of protoplasm, in the form of protistæ and protamœbæ are constantly being evolved in myriads in the fine mud of our ponds and ditches.

6. Given the speck of matter, Mr. Darwin and his followers have taught, that by inherent blind physical forces, such speck or specks of living matter have given origin to every plant, tree, animal, and human being in the world. I expressly, in the beginning of my remarks, for reasons which I will give in the end, decline to associate men and animals together.

7. Mr. Darwin and his followers have taught that such primitive specks of living matter have been endowed with a potentiality, by means of which they varied into other living things, slightly dissimilar from their predecessors; that these again varied in some way advantageous to themselves, and so survived in what they term the "struggle for existence," while the weaker or less fortunate forms perished and went out of existence.

8. They have taught that these survivors, by reason of their innate potentiality and the operation of molecular forces and interchanges, "evolved" themselves into other forms, which "struggled" and were "selected," as the "survival of the fittest" to vary again, diverge into new lines of development, and so, through vast periods of time, become the living world we now see around us.

9. Darwinism essentially consists in the belief that living things have been perfected from the weak to the strong—from the formless to the formed—from the meanest fungi to the oak of the forest—from the lowest animalcule to the most perfectly organized animal, and man himself, by forces which are known to obtain in the inorganic world and are termed physical—and those which, only existing in living beings, are termed vital—such forces being correlated, and convertible into each other. They deny the existence of any external or miraculous power, and consequently ignore a controlling and designing Providence. They believe that the forces of the world are self-acting and "self-adjusting."*

* Wallace.

10. Mr. Darwin and his disciples have taught that mind or intellect and the reason of man have been "evolved" in like manner from the lowest known psychical attributes of animals far down in the scale of existence, passing through the same formulæ of "variation," "struggle," "survival," and what they term "natural selection,"—which preserves those who live through the struggle, and which is one day the most powerful factor and backbone of the system, and the next is broken down and acknowledged by Mr. Darwin himself to be imperfect and to have been too much relied upon in the exposition of his theory.

11. I have thus broadly laid down the two definitions which were necessary to make this paper intelligible; and I have been more explicit in this because in the present day a common mode of criticising the statements of an opponent is to accuse him of ignorance.*

12. I undertake to prove that a belief in Darwinism and revelation is incompatible and irreconcilable, and in the argument I will first take the most favourable view of evolution as a means of creation by law; and as Mr. Darwin in his recent work, the *Descent of Man*, has fully adopted the doctrine of evolution, it will only be necessary to treat of the whole as one hypothesis under the title of Darwinism.

13. A belief in Darwinism then implies that in the beginning a living thing came into being. It did so, according to Darwin, by the power of the Creator breathing into one form or more the breath of life. According to Mr. Spencer, it might have been evolved: to use his own words, thus "construed in terms of evolution, every kind of being is conceived as a product of modifications wrought by insensible gradations on a pre-existing kind of being; and this holds as fully of the supposed 'commencement of organic life' as of all subsequent developments of organic life. It is no more needful to suppose an 'absolute commencement of organic life,' or a 'first organism,' than it is needful to suppose an absolute commencement of social life and a first social organism."†

* Agassiz, the great naturalist of the New World, in a recent address at San Francisco, on the result of his exploring expedition in the *Hassler*, describes evolution, as taught in this country, "the work of blind forces, of forces without intelligence, without discriminating power, and without forethought," and that the object of the study of nature as so taught is "to determine whether we ourselves are descended from monkeys, or whether we are the work of a beneficent Father." A writer in *Nature*, October 24, 1872, in commenting upon these remarks, calls them "singular misrepresentations"!

† This passage is quoted by Dr. Bastian, without reference, in his *Beginnings of Life*. As there are no indices to Mr. Spencer's works in my library, I cannot give a special indication where the passage occurs.

14. I prefer, however, for the argument in this paper, to take Mr. Darwin's view of the "commencement of life," for it will exempt that gentleman from the charge of atheism, and it will save us a great deal of discussion, which, although intensely interesting, would exceed the limits of this paper.

15. Having breathed, then, the "breath of life" into an organism, the necessities of Darwinism require that it should be endowed with a potentiality by which it would evolve into all the known living forms in the world.*

16. Following the obvious sequence implied in the doctrine of evolution, such a form must have been of a vegetable nature, inasmuch as animals have no power of creating or forming within themselves the elements of food. Without vegetable life no animal could exist now or have done so at any period in the history of living things. Professor Hæckel has discovered a family of low forms of life, which he says are intermediate between the vegetable and animal worlds; and among his Protista, as he calls them, he places the Protamœbæ previously alluded to (para. 5), as well as fungi; all the well-known forms of Amœbæ,—the *Noctiluca*, which produce phosphorescence of the sea; and the Rhizopoda, a large group of what have hitherto been considered animals. But such a classification of the lowest living forms, even if allowed to be scientifically established, which is not yet the case, would not alter the position I take; viz., that as vegetables subtract from the air and soils the elements of those organic compounds upon which the animal feeds, and which he cannot himself form or otherwise procure, it follows of necessity that the vegetable, even according to the doctrine of evolution, must have been the first living thing.

17. Further, I contend that the doctrine of evolution makes it necessary that the vegetable forms of life must have covered the earth with verdure before the evolution of animal life; inasmuch as almost each animal in the world has its own plant, or class of plants, upon which it feeds.

18. Therefore all plants, or the greater part of them, must have gone through their battles and struggles, and been selected and become species before the animals which feed upon them were evolved, or the latter would have been starved.

* Mr. Martineau, *Mind in Nature*, p. 22, says: "If you retain the forces in their plurality, then you must assume them all among your data, and confess, with one of the greatest living expositors of the phenomena of development, that unless among your primordial elements you scatter already the germs of mind as well as the inferior elements, the evolution never can be brought out."

Lotra's *Mikrokosmos*, bk. iv. kap. 2, band ii. 33 et seq.

19. It has been suggested by a man of great eminence as a physicist, that vegetable life may have been evolved in another planet and have been thrown on to our earth when such planet broke up, by means of a meteoric stone. I only mention such a theory to show how wild may be the speculations of even great philosophers on this subject. We have no proof that vegetable or animal life exists, or has existed, in any other world than our own, and we know that the friction of our atmosphere would destroy, by causing intense heat, any such organism on meteors. Such a means of introducing life into our globe would spoil the potentially-endowment theory, and destroy all belief in the interference of a supernatural Being in the origin and progress of life on our globe, leaving such origin to the *chance* shot of a broken rock deviated from its course round the sun, and falling upon a plantless and lifeless world. Such a wild, hopeless, cheerless, unscientific theory could do nothing towards an explanation of the origin of species, inasmuch as it would merely relegate to another broken-up planet that creation which the science of the 19th century dares not face on this.

20. The earth becoming covered with verdure, the potentiality of the original germ, selecting its own spot and its own moment, is required by the doctrine of evolution to effect a new exercise of forces hitherto dormant for myriads of ages. A "self-adjusting" principle comes into play, and the plant is evolved into an animal.

21. Where, when, how, or why, the theory does not explain. Exercising his finite mind, man treads fearlessly on the path of the Infinite. He has seen an egg become a chicken, a pigeon's plumage vary, a bright feather in a bird's tail entrancing its mate, and upon foundations slight as these he ventures to unravel the greatest, the grandest, the most sublime, and the most divine of all mysteries—that of Creation.

22. I remark that without an atmosphere no plant or animal could live or grow. Therefore, before the plant or animal there must have been an atmosphere, and geology tells us plainly enough that such atmosphere has been modified from time to time to meet the requirements of living things on the earth. Did that occur by chance? Did that beautiful combination of oxygen, nitrogen, and carbonic acid—a compound of the same constitution in every part of the earth—come into existence by "natural selection" or the "struggle for existence"? *

* A writer in the *Edinburgh Journal* for Dec., 1872, has discovered that, among other good things, the atmosphere of Edinburgh contains more oxygen than other places.

23. The in-coming of animal species must have left our original potentially-endowed speck of protoplasm, myriads upon myriads of ages away, even according to the arguments of the Darwinian school.

24. But the animal, when evolved, could not have lived without an atmosphere, neither could it have existed without the plant especially adapted to its organization. Man eats the ox, which derives its nourishment from grass; he also eats wheaten bread, the produce of a grass. Destroy the grasses, and man, with all other mammals, would perish off the face of the earth. The bird feeds upon the fly, which comes from maggots, nourished by flesh, which again comes from grass; or it takes the caterpillar from the tree upon which alone the caterpillar can feed. Again we come back to the plant: I need not pursue this part of the argument further.

25. Now mark! The potentially-endowed plasm theory, and that of evolution, require in all this no interference of Divine Power. The sequence of events follows the laws implanted in the first plasm. The Creator of that plasm has retired from the scene: there is no Providence in nature.

26. But let me pause here, and ask in all humility, if the whole theory of evolution and Darwinism is not placed out of court by the necessity that an atmosphere should have been created *before* the advent of life upon the globe? Why should the same Power which created the one be denied the power of creating the other? Is the preparation for life to be considered specially creative, and life itself to be perfected without the supervision of the Creator? The theory which allows the Creative Wisdom to exist before the coming of life into the world—exist, too, in all that grandeur, sublimity, and power which could form in an atmosphere the “breath of life”—must indeed be deficient in probability, much less in truth, if it does not follow the same Creator into the great scheme of Life, Death, and Immortality.

27. Following the evolutionist, I must now ask into what animal form or forms was the vegetable first transmuted? Upon this point the evolutionist is silent, for he has floated his theory upon the unknown seas of speculation.

28. In the vegetable world “the plasm” has already worked out wonders without end. It has evolved the thousands of different forms which exist over the globe. It has “adapted” each plant to its peculiar soil and climate; it has provided each plant with a distinct and often widely different mode of propagating its own species. Some of the most beautiful provisions of the kind have been pointed out by Mr. Darwin himself in his admirable work on the *Fertilization of Orchids*.

29. But the "plasm" has now much higher and more complex duties to fulfil. It has to people the air and the water with living beings; it has to evolve creatures with structures so complicated that the highest wisdom and genius of man often fails to unravel or explain them; it has to evolve forms not only in themselves complete but having organs each adapted to its peculiar function, and each organ again more or less dependent upon its fellow; and it is an absolute necessity that they should go on evolving from "blind force to consciousness and will," from the psyche of the plant to the instinct of the animal, and from this to the reasoning mind and immortal soul of man.

30. Such is "Evolution," its duties and responsibilities under the most favourable aspects; it is believed by many excellent and good men, who consider it consistent with religious belief. I need hardly say, however, that such a mode of the origin of species has no basis of proof, nor, in my opinion, of probability even, in its favour. Were it true, it would be merely a mode of creation with the Creator replaced by a *Deus ex machinâ* of human invention. Why should we accord to a God of the imagination that honour which we would thus deny to the God of Nature and Revelation? As Agassiz, the great American naturalist, has well said, the work of creation is not such as a master mind would relegate to a workman—it is work which shows in every step of its progress the guidance of a designing All-Powerful Creator. Mr. St. G. Mivart, in his *Genesis of Species*, remarks, "without a distinct belief in a personal God, it is impossible to have any religion worthy of the name; and no one can at the same time accept the Christian religion and deny the dogma of creation."

31. The two extracts just quoted, however, express widely different phases of thought. Agassiz endeavours to prove, and to my mind he does so conclusively, that creation is personal and direct. Mr. St. George Mivart believes in evolution, with the exception of the soul of man, which he thinks was created when "God breathed into his nostrils the breath of life."

32. But the life and the soul of man are two entirely different and inconvertible terms. The supposition, for it is nothing more, of their identity must also break down, because it necessarily assumes that there was a time when man's corporeal frame existed without a soul, which is equally repugnant to common sense and authority.

33. I now proceed to examine more carefully some of the utterances of Mr. Darwin and his followers as they affect their belief in the evolution theory. The fourth edition of the *Origin of Species* of Mr. Darwin ends thus:—"There is

grandeur in this view of life with its several powers, having been originally breathed by the Creator into a few forms, or into one; and that whilst this planet has gone cycling on according to the fixed laws of gravity, from so simple a beginning, endless forms, most beautiful and most wonderful, have been and are evolved."

34. This passage, even from its apparent clearness and simplicity, has caused many very erroneous notions as to what is Mr. Darwin's real doctrine. Contrast the passage quoted with the following, taken from the Preface to the same work:— "As many more individuals of *each species* are born than can possibly survive; and as, consequently, there is a frequently recurring struggle for existence, it follows that any being, if it vary, however slightly, in any manner profitable to itself, under the complex and sometimes varying conditions of life, will have a better *chance* of surviving, and thus be naturally selected."

35. We are now, mark, on Mr. Darwin's own line. Natural selection, as explained by him in the last paragraph, is the corner-stone of his entire theory,—it is the backbone of Darwinism. And yet what are we told? If so and so occurs, then the species will have a better *chance* of surviving. There cannot be here a superintending Creator, for He trusts nothing to chance; neither can creation be thus carried out by law according to the evolution theory; for a Divine law *must* be perfect—unchangeable, irrevocable. It cannot contain within it the elements of chance.

36. At page 64 of the same work Mr. Darwin writes:— "Where many species of a genus have been formed through variation, *circumstances have been favourable to variation*; and hence we might expect that the circumstances would generally be still favourable to variation. On the other hand, if we look at each species as a special act of creation, there is an apparent reason why more varieties should occur in a group having many species than in one having few."

37. But surely a potentially-endowed plasm—or laws implanted in matter by the Creator for the purpose of evolution—would not differ from those which would be the result of special creation? We have, therefore, Mr. Darwin's own word that he does not intend to avail himself of either of the above alternatives.

38. On page 157 of the same work, however, Mr. Darwin states explicitly, "I have hitherto sometimes spoken as if the variations so common and multiform in organic beings under domestication, and in a lesser degree in those in a state of nature, had been due to chance. This, of course, is a wholly incorrect expression, but it serves to acknowledge plainly our

ignorance of the cause of each particular variation." After stating with great care all that is known about the causes, Mr. Darwin fails to establish any law of variation. He comes to the conclusion that "our ignorance of the laws of variation is profound. Not in one case out of a hundred can we pretend to assign any reason why this or that part differs more or less from the same part in the parents;" and he summarizes the questions thus:—"Whatever the cause may be of each slight difference in the offspring from their parents—and a cause for each must exist,—it is the steady accumulation through natural selection of such differences when beneficial to the individual, that gives rise to all the more important modifications of structure by which the innumerable beings on the face of the earth are enabled to struggle with each other, and the best adapted to survive."

39. From the above quotations it is easy to tabulate what Mr. Darwin means.

1. The word "chance" is used instead of saying "we don't know."
2. We are profoundly ignorant of the causes of variation, therefore, to cover our ignorance, he says, "they vary by chance."
3. All variations are governed by the same law.
4. Natural selection is the power by which all such variations are accumulated for the benefit of the creature, and to enable it to be among the "survivals of the fittest."

40. Natural selection, therefore, is the keystone of Darwin's philosophy. But what, I think we may fairly ask, has become of the potentially-endowed plasm? Does it contain "natural selection" among its "laws"? It cannot be, because the imperfection of the power as a means of creation has been proved by Mr. St. George Mivart and admitted by Mr. Darwin, and a Divine law must be supreme, perfect, unchangeable.

41. It is, however, in his latest work, the *Descent of Man*, that Mr. Darwin has most decidedly rejected a Divine guidance and power in creation. The limits of this paper will not allow me to make many quotations.

42. Perhaps the most significant utterance on this point is that in which he argues (vol. i. pp. 66-7) about the probability of religion having its origin in dreams. "It is probable, as Mr. Tyler has clearly shown, that dreams may have first given rise to the notion of spirits," and "the belief in spiritual agencies would easily pass into the belief in the existence of one or more gods." And so, according to Mr. Darwin's views, was religion "evolved."

43. In support of his views he quotes Mr. Herbert Spencer's article in the *Fortnightly Review* of May 1, 1870, p. 538, and then he continues: "No being could experience so complex an emotion (that of religious devotion) until advanced in his intellectual and moral faculties to at least a moderately high level. Nevertheless, we see some distinct approach to this state of mind in the deep love of a dog for its master associated with complete submission, some fear, and perhaps some other feelings."

44. It will not be necessary for me to follow Mr. Darwin over the gulf which separates the animal from man. I need not dwell upon the fruitless effort to prove that reason has been evolved from the lower psychical attributes of brutes, nor need I stay to refute the theory that man's consciousness, his language, his spiritual nature, and his immortality, are the result of "natural selection" and the "survival of the fittest."

45. There is perhaps nothing more astounding in the history of the human mind and the literature of our time than the fact that men of reputation and scholars can be found who hold that a belief in such hypotheses as are included in Darwinism and evolution are consistent with Christianity and the revelation of Holy Scripture.

46. The principal argument used by such men is that Mr. Darwin's critics do not understand Mr. Darwin. But this is a poor subterfuge. The "Darwinian calculus" is by no means a difficult thing to solve. If Mr. Darwin has some *arrière pensée*, which he merely foreshadows in ambiguous language, we shall, no doubt, be enlightened by-and-by. In the meantime we must remember that critics may themselves be deficient in the necessary knowledge to form a sound opinion upon the writings of Mr. Darwin's opponents.

47. Whether this be so or not, there can be no difficulty in comprehension by the meanest capacity of the following passage, which I requote: "It is quite possible, as Mr. Tyler has clearly shown, that dreams may have given rise to the notion of spirits, and the belief in spiritual agencies would easily pass into the belief in the existence of one or more gods."

48. It is childish to tell us that such a passage can be misunderstood, or mistaken for anything but a theory of the origin of religion which it professes to be. Is it possible to hold such opinions and to teach such doctrines consistently with a belief in revelation or of natural theology?

49. With regard to the utterances of Mr. Darwin's followers I will now make some quotations and remarks. How far the evolution of the "formless to the formed; the inorganic to the organic; or blind force to conscious intellect and will," is consistent with a belief in the Creator of the Bible, who,

we are told, created distinctly and separately each division of organic nature, I need not stop to inquire. Neither need I dwell upon a "a self-regulating universe," nor the belief that the world "would not come to chaos if left to law alone."* Such opinions are contradicted over and over again in the Bible, which teaches that "not a sparrow shall fall to the ground" without His knowledge.

50. Mr. Herbert Spencer tells us that special creation, which is the creation of the Bible, is worthless by its "derivation," which is, of course, the Bible; "worthless in its intrinsic incoherence; worthless as absolutely without evidence."

51. Surely such language as this is plain enough to be understood by those who are not included in the mysterious bonds of Darwinism. Mr. Herbert Spencer has written two volumes upon a Biology founded on Darwinism; but he has the candour to tell us he does not believe in the "current theology."

52. In a recent review in *Nature*, July 11, 1872, of a work called the *Martyrdom of Man*, we are told that the author, after working out the evolution of animal and human faculties, goes on to "urge all enlightened men to take part in the great work of demolishing one of those institutions which, once the highest attainable, has now become injurious. *Christianity must be destroyed.*" And he concludes his work in these words: 'But a season of mental anguish is at hand, and through this we must pass in order that our prosperity may rise. *The soul must be sacrificed, the hope in immortality must die.* A sweet and charming illusion must be taken from the human race, as youth and beauty vanish never to return.'

53. As a commentary upon these horrid statements, the reviewer, who is the principal writer in the chief organ of Darwinism, instead of expressing disgust at the publication of such impious trash, contents himself with calling the author's anti-Christianity "fanatical," and advising him to "turn his experience and ability as an ethnologist to the doing of more solid work in some special department of his *science*"!

54. In a paper read before the British Association at Brighton, this year (1872), entitled, "On Aims and Instruments of Scientific Thought," by Professor W. K. Clifford, the author comes to the conclusion that, "By saying that the order of events is reasonable we do not mean that *everything has a purpose*, or that everything can be explained, or that *everything has a cause*, for neither of these is true."

55. Among the arguments by which this "purposeless" and "causeless" theory is arrived at, we find the following:—

* Wallace.

After showing how men come to the conclusion "that the order of nature was reasonable in the sense that everything was adapted to some good end," he continues, "Further consideration, however, has led men out of the conclusion in two different ways." He then attempts to show that the case has been wrongly stated; that wonderful structures can be found that serve no good purpose at all; referring to the useless teeth of whales—the eyes of the mole being perfect in the young and destroyed in the adult—the uselessness of our own external ears—and he continues thus: "The eye, regarded as an optical instrument of human manufacture, was thus described by Helmholtz, the physiologist, who learned physics for the sake of his physiology, and mathematics for the sake of his physics, and is now in the first rank of all three. He said: 'If an optician sent me that as an instrument, I should send it back to him with grave reproaches for the carelessness of his work, and demand the return of my money.'"

56. Professor Clifford's second reason for denying "adaptation to some good end" is that, "both the adaptation and the non-adaptation which occur in organic structures have been *explained*. The scientific thought of Darwin, Herbert Spencer, and Mr. Wallace has described that hitherto unknown process of adaptation as consisting of perfectly well-known and familiar processes."

57. Here we have Darwinism shown to destroy our teleological view of nature, which it is often denied that it does. And this is effected by such weak arguments as the rudiments of teeth in the whale, forgetting the adaptation which replaces the useless organs; the blindness of the mole, which can easily be proved to be untrue; the uselessness of our external ears, which are well known to concentrate the waves of sound; and the scientific arrogance which can see imperfection in one of the most perfect and the most beautiful works of God.*

58. Another effect of Darwinism may be witnessed in the recent attempt by a strong disciple of the school to deprive mankind of the great and inestimable privilege of prayer.

* A friend of mine assures me that if a live mole be confined in a box, although all its efforts are concentrated in the desire to get out at the bottom by burrowing, if a finger is introduced carefully and slowly at the part furthest from the animal, it will immediately make a rush at it. Every one also knows that if the waves of sound are not sufficiently concentrated to suit partially deaf people, they elongate the external ear with their hands, and thus hear more plainly. A celebrated London physician in an address to a public scientific body, said that if he had to make a man he would make him without tonsils, for they are of no use. This statement is absolutely untrue, as the merest tyro in physiology full well knows. This is another instance of "scientific arrogance."

Professor Tyndall and his unknown physician must bear all the consequences of this revolting and mistaken movement. It is impossible to conceive anything more dreadful than the proposition made by these men, founded as it is upon ignorance of the meaning, the objects, and the value of the greatest of all human blessings.

59. If not the direct result of Darwinism, which I believe it to be, this discussion displays at least the utter want of religious feelings among its disciples. Is man to dictate to God? Is man to put God upon his trial? Is the great Omnipotent to be placed in parallelism with the self-glorifying and presumptuous aspirations of scepticism? Alas for the day when the Christian should be deprived of the privilege of praying to his God! It has been well remarked by the editor of the *Sunday Magazine* for October, 1872, "There is something very melancholy in the endeavour, in the name of science, to deprive us of one of our highest privileges. If the views of Tyndall and Galton should be established, the awful dream of John Paul Richter would become nearly a reality. 'I wandered to the farthest verge of creation, and there I saw a socket where an eye should have been, and I heard the shriek of a fatherless world.'"

60. In *Fraser's Magazine* for April, 1872, there is a paper under the signature of L. S., entitled "Darwinism and Divinity." The writer of the article holds the opinion that the doctrine of evolution should appear harmless, because "Every sincere believer ought to hold that religion depends upon certain instincts, whose existence cannot be explained away by any possible account of the mode by which they came into existence."

61. This is a good example of the manner in which religion is treated by the disciples of Darwin. Of course it suits the doctrine to argue that religion depends upon "certain instincts." Having thus begged the question, the writer proceeds:—"A little more straining of a few phrases which have proved themselves sufficiently elastic, and the first obvious difficulty may be removed. The first chapter of Genesis has survived Sir Charles Lyell; it may be stretched sufficiently to include Mr. Darwin."

62. But before this can be done, the writer considers that "a certain change is being brought about by the application of that method of which Darwinism is at present the most conspicuous example. Possibly the change may be of even greater importance. Certainly it is of far too great importance to be more than dimly indicated here. Briefly, it may be described as the substitution of belief in gradual evolution for a belief in spasmodic action and occasional outbursts of creative energy: of the acceptance of the corollary that we must seek

for further explanation of facts or ideas by *tracing their history* instead of accounting for them by some *à priori* method; and this is the adoption of the historical method in all manner of investigations into social, political, and religious problems, which were formerly solved by a much more summary, if not more satisfactory method."

63. The open attack which is here made upon Holy Scripture is unmistakable. I could not have adduced a better example of Darwinism, as it affects religious thought, than by this substitution of an unproved hypothesis for the inspired Word of God.

64. The same writer, a fair example of the Darwinian school and a shining light among those who are constantly expressing their anger because Christian men cannot reconcile their philosophy with Christianity, admits as fully as possible the position which Darwinism holds to religion. His remarks ought to put an end at once and for ever to the claims of those who profess that Christianity and Darwinism are compatible with each other. For example, he thus writes:—" Darwinism does not make it more difficult to believe in a God. But," he continues, "it is true *that it weakens that conception of the Creator* which supposes Him to intervene at stated periods, in order to give an impulse to the machinery. . . . There is another doctrine, which seems to be more nearly affected; and probably, although we seldom give open expression to our fears, it is this tendency which is really the animating cause of the alarm which is obviously felt. *Does not the new theory make it difficult to believe in immortal souls?*"

65. Now all this is written by a man of evident ability, a firm believer in Darwinism, and it is published in a journal edited by the historian Froude. I cannot, therefore, be accused of selecting a partial advocate of the doctrine, but rather one who expresses his own belief in Darwinism, and who is therefore a trustworthy witness of any views as to the effect of " Darwinism upon religious thought."

66. As a further and striking example of the effect of Darwinism upon religious thought, I may refer to the first of a series of "international" scientific works lately published, entitled *The Forms of Water in Clouds, Rivers, and Glaciers*, by Professor Tyndall, a series of works intended for the instruction of the rising generation.

67. Count Rumford, a man of great and original genius, occupied many "pages of his well-known book" in applying to the Design of Providence the law that water when freezing contracts down to 37 degrees, and then suddenly expands down to 32 degrees, the freezing-point.

68. By this beautiful and adaptive law the ice necessarily becomes lighter than water, and so, floating at the top, all the inhabitants of the freezing water are saved from destruction; for if ice were heavier than water it would fall to the bottom, and thus gradually the entire water would be frozen.

69. Professor Tyndall states that Count Rumford's inference is unsound, because he described the property of freezing water as the only instance in nature, while it is now known that iron and bismuth do the same thing; that is to say, they "require more room in the solid crystalline condition than in the adjacent molten condition"; and he remarks, "There is no fish to be taken care of here, still the 'contrivance' is the same." Now, surely this is shallow and inconclusive reasoning. Because the law mentioned obtains when we melt two metals, therefore there is no contrivance when it is applied to all living things in the waters of the world where water freezes? Count Rumford was talking eloquently about the evident design of a Providence. Professor Tyndall thinks that because the law exists where the philosopher can see no contrivance or design—where, in fact, it would be impossible to see either—viz., in the crucible of the laboratory—it cannot be providential or designing when applied to the preservation of myriads of living things; and he concludes his unscientific, unphilosophic, and gratuitously irreligious criticism by remarking: "But both life and its conditions set forth the operations of inscrutable Power. We know not its origin, we know not its end. And the presumption, if not the degradation, rests with those who place upon the throne of the universe a magnified image of themselves, and make its doings a mere colossal imitation of their own."*

70. Of course the philosopher who writes thus does not believe in his Bible. I should be sorry to make such a statement lightly, but I will quote the writer's own words.

"Man himself, they say, has made his appearance in the world since that time of ice (the Glacial period); but of the real period and manner of man's introduction little is professed to be known, since to make them square with science, *new meanings have been found for the beautiful myths and stories in the Bible.*"

71. It certainly appears to me that a philosophy which places the Bible in such terms before the youth of the world must prove most injurious to the healthy settlement of "religious thought," which is at all times in the young susceptible of false impressions. Such philosophers altogether forget that they have to prove that the Bible is untrue. I much question whether

* *Op. cit.*, p. 125; *Op. cit.*, pp. 151-2.

either Mr. Tyndall or Mr. Darwin is capable of such a demonstration. Most certainly the Bible has an infinitely sounder foundation than Darwinism.

72. We are told over and over again by writers that they can hold simultaneously a belief in Darwinism and what Herbert Spencer calls the "current theology." Happy, indeed, are such men. They could not, of course, hold any terms with those who would deprive us of prayer, destroy a belief in the immortality of the soul, write down Christianity like the *Westminster* and other reviews, nor pander to the infidelity and scepticism which is creeping like a serpent through the vitals of society!

73. I contend that I have proved my case that Darwinism, whatever may be its merits as a philosophy, has been most disastrous in its effects upon religious thought; and that the right-minded among its followers are powerless to prevent the effects of such so-called science upon the progress and well-being of mankind.

74. I have a few words to say, in conclusion, upon what I consider is the real position of man in the organic world.

75. One of the greatest biologists of the age has but two or three years ago passed away to his rest. My memory lingers, with a sad and melancholy feeling of pleasure upon the life, the works, the genius, the character of the late Professor Goodsir, of the University of Edinburgh.

76. As a rule, comparisons between men of fame are invidious, for they are too often coloured by the opinions and convictions of him who compares. Few, however, if any, will be found to dispute the fact, that the man who for twenty years and upwards taught the largest anatomical class in the United Kingdom, the zealous and indefatigable worker in Anatomy and Physiology, both human and comparative, the original thinker, the man of genius, the Christian and the philosopher—John Goodsir—was one of the foremost men of his age.

77. For twelve months I had the inestimable pleasure of listening to his eloquent and sound teaching, and therefore I may readily be believed when I acknowledge that I am proud to be a disciple of his school, and a believer in his faith.

78. Now Professor Goodsir maintained, with all the learning and original thought for which his name will be remembered when Darwinism and most of its believers will be forgotten, that man is entirely separated from animals by reason of his spiritual nature, and that he stands alone in the great work of Creation.

79. Morphologically—that is to say, structurally—he is correlated with the animal, and therefore we may freely present the Darwinian with his supernumerary or useless organs. But

just as the animal is corporeally and psychically far higher than the plant, so in his corporeal, psychical, and spiritual nature is man far higher and distinct from the animal. Therefore, says Professor Goodsir, "Man, in virtue of his possession of a spiritual principle, by which alone he is capable of thought and speech, and is impressed with the belief of moral truth and divine agency, stands alone among organized beings of the globe."*

80. And again:—"To my apprehension, man's possession of a spiritual principle entirely excludes him from the scale of mere animal being, even although he possesses an animal body." †

81. But Professor Goodsir does not stop here. He proves to my mind, absolutely without any drawback, that man could never have been evolved, even physically, from the animal. He remarks: "An organism adapted to a spiritual end, and capable of acting in space in the most perfect manner, *must* be more highly developed than one not so adapted." ‡

82. The limits of this paper will not permit me to adduce Professor Goodsir's evidence upon this point. But I must quote him once or twice more. "Why," he asks, "should man alone, of all the living beings on the globe, have been left so unfettered that his welfare should depend on his own choice?" And he continues: "Herein lies the great mystery of humanity, on the existence of which depends that *religiosity* which is characteristic of every form of the human race. The consciousness of untruth and of error, in some form or other, exists in every modification of man; and it is equally certain that all the vicissitudes of human history and all the distress against which man has had to struggle, have been directly due to his tendency to untruth, and his liability to error." §

83. From these extracts it will be observed that a great and a good man did not hesitate to support his scientific investigations by direct references to the records of Revelation. He laid it down as a principle, "that although we are not to look to the revealed record for scientific forms of statement, we are nevertheless, from its character, entitled to assume that whenever statements are made bearing on the intellectual, moral, and religious departments of the economy of man, in their relations to his material economy and conditions of present and future existence, the sense or bearing of these statements will not only be not contradictory, but, on the contrary, confirmatory of the scientific results of human research. On the grounds already

* *Anatomical Memoirs*, vol. i. p. 271.

† *Op. cit.*, p. 275.

‡ *Op. cit.*, p. 276.

§ *Op. cit.*, p. 277.

stated," he continues, "we are bound to guard ourselves against the conscious or unconscious assumption that the development of humanity can be legitimately or safely investigated as an anthropological subject without reference to the primitive condition of man as presented to us in the revealed record."

84. Tried by such a standard, what becomes of the philosophy of Mr. Darwin? Can we reconcile the origin of religion from dreams, with the revelation of Holy Scripture? Can we bring the potentially-endowed plasm—the tendency to vary—the "struggle for existence"—the "survival of the fittest," and the consequent incoming of living beings into the world around us, into unison with Revelation?

85. I maintain that Darwinism in all its forms has been most disastrous to the religious thought of the present age.

The CHAIRMAN.—I trust that all present will unite with me in awarding their cordial thanks to Dr. Bree for his able paper. I shall now be glad to hear any observations upon it, either from members of the Institute or from our visitors.

Rev. W. J. IRONS, D.D.—I have listened with great attention to Dr. Bree's paper; but there is one subject which arises towards its close on which I desire to say a word. It seems by some to be assumed that we are to deal with questions of this kind in the first instance by advancing our own interpretation of the Bible, and then arguing from it as established. Now, it is quite conceivable that propositions held in common by all scientific men, on this subject of Darwinism, may be different from those interpretations of Scripture, and yet be retained with entire reverence for the letter of the Holy Scripture. If we look back through the whole course of religious thought during the last thousand years, we certainly find elements of Darwinism; and people have arrived at the conclusion that the created universe, from the very lowest organism to the highest form of intellect, consists of a series. We need not be startled at this fact, if it be a fact; and if the interpretations we have been accustomed to apply to Holy Scripture may at first seem to be in collision with much that now may have been arrived at, we must not complain if we are called upon to face the matter in a philosophical and truthful spirit. I do not think, for a moment, that Dr. Bree will hesitate to admit what I am thus saying; but I consider the tone of his paper is rather hostile to the notion that we may contemplate these questions by themselves, and leave Holy Scripture to stand entirely upon its own merits. This, however, is my proposition. For my part, I thoroughly believe—and, as a clergyman, I need not insist very strongly upon it—that the Bible is the word of God; but I am quite prepared to let this point stand by itself. Such is my faith in the Bible that I believe it can fully take care of itself, and that we need not be in a state of perpetual fear about it. Then, on the other hand, I am also content to trust in nature, that

is, the laws of God which we come in contact with in this world. I believe that God's laws, in the whole world of nature, are well worth our investigation, and that we ought not to flinch from anything in those laws, or in facts of nature, because they may, in the first instance, seem opposed to the received view of Scripture. We have plenty of time before us, and we can afford to be quite calm about the matter. To be perpetually, as some phrase it, "throwing the Bible at the head of the infidel," I am sure only irritates him, without doing any good to our cause; and although I am quite sure that this is not the intention of the writer of the paper, yet he will, I trust, forgive me if I say that I think it will appear to be his view to many persons who read it. A considerable number of paragraphs in the paper we have heard wind up with the same climax, namely, that "this is quite contrary to the Bible." Now, I do not think that this is exactly the way in which scientific questions ought to be treated. I say, let each question stand on its own basis. If we were here to discuss the connection between a biblical conclusion and a scientific conclusion, we should have to examine very clearly what the biblical conclusion was; and then I think we should all be, to use a common expression, at sixes and sevens, for we should not be quite clear as to what biblical conclusion people were going to put into opposition to a scientific conclusion; therefore I should be glad if this kind of reference to Holy Scripture were kept as much as possible in the background in these discussions. There is nothing at all inconsistent with the laws of God in the statement of His having created all things in series; for there is, undoubtedly, an entire series evidenced both in moral and physical creation; just as in one case we begin with the merest creatures of inorganic, or almost inorganic, existence, and rise from them to the highest organizations; so, in the other, do we begin with the lowest movements of life, perception and instinct, until we arrive at thought and will, and so on; not implying for a moment that the one was derived from the other; but that it pleased Almighty God to give that series of beings in regular order, creation after creation, regulating the one in proportion to, and rising above the other. I do not know whether I am making myself intelligible; but I am anxious to express a feeling which I am sure pervades a large number of intelligent men in London and elsewhere, when I say that there is no need whatever to place Darwinism, or to place any of the present results or proceedings of science, in *a priori* antagonism with revelation. There is quite enough of real antagonism going on without our adding to it in this way. I believe that that awful passage which is quoted in Dr. Bree's paper, wherein an avowal is made, by some persons, of a desire to get rid of Christianity, is by no means an expression of unusual fanaticism. That unhappy feeling is, I believe, spreading, and this is a solemn reality which is not to be confronted by any mere nibbling. I say further, that when we take up a scientific subject, and deal with it in a mixed manner, as though it brought into question at once the truth of the Bible, we are nibbling at the whole matter. (Hear, hear.) That is not what I call going to the root of it. I would advise that the two things should be kept quite distinct. But one thing is quite clear, and that is that this paper has elicited the fact that some

gentlemen who write on scientific subjects are themselves very ignorant of our side ; in fact, that they know nothing about it. (Hear, hear.) What, I ask, would be said of any one who should attempt to give a lecture on a language he had never studied? I once knew, as a matter of fact, of a gentleman who, in mere exuberance of spirits, and, I suppose, because he was in reality very clever, and had a good deal of address, attended a meeting, and passed a whole evening among its friends, to whom he was given out as Professor of Arabic in a celebrated university, without his knowing a word of the language. (Laughter.) He made a few unintelligible remarks, and, although he was among university men and others, he passed off as an Arabic professor. How easy it is for people to acquire character without knowledge. He was that sort of man who could handle a few facts in a most adroit way, and produce an effect upon those who knew nothing, because he knew a little, or pretended to it. It is just in the same way that people of little knowledge talk against the Bible, and we take up their views and objections, and find many of them are of the most childish kind. When we treat them with respect, and place them in antagonism with some solemn scientific theories, we are doing deep injustice to the Bible, and we are also doing an unfair thing to the poor fellows who know nothing about the matter, and whom we treat as if they did. We should try to make them understand that theology is not only a science, but, as we believe it to be, the queen of sciences ; that we are anxious to teach them what is true on our side, and are willing to be taught ourselves what is true on their side, if they will only teach us. Do not, however, let us mix up crudities with the science of theology. There seems to me a little of this in the paper to-night, and without the slightest wish to offend the learned writer, I would so far object to it on the ground I have stated, much as I admire the paper on other grounds. (Hear, hear.)

Admiral HALSTEAD.—I have been much pained by Dr. Irons' remarks, and wish to ask what is to be the effect of infidel teaching—not upon those who are grown up, but on the thinking youth of the country—if those whose duty it is to do so do not endeavour to counteract it in every possible way? (Hear.) I maintain that the danger lies with our youth, and therefore I say it is necessary for us to distinguish between truth and imposture. (Hear.)

Rev. J. H. TITCOMB.—Although I concur with the meeting in thanking the author for having given us much that is very interesting and valuable, and in perfect harmony with our own thoughts as religious men, yet I think that some of the points he has set himself to prove have not been proven ; and that the points which have been proved in the paper lead us to an issue on which there is an inconclusive sequence raised. First of all, in section 12, the author says: "I undertake to prove that a belief in Darwinism and Revelation is incompatible and irreconcilable." Now, I wish it to be understood that I do not in the slightest degree believe in Darwinism, nor do I think it has been at all proved, and many scientific men of the day concur in this judgment. We are not

bound, as a scientific society, to accept it as a thing proved in any sense such as certainly the scientific discoveries of Sir Isaac Newton. Darwinism is a thing which is now on its trial before the scientific world : it is in a period of probation. A great deal may be said for it, and a great deal may also be said against it ; but this is not the question before us. For my own part I heartily wish that this paper had been constructed, as Dr. Irons has suggested, entirely on a scientific basis, and totally irrespective of the bearings of the question upon Scripture ; but that line has not been taken, and the unfortunate part of the paper seems to me to be, that in some measure it proves Darwinism to be consistent with Scripture. Of course I am well aware that this is not intended. Thus in section 17 it is stated that Darwinism necessitates the creation, or the existence, of a vegetable world before the creation of an animal world,—the very statement made in the first chapter of the *Book of Genesis*.

Dr. BREE.—You have misread the passage. In it I state what, in my own belief, must have been the sequence, if evolution were true.

Mr. TITCOMB.—That is the point. Darwinism, properly understood, does take that line. It assumes the precedence of inorganic evolution from molecular atoms ; and (as I understand it) of vegetating evolution also, previous to the evolution of animal life from its first protoplasm. Hence the passage in section 18 of the paper, which seems to say that Darwinism must be wrong, because the vegetable world must have preceded the animal world, is, in my judgment, a *non sequitur* altogether. So far as it may be used as an argument it rather confirms Moses, and puts Darwinism on a scriptural basis ; for the argument here used is that Darwinism, if true, requires us to believe that vegetation was created before animal life.

Dr. BREE.—Allow me to mention that you have misapprehended my meaning. In detailing the views you refer to, I was stating what I considered was essentially necessary for evolution to effect, supposing that doctrine to be true. I pointed out that it must take that line ; but I did not say that was the line taken by the evolutionists. Quite the contrary : they do not believe anything of the kind.

Mr. TITCOMB.—That is a matter of opinion. I believe that if Darwin were here he would say there has been the same amount of matter ever since the first creation, although by the correlation of forces there have been a variety of shapes in which that matter has existed. He would go back to inorganic matter, to molecular atoms scattered throughout the universe, which must have preceded by long ages the first germ of life. The whole theory of modern science, and of the school we are now discussing, seems to me to require this.

Dr. IRONS.—Were those molecular atoms all homogeneous, or was there a great variety of them ?

Mr. TITCOMB.—I believe the Darwinian school hold that there was a great variety ; and the theory of Huxley and Darwin is that they preceded the origin of life.

Dr. IRONS.—Is it their theory that the atoms were all homogeneous? Were they all of the same kind, or was there a great variety?

Mr. TITCOMB.—That would only complicate the question. It does not matter whether they were homogeneous or not.

Dr. BREE.—Darwin does not say anything on the subject. He only speaks of one or more forms of life, and he does not confine himself to vegetable life.

Dr. IRONS.—You say “one or more forms of life”?

Dr. BREE.—I will read Dr. Darwin's words :—“There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms, or into one.” He here alludes to the beginning of things. Nothing can be clearer than these words; and it will be seen that he alludes neither to vegetable nor to any other form of life. He merely says “a few forms.”

The CHAIRMAN.—I must request that the discussion of this paper may not be allowed to descend into a conversation.

Mr. TITCOMB.—I have to thank the chairman for ruling as he has done. Mr. Darwin makes no reference to anything that is not biological, simply because the theory he has to deal with, is from first to last biological, and this accounts for his not referring to the vegetable world, or to the atmosphere, or to the inorganic world, in any of his books. If he were here, I am sure he would allow that the first germ of life was long subsequent to the creation of inorganic matter. On this ground I say that the argument raised against his view as necessitating the fact of the vegetable world having come first, is out of place, and that in this instance Darwinism is rather in harmony with the Word of God than opposed to it. I am not here espousing the doctrines of Darwin, but I like to see justice done even to those with whom I disagree. Another argument that has been raised against Darwin is, that his theory involves the admission that there is no superintending Creator. There can be no doubt that this is unfortunately the tendency of the doctrine he lays down; but the question with which we have to deal is, does it of necessity involve this doctrine? The fact is, that God is actually present sustaining all natural law; and the law of evolution itself cannot in any sense, according to my judgment, be opposed to divine action. There is the idea of persistent volition running throughout and in contact with all the laws of nature by night and by day,—an interpenetration, if I may so speak, of God's Spirit, by which we have God's presence acting in and upon, and working with and about, every department of nature ceaselessly, continuously from the first act of creation to the last. It appears to me that in this way you get the idea of a superintending Creator and providence, and that this is quite consistent with the theory of evolution. It is said, and said very properly, that this doctrine appears to drive God a long way back, and to constitute Him merely one who created a set of laws and certain matter, and then left them to themselves. I grant that this is what Wallace and others, who are free-thinkers, say about it; but I ask whether they have a right to say so? I will take the case of my own church organ, which is rather a large one. The organist sits at some distance from the instrument, nevertheless

by the mechanical means at his disposal, he is constantly evolving all the sounds and notes it is capable of producing. He is far removed from the organ pipes; and yet without his action on them they would not sound. In a similar way, although the action of the Creator may have been at first only such as to impress His omnipotence on that which He was pleased to create, so that it might, by a series of self-developing laws, as they are called, evolve first one form and then another, yet that is no proof that He is not working the whole set of laws throughout, by His omnipotent agency. What I want to point out is this; that the laws of nature cannot act by themselves, or of their own independent motion. There must be an intellectual agency working with and behind those laws, otherwise they would be dead. This paper has called them "blind laws." Well, I have here a short extract from a work by Professor Owen, who says, in a passage to which I am unable at the present moment to give a more particular reference: "Natural evolution, by means of slow physical and organic operations, through long ages, is not the less clearly recognizable as the act of an adaptive mind." Again he says: "The succession of species by continuously operating law is not necessarily a blind operation." Also: "Organisms may be evolved in ordinary succession, stage after stage, towards a foreseen goal, and the broad features of the course may still show the unmistakable impress of Divine volition."—I will now venture to refer to section 35 of the paper we are discussing. The author has made some remarks on chance, which I think are scarcely fair. He takes exception to the use of the word "chance" as implying something in relation to the operation of laws of which we are ignorant. Why, sir, that is the very meaning of the word chance; and I do not think the argument a right one to urge against the term. If I take up some dice, and after rattling them in a box I throw them down, I say the result is a matter of chance; but it is none the less by law that the numbers are thrown because I use that term. I know that it is in accordance with certain laws only, but I am not cognizant of the exact mode of their operation. And so when Darwin enters into the laws of causation, he is the first to confess his own ignorance, in the same way as one is led to say that the dice fall by chance. Even the Scripture chroniclers speak in the same way. They tell us that "By chance there came down a certain priest that way;" meaning that it was by some means inscrutable to them, and which they did not understand. The very fact of their using the word would imply that it was by God's agency, although they speak of it in a human sense, as having been by chance. In the same way although I should say if I were a Darwinian, that natural selection might be brought about by laws which I know nothing of, I should still, as a Christian, hold that those laws are the appointed ends of a superintending Creator. It is on this point that I think the paper is not quite fair to Mr. Darwin. Still less is it fair to Dr. Tyndall. I hold in my hand the October number of the *Contemporary Review*, which contains an article on "Prayer" by Professor Tyndall. The paper we have heard to-night most distinctly asserts that Professor Tyndall denies, and puts out of the

rational of human life or thought, the power and privilege of prayer. The author of this paper says: "Another effect of Darwinism may be witnessed in the recent attempt by a strong disciple of the school to deprive mankind of the great and inestimable privilege of prayer." Now, I take exception to this statement, because all that Professor Tyndall says* is, that there is no place for what he calls "physical prayer;" but he distinguishes between that form of prayer which has for its object the alteration of Nature or Nature's laws, or the asking of anything physical and exceptional from God in reply to prayer, such as a change of the weather or anything of that sort, and other kinds of prayer which do not ask for these things. He says: "It is under this aspect alone that the scientific student, as far as I represent him, has any wish to meddle with prayer. He simply says physical prayer is not the legitimate domain of devotion." This is a very different position from that which is implied in the wholesale statement that he would "deprive mankind of the great and inestimable privilege of prayer." It is not for me to say what Professor Tyndall believes in the secrecy of his own heart; but I like to do justice even to an opponent. To my mind the paper we have listened to proves most distinctly that Darwinism is damaging and dangerous to religious thought; and I was glad to hear Admiral Halstead speak of its effects upon the young, for we can never be too jealous of the effects of new scientific doctrines on the minds of youth. What we, as seniors, may think, is of comparatively little importance: but what the young may think is of the greatest importance. (Hear, hear.) Therefore I allow that in this sense Darwinism is most dangerous, and I think that the arguments in the paper prove it to be dangerous. And yet, even here, there seems to be an inconclusive sequence raised on this proved point. The author of the paper says: "I contend that I have proved my case, that Darwinism, whatever its merits as a philosophy, has been most disastrous in its effects upon religious thought," and the reader is led to conclude that, because its effects are dangerous, therefore it is most objectionable, and ought to be altogether rejected. Of course we all know that if a fire be very strong, it is dangerous to go too near it; but this does not prove that it is wrong to have a fire. And so with regard to Darwinism. Arguing logically, it is possible that it may be true, and yet its effects very bad. Galileo's discoveries gave rise to an immense amount of infidelity; and the same may be said of other great investigators of scientific truths. Indeed, it is the tendency of all science to be deemed in the first instance in conflict with popular theology. The right solution of the difficulty is to keep the two for ever distinct. Science and Scripture will never be out of harmony while the one is rightly interpreted, and the other rightly proved; but in this case one is not proved, and the other, as Dr. Irons has said, may be very divergently interpreted. To my mind the paper we have heard read is a valuable one; but I hold that it is inconsequential, inasmuch as the author does not prove all he undertakes,

* This subject has been fully dealt with by Dr. Irons in the present volume, and by Professor Kirk in the second volume. [Ed.]

and because in what he does prove, he seems to raise an inconsequential sequence.

Rev. W. ARTHUR.—There is one point which has been raised by the last speaker which I think may to some extent be said to have been met. Mr. Titcomb seemed to think that the argument on the 16th section of the paper was that life must have existed antecedently to vegetation. To my mind the argument in the paper is a very different one. It assumes, as Mr. Titcomb has very justly pointed out, just what we have in the Mosaic description, namely, that vegetation preceded animal life. But the argument is not merely that vegetation preceded animal life; but that if animal life came only by evolution, this doctrine “makes it necessary that the vegetable forms of life must have covered the earth with verdure before the evolution of animal life; inasmuch as almost each animal in the world has its own plant, or class of plants, upon which it feeds. Therefore all plants, or the greater part of them, must have gone through their battles and struggles, and been selected and become species before the animals which feed upon them were evolved, or the latter would have been starved.” This is a totally different argument from that which Mr. Titcomb conceived it to be, and goes to prove that the whole flora of the world must have existed before the fauna began to be developed, and I think it is an argument requiring a good deal of consideration. (Hear, hear.) I agree in what has been said as to the desirability of keeping the scientific argument on a strictly scientific ground, and in the assumption that upon all questions between the Bible and science, the Bible will take care of itself. At the same time we ought to be very careful when we assume that, if we admit there is a series in creation, we come very near to development. I believe the two things are totally distinct. I believe with regard to the question of a series ascending from the lowest depths to the highest we yet know of, which is man, that if you fill up the series so completely that you leave no kind of interval whatever, there is nothing in experience alone with which science has to deal which will lead you to ascribe the result to evolution, but that everything in experience absolutely requires us to attribute it to one presiding mind with one great object, which has dealt with each great type so as to advance it endlessly towards innumerable adaptations. For the sake of illustration, if you take the wheel, you see at first the original block wheel, without felloes, spokes, or nave; then you come to a wheel with these component parts, then to the tired wheel, the cog-wheel, the bucket-wheel, and so on, developed into almost endless varieties, and in a perfect series. I ask you is it a scientific conclusion that these wheels have developed themselves—that the process of evolution has been going on, and that by a scheme of natural selection the rude block wheel has developed itself into the balance-wheel of a watch? (Hear, hear.) The scientific conclusion is that the wheel has been developed by a mind which, having a type before it, adapted it to the different purposes for which wheels are required. This is the conclusion which experience would suggest, and not the conclusion that Darwinism would favour. I am glad to have heard the strong expressions that have

been used as to the necessity of doing justice to those whom we feel bound to oppose. I am sure that of all, clerical men ought to be the first to do so; but I am convinced that in continually throwing the Bible at the heads of infidels, as it has been phrased, you do not do this. I am certain, however, that on purely scientific grounds any one, looking at the position in which the Bible stands in relation to human history, cannot but feel that, as a man of science, he ought to pause long before knocking his head against that wall; but when he has done so and been brought up, I would then meet him entirely on scientific grounds, and say, "Is the fact so and so, and is this or that inference logical or not?" I believe there is much in the arguments that appear to prove that Darwinism has not made good its propositions, and that in many of its inferences is has been very wild. (Hear, hear.)

Dr. J. A. FRASER.—I wish to ask whether injustice has not been done, probably unintentionally, to another person besides the one already mentioned. I allude to what appears in section 19 of the paper, to the effect that "it has been suggested by a man of great eminence as a physicist, that vegetable life may have been evolved in another planet, and have been thrown on to our earth when such planet broke up, by means of a meteoric stone." Now, has it not been repeatedly stated, not perhaps by the author of the theory himself, but by others for him, that this was intended more as a joke than anything else? I believe it is generally so regarded, even if it has not been specifically stated by the author.

Rev. C. A. ROW.—Dr. Irons has already forestalled the remarks I had intended to have made, and I can only say that I most cordially assent to his observations. I think that there is a defect in the beginning of this paper,—it seems to make Darwinism stand for a great number of opinions entertained by various individuals, instead of the opinions of Darwin himself. The author of the paper tells us this, and it has produced in my mind considerable confusion. I may illustrate the undesirableness of putting the subject in this light, by saying that if we were to speak of the opinions of Socrates as Socraticism, it would be very undesirable to include under that term the opinions of Plato and Aristotle, as well as of the new and old Academies, and of the Cynics and the Stoics. To do this would only lead to endless confusion of thought; and it appears to me that this paper ought to distinguish between the principles of evolution as held by atheists, those held by Darwin, and those entertained by men who believe in Revelation. It is a most undesirable proceeding to lay down the proposition, that a belief in the Darwinian theory is inconsistent with belief in an intelligent Creator. We have already quite enough enemies to oppose, without adding needless ones. I think that in dealing with infidels we ought to follow as closely as we can what is said respecting our Divine Master—"A bruised reed shall He not break, and the smoking flax He shall not quench." I have been informed that Darwin holds a belief in theism. When we consider that there are such a vast number of opponents of revelation, it seems to me in the highest degree unadvisable to represent that

every modern theory of science, of which we may not be able to see the logical conclusion, is necessarily opposed to the belief in a living God. (Hear.) I am not defending the Darwinian theory, be it clearly understood, for as yet it seems to me to be utterly unproved. There is, however, another view to be taken of this subject, and that is, that the theory of development, as distinguished from the special theory of Darwinism, can be made to aid the arguments used for Divine Revelation. Among the great difficulties which meet us, there is that of the exceeding slow growth of Christianity. This is a difficulty that has struck my mind very forcibly, and there is also another difficulty in the slow and gradual development of Revelation itself. There are no two objections which are urged against us more frequently, or more persistently, by unbelievers than these. My reply to these objections is this: "You are bringing as an objection against Christianity, what you hold to be an actual truth respecting the elaboration of creation; you are urging as an argument against my Christianity that which you hold to be an absolute law of creation in the evolution of this world; and therefore if God Almighty be the actual Creator of this globe, if He has elaborated by slow and gradual processes this earth and all that it contains, I am fully entitled to expect that Revelation will follow the same law of slow and gradual evolution, and therefore that Christianity must require a considerable period before it commands the assent of the entire human race." (Hear, hear.)

Mr. I. T. PRICHARD.—I wish to make one or two remarks in reference to this discussion; and the first is with regard to what has been said by Dr. Irons, and endorsed by one or two speakers who have followed him; namely, that we ought to avoid, as much as possible, throwing the Bible at the heads of opponents. Now, I feel bound to take exception to that remark, because I do not think that it is a tendency on our part, or on the part of those who discuss matters of this kind on our side, to throw the Bible at the heads of our opponents. On the contrary, it is we who have the Bible thrown at our heads by those who oppose us. (Hear, hear.) Without entering into a discussion of the paper, of which I beg to express my humble and deep admiration, I would simply suggest that in cases of this kind it is not we who are the assailants, but our opponents of the scientific sceptical world, if I may use the term without intending it in any offensive sense. I do not see how such a theory as the Darwinian, with the conclusions it professes to lay before us—conclusions which affect, necessarily, the question of the origin of man—can be started without assailing the belief we have in the Bible, and it is in this sense only that I mean the Bible is thrown at our heads, and we are acting on the defensive, and not at all upon the offensive. To this extent, therefore, I differ from the remarks of Dr. Irons, and one or two others by whom they have been approved. It is a matter of regret to me that we labour under one disadvantage in this Society—if I may be allowed to point out a fault in our organization—and that is that unfortunately our discussions are sometimes all on one side. (Hear.) I was in great hopes that we should have had some here to-night who would have stood up as the advocates of the Darwinian theory; but unfortunately that has not been the

case. Had the Darwinians come forward, I should have been prepared to meet them on scientific grounds ; but as they have not appeared, I think it is hardly worth while to take up the time of the meeting by answering arguments which they might be supposed to have brought forward.

Rev. C. GRAHAM.—I desire to say that I go with Dr. Bree in the arguments he has brought before us this evening. Mr. Darwin, in the general summary in his work on the *Descent of Man*, says that he who is not content to look like a savage at the phenomena of nature, cannot any longer believe that man is the work of a separate creation. Now, are we to hide from ourselves the fact that the Bible is most distinct on this subject—that it is distinctly stated that God said “Let us make man in our image, after our likeness,” and that it is clearly set forth that “in the image of God created He him ; male and female created He them” ? And are we also to conceal from ourselves this fact, that the Bible most distinctly sets forth that the grasses, the herbs, the fruit-trees and the whole flora of the world were created after their kind—[*leminehu*—] each after its kind. Any Hebrew scholar will know that *min* means “form,” “species,” or “kind.” We have it not merely in *Genesis*, but also in the 11th of Leviticus, where, in the mention made of the creatures that are clean, and that are fit to be used by Israel as food, you have it continually repeated, each “after his kind,” and it is not merely *leminehu*—or each after its kind—but *leminehim*, all brought together, and each created after its kind. I take it that it is quite within the province of this Society to show what such supposed science really is—for it is not science, and I think that some of the greatest scientific men here are quite ready to agree with me. Are we not to come out distinctly and boldly in defence of the Bible ? If I am mistaken about my view of separate creations, I am quite willing to be corrected by Dr. Irons, or by any one else competent to do so ; but as I have read my Bible, and looked into the originals, and as I have studied theology, I have been taught, and have learnt from my Bible distinct creations. (Hear.) But Mr. Darwin says he has destroyed this, and glories in the fact. I believe that Darwinism is subversive of truth, as it is disclosed in natural and revealed religion. There is not a distinguishing feature in Revelation that Darwinism does not contradict. Perhaps I may be permitted to say a word or two on the psychological aspect of the subject. Man has a conscience ; he has an instinct which impels him to judge the moral qualities of his actions and thoughts, and I ask, will you find that instinct which enables him to do this, which condemns or approves, which gives pleasure or inflicts pain, in any inferior creature ? Dr. Bree has shown that animals must have been developed from vegetables, if the Darwinian theory be correct. I ask, will you get a conscience in a vegetable—will you find in any portion of the vegetable kingdom a moral nature, or an ethical nature, or the apprehension of a God ? Mr. Darwin’s designation of conscience is a most unfortunate one. He develops conscience from an instinct, and from associated feelings ; but he has no reference to any Divine standard of truth—he makes no reference in what he says of conscience to a God. He has, in fact, no apprehension of conscience

rightly understood. The very idea of conscience implies a reference to, and a comparison between, our actions and a Divine standard—a reference to something objective and outside man. Take man's ethical nature. Is there one single principle of an ethical nature in an inferior animal? Here we have not to reason about a dog; you will have to go lower down; you must go to the jelly-fish and the vegetable, and in that case, with regard to a God, where can the notion be drawn from? How is it developed? Can we know God in His nature and character, and His claims on us, and what it is necessary to do to meet those claims, without a revelation? But everything is developed. Our religious nature, our knowledge, our conscience, our ethical and moral natures are all developed; but if you have no principle from which to develop conscience, how can you get conscience, or a moral nature? Mr. Darwin almost concedes what I am saying, and yet he holds to his theory. He almost tells you in so many words that the theory is untenable, and yet he clings to it, and he considers us "savages" if we do not agree with what he says. Why, sir, this is not science.

Rev. J. JAMES.—It was publicly stated at Leeds not long since, and the statement has not been contradicted, that the French Academy has declined to permit the nomination of Mr. Darwin as a candidate for admission thereto, on the ground that his public works were unscientific in their psychological character. I wish to ask whether there is any foundation for this statement?

Dr. BREE.—Mr. Darwin is stated to have been proposed for election by the French Academy three times, and to have been rejected each time. I believe this was entirely on the ground that his work is not scientific.

Mr. T. W. MASTERMAN.—If I have rightly understood the theory of evolution, it starts from this basis, that many things are created not "very good," but very imperfect; that they become in process of time, by development, "very good," and that if they have not already attained to perfection, they will shortly arrive at that state. It is also maintained that there are some things which were created "very good;" but which have, in process of time, deteriorated, and less useful for the purposes for which they were first designed. This being a part of the theory of evolution, I contend that the author of the paper is quite right in stating that the advocates of that theory cannot consistently believe in eternal God, who is the God of nature, as well as of revelation, and not a mere fancied God of man's creation. I consider that Dr. Bree is right in linking together all the arguments that he has used to defend revelation, and it seems to me that in every paper, read before this Society, taking up questions of this kind, we ought, and must, refer to revelation, or we shall fail to carry out some of the great objects for which we are associated. I agree also in the remark made by one of the speakers at the other end of the room, when he said it is not we who take up the Bible for the purpose of throwing it at other men's heads, but rather our opponents who take it up, and we who stand on the defensive. I think it a glorious thing that this Society contends for a belief in the God of Revelation, and all that is given to us in the Inspired volume. (Hear.) I consider Dr.

Bree has succeeded in showing that Darwinism may tend to an attack on religious thought, and I have been surprised to hear some members take Mr. Darwin's side.

THE HON. SECRETARY.—I think they merely stated what they conceived to be Mr. Darwin's views, in order that those views might be made known in the absence of Mr. Darwin's own friends, several of whom were supplied with copies of Dr. Bree's paper, and invited to attend this meeting; unfortunately they have failed to put in an appearance, which is to be regretted, because it has rather damped the interest which might otherwise have attached to the discussion. It may interest many present if I relate the substance of a conversation I had the other day with Dr. Parker, the President of the Microscopical Society. He showed me the results of a large number of experiments which he and Professor Huxley have been making, and stated that up to the present time their labours at South Kensington had failed to prove the connection between man and the rest of creation—in fact there was, he said, no point at which they appeared to join. He added :—

“ We can classify, and have classified, the whole of the animal kingdom that we are acquainted with. We have put all the different animals into their separate places, and we have constantly got hold of man, and tried to put him into his place; but he would fit nowhere. There is such an immeasurable gulf between him, with all his attributes, and the rest of creation, and everything tends to prove that he must have been a separate creation.” (Hear, hear.)

I give these as being as near as possible the *ipsissima verba* of Dr. Parker, than whom, I think, there is not a much higher authority in England. With regard to the remarks to the effect that Sir William Thompson had said, or had allowed others to say for him, that his theory of vegetation coming to us from another planet, by means of meteoric stones, was only a joke,—I fear I must remark that this is the only excuse which a number of his friends, and some newspapers, have been able to make for his having, as a man of science, put forward such a theory. (Hear, hear.)

DR. BREE.—I do not think we have any cause to regret that no professed Darwinian is present, for I am sure that if there had been, he could not have stated the arguments in favour of Mr. Darwin's theories more ably, or more pointedly, than one or two of the speakers we have heard. With regard to Sir William Thompson's meteoric theory being a joke on his part, those who say this must remember that the theory was propounded in his Address before the British Association, with just as much gravity as characterized the assertion of Dr. Hooker at Norwich, that almost all the philosophers of the world were Darwinians. Sir William Thompson is a great physicist; but Dr. Lionel Beale expressly states, in his *Life Theories* and *Religious Thought*, that in his opinion that part of Darwinism which includes the evolution of living beings by physical laws, is utterly opposed to every principle of religion; and, therefore, I am astonished when I hear it stated that the doctrine of evolution is consistent with the Bible. Had I possessed the time, I

should have gone into the Biblical question myself ; but have only made one slight quotation. I have a right, however, to assume that all here have a perfect knowledge of the Bible and a fair knowledge of Darwinism. I say, therefore, that it is impossible to speak of Darwinism without mixing up the views of Darwin with those of his followers, because he has adopted many of the views of the latter. With regard to Dr. Irons' remarks, I think we have a right to take the Bible as proved to be true, and to refer to it as a truthful record of all that we believe and advance on its authority, and I scarcely think investigation will show that the principles of Darwinism may be held consistently with certain interpretations of the Bible ; but no interpretation would support the theory of the evolution of man from a monkey, or the origin of religion from dreams. In regard to this, let us not forget the remark of the reviewer in *Fraser's Magazine*, who states " that as the first chapter of *Genesis* has survived Sir Charles Lyell, it may be stretched sufficiently to include Mr. Darwin." If we are to go upon these grounds, it is of little use for us to argue the question. In order to discuss it properly, we must have two distinct bases to go upon ; we must understand Darwinism, and we must understand the Bible, and, if we are to have different interpretations of the Bible, I think there is an end of the discussion. Dr. Irons said he believed that the Bible was the word of God, and that it would take care of itself. True ; but few are aware of the extent to which infidel notions are being actively spread, and this is often done by bringing forward human inventions and unproved hypotheses, such as, in my opinion, are those of Mr. Darwin. My object in bringing the subject forward has been, to point out a few facts showing the language used by learned men of great ability ; men such as Mr. Huxley, who has been made secretary of the Royal Society,—a first-rate man no doubt, but holding very extreme views, who states that he believes the world arose from a cosmical cloud of matter, and that if you were to suppose an intelligence like ours existed in the beginning, that intelligence could have foretold, knowing the power of molecular forces, the whole evolution of the world as it now is !—an argument that renders it necessary first to assume that which is impossible, and then argue from it. With regard to the objection made by a clergyman as to the introduction of Scripture, I think if we were to keep Scripture out, the necessity for these discussions would cease. The whole argument against Darwinism is that an unproved hypothesis is sapping the very foundations of Religion, and I, for one, will never cease to agitate this question on scientific grounds. Again, a speaker has said that we are throwing the Bible too freely at the heads of our opponents. I do not think so. The fact is that we are simply Christians desirous of preserving our belief in the Bible, and who do not want to believe that which one man of great ability has made fashionable. I am old enough to remember the days of Tom Paine and Voltaire, and poor Lawrence, the surgeon ; they were driven out of society, and yet none of them went to the lengths to which Darwin and others in our own day have gone. In the one case, men who expressed these peculiar views were hunted out of the world ; in the other, we are told that we should receive the strange doctrines we hear

propounded, because their authors are scientific men. Mr. Titcomb says we are not bound to accept Mr. Darwin at present; but that he believes some portions of Darwinism are consistent with Religion. Now, I believe that Darwinism must be taken as a whole, and that it has yet to be reconciled with the records of the Bible; hence I cannot agree with him. He argued that we were not bound to accept Darwinism as proved, and adduced the observations made in the paper as indicative that the order of evolution, commencing first with vegetative, and then with animal life, was in accordance with the Mosaic theory. But I did not for a moment contend that my line of evolution was that which would be accepted by the evolutionist, but merely that it was the line which I considered the exigencies of his case *required* him to adopt, and it was intended by me as an argument against evolution. Suppose that the world was covered with verdure by means of the potentiality with which the first germ was endowed, there would be myriads upon myriads of spots on the earth where the power to vary into an animal ought to be evolved, which would throw the whole matter into an absurd position. Mr. Titcomb spoke of infinite molecules existing *before* the first germ of life came into being. Granted; but is it even probable that the Creator would have taken some of these molecules—converted them into living matter—endowing them with a potentiality by which they would be evolved in myriads upon myriads of years into all the living world we see around us! Surely, such a mode of creation is not consistent with the teachings of the Bible? He further asks “Does Darwinism of necessity imply that there is no Providence in Nature?” I think it does. If the disciple of Mr. Darwin, or the evolutionist, were to put an exterior power as the cause of the changes which they say are produced by “blind force,” there would be an end to one of the strongest objections to the theory. But then why use the terms “Natural selection,” “variation,” “struggle for existence,” “survival of fittest”? These elements of evolution are incompatible with an external Divine power, which Mr. Titcomb will admit is the doctrine of the Bible. Where, in such a case, would be the necessity for elaborate works to prove that the “blind forces” of nature are sufficient to evolve a living being? or that the world is “self-regulative” and self-adjusting? The opinion cannot be entertained for a moment. The same speaker has objected to my applying the word “chance” to Mr. Darwin’s description of the mode by which variations caused “struggles for existence.” But I gave Mr. Darwin’s explanation, which purely removed the expression to that of “ignorance” of the cause of variation. If “chance” means “ignorance,” what does Mr. Darwin mean by the struggles for existence where the strong overcome the weak and survive as the fittest? Mr. Titcomb will perceive that the only alternative left is that God arranged that His creatures should be evolved from the lowest to the highest by *creating* the strong on purpose to subdue the *weak*, which is not, I think, a belief consistent with the teachings of Scripture. With regard to the objections to my strictures upon Professor Tyndall’s project for trusting the efficacy

of prayer, I think that they are answered in the quotation I gave from an eminent clergyman, whose opinion upon the subject is exactly like that formed by myself. The same speaker has also said, that I endeavoured to show that *because* Darwinism was injurious to religious thought, I seemed to infer that Darwinism is therefore not true, and he quoted geology as an instance of being true although it had been denounced as being opposed to Scripture. I do not think I am open to the first charge, as I endeavoured to show that Darwinism had no foundation, and then, by pretty conclusive evidence, to prove that it had been injurious to religious thought. With regard to another speaker's argument about Geology, I do not see that it applies to my own. Geology may be reconciled by some with different interpretations of Scripture,—Darwinism never can. Geology may seem to some incompatible with the narrative of Moses; but Darwinism affects Religion and the existence of a God of any kind. The facts of Geology are true and not irreconcilable with Scripture: Darwinism is not only untrue,—but as a theory it is inconsistent and irreconcilable with Scripture; while some of the strongest arguments against it are furnished by Geology itself. The Rev. Mr. Row mentioned he had heard that Mr. Darwin was a Theist; but he will grant that even the doctrines of a Theist cannot be placed on the same level as those which teach of a Saviour. He added that it was highly undesirable to represent every phase of science as opposed to a belief in God. Certainly, and most assuredly I agree with him. But if an unproved theory is raised by scientific men to a high pillar in the archives of science—if we are told that this crude hypothesis is one of the three great means by which science has *been advanced* during the last twenty-five years—and if such a crude unproved hypothesis strikes at the root of revelation and religion—I am sure he will grant that it is desirable to expose both the fallacies of the doctrine and its anti-religious teachings. The same speaker seems to think that God may have created the world consistently with evolution; but he has to prove that such a belief is consistent and true.

The Meeting was then adjourned.