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888TH ORDINARY GENERAL MEETING

HELD IN THE LECTURE HALL, NATIONAL SOCIETY FOR RELIGIOUS EDUCATION, 69, GREAT PETER STREET, S.W.1, ON MONDAY, 13TH FEBRUARY, 1950.

ERNEST WHITE, ESQ., M.B., B.S., IN THE CHAIR.

The Minutes of the previous Meeting were read, confirmed and signed.

The CHAIRMAN then called on E. J. G. Titterington, Esq., M.B.E., M.A., to read his paper entitled "The Early History of the Victoria Institute."

THE EARLY HISTORY OF THE VICTORIA INSTITUTE.

By E. J. G. TITTERINGTON, M.B.E., M.A.

SYNOPSIS.

This Paper contains a historical sketch of the origin of the Victoria Institute, together with an account of the principles on which it was founded. An attempt is made to assess the background of the thought of the age, and the state of development of physical science. It is shown how the Institute set about the task it had undertaken. Some reflections are made on the Institute's task in the changed circumstances of the present day.

THE years surrounding 1860 were years of ferment. Movements, of various character, were coming into being, which were to exert a profound influence in years to come. A common feature of these movements was that they often made a direct challenge to the Christian faith, and to the integrity of the Word of God. In the intellectual field there was an intense interest in the problems of natural science—a spirit of enquiry was abroad. Not that there was anything subversive in that; but the new discoveries, and more, the new hypotheses and speculations in the field of science furnished a weapon ready to the hand of those who wished to discredit the Scriptures, of which they were not slow to take advantage. Other movements were delivering their assaults from outside the Christian community, but the advocates of the new intellectual movement found powerful allies within the Church itself, and thus seemed at the time the more dangerous. Indeed, it is largely due to the undermining of the Christian faith from within that the assaults from without have had their measure of success.

The Origin of Species made its appearance in 1859, and Lyell's *Antiquity of Man* in 1863—books which immediately led to much discussion, but it was a long time before their full significance could be appreciated, and it was not always in the ranks of the Church that they found their chief critics. What caused more concern to Christians was the attack which was being made upon the Scriptures by Bishop Colenso and others, as they laboured with tongue and pen to declare their disbelief in much that Christians held dear, much as another bishop is doing to-day, but Bishop Colenso had many more followers. He was certainly not backward in declaring his faith (or the lack of it)—" The elementary truths of geological science flatly contradict the accounts of the Creation and the Deluge," and, " I have done my best to secure that the simple facts revealed by modern science . . . shall not be kept back from the heathen with whom my lot has been cast in the district of Natal."

But the real storm broke in 1861, with the publication of a volume under the title *Essays and Reviews*. This volume contained seven essays of very uneven quality, but all tinged in a greater or less degree with what to-day we term " modernism." The first essay, *The Education of the World*, was from the pen of Dr. Frederick Temple, and the last, on *The Interpretation of Scripture*, by Dr. Benjamin Jowett, and it was probably to these two great names that the volume owed much of its success. These two essays however were comparatively moderate in tone, and Dr. Jowett, though saying some things with which most of us would doubtless differ, gave some very much-needed advice which is as valuable to day as it was then. But it was rather the contributions of two of the lesser lights that provoked the storm—*On the Study of the Evidences of Christianity*, by Professor Baden-Powell, and *The Mosaic Cosmogony*, by C. W. Goodwin.

The volume had an astonishing success, running through at least eight editions in the year in which it appeared. Reading it to-day, one is surprised that it should have caused such a stir; if it first saw the light in our time it would probably have provoked some discussion in the popular press, some criticism and protest from the religious journals, and then have been quietly forgotten. But in 1861 its effect was electric. It seemed as though men's minds were moving in that direction and the ground was prepared for it. It was symptomatic of the thought of the age and, in its turn, helped forward that thought in the direction in which it was already moving.

These attacks on the credibility of the Scriptures, culminating in *Essays and Reviews*, provoked a strong and healthy reaction, one of the fruits of which was the issue in 1871 of the *Speaker's Commentary*.

Another outcome was the Victoria Institute.

The Institute owes its existence mainly, if not almost entirely, to one man, whose name ought always to be held by us in high honour—James Reddie, who became its first Secretary. After his death, he was referred to as the " Founder " of the Institute. It was due to his energy, his untiring zeal, his power to secure the co-operation of other men of influence, that the Institute came into existence. It was James Reddie who drew up its constitution and laid down the principles that should govern its activities ; and it is upon the lines laid down so long ago that the Institute carries on its work to-day.

Of James Reddie himself little can be discovered. He was an honorary member of the Dialectical Society of Edinburgh University, and there is a hint that he had at one time held some public office. We can learn more from the work he left behind him—*si monumentum requiris, circumspice.* How any one man could have performed all he did was a marvel. Whilst responsible for all the work that normally pertains to the office of Secretary, he found time to contribute several Papers of merit to the Society ; he intervened constantly, and with effect, in the discussions ; and he acted as Editor of the Journal—a much larger task than it is to-day, when papers were not only more numerous, but much more lengthy, and the discussions, which were reported verbatim, seemed to have no time limit. He lived to see the Institute established firmly on its feet, and died rather suddenly of heart disease in the early part of 1871. His health had not been good for some time and he had retired from the active secretaryship on February 1st preceding, though he continued to act as Honorary Secretary jointly with his successor until his death. The last Paper he contributed to the Institute was read on June 6th, 1870, and he continued to occupy the Chair at the meetings from time to time, the last occasion being on March 20th, 1871. A fortnight later he was dead, and on April 3rd a Special Meeting of the Council passed a Resolution in the following terms :

" The Council desire to record its deep sense of the loss which the Institute has sustained in the death of its late Honorary Secretary, Mr. James Reddie, and at the same time to express

the great honour with which it feels sure his name will ever be associated in its annals, not only as the Founder of the Institute, but as one who, uniting many literary and scientific attainments with untiring energy and zeal, proved eminently successful in contributing to its popularity and prosperity."[1] The Annual Address for the year was delivered by the Rev. Prebendary W. J. Irons, D.D. (the tradition that this should invariably be delivered by the President is a comparatively modern innovation), and in this address he paid the following tribute to Mr. Reddie :

" I had known our friend at least half his life ; and I can surely say—nor ought I to withhold it here, though elsewhere the Press has rightly honoured him as a public servant of high mark—but I feel bound to say, that so much fearlessness in truth, so much scorn of artifice, and inborn abhorrence of wrong, so much purity, rectitude and confidence in God, I have rarely known, as in James Reddie."[2]

So much for the man ; now for his work. The thought of a Christian Philosophical Society came to him as no sudden flash. To quote again from Dr. Irons' Address : " I well remember how, with that clearness and originality which distinguished him, he urged to me in private, long before he pressed it on the public, the need there would certainly be of a philosophical union among all ' who name the Name of Christ,' our common Lord, to confront the devastating literature which, in new and various forms, ultimately denies that Name."

The birthday of the Institute has always been regarded as May 24th, 1865—the birthday of Queen Victoria. Not that the Institute came into existence on that day ; all that happened was the issue to the Press, and to certain persons individually, of a Circular[3] inviting those interested to come together to form such a Society. The objects of the proposed Institution were defined in the following terms :

" It will be the business of the new Philosophical Institution to recognise no human science as ' established,' but to examine philosophically and freely, all that has passed as science, or is put forward as science, by individuals or in other societies ; whilst its members, having accepted Christianity as the revealed truth of God, will defend that truth against all mere human theories by subjecting them to the most rigid tests and criticisms."

[1] *Trans. V.I.* vi, p. 201.
[2] *Ibid.*, p. 285.
[3] *Trans. V.I.* i, p. 30.

Such was the response to this Circular that already by June 4th a second Circular was sent out, with an invitation to a preliminary meeting to be held on June 16th to consult together as to the bases upon which the new Society should be founded. This meeting was presided over by the Earl of Shaftesbury. Certain resolutions were passed and referred to a small sub-committee, who reported on June 22nd. The Objects and Terms of Membership of the Society were agreed upon, and in July a further Circular was issued inviting applications for membership.

The next important step was the issue in September of a somewhat lengthy document by Mr. Reddie, entitled "Scientia Scientiarum,"[1] in which he set out the objects and principles of the Society *seriatim*. The title of the document is explained as follows: "The Science of Sciences, in fact, is the proper co-relation of all the various sciences into one grand and consistent philosophy, which will be the interpretation of the nature of things as ordained by the one true God; and it does not require to be argued that each science should at least be consistent with itself. True lovers of Science, and all lovers of Truth, must surely unite in one desire to harmonise the conflicting elements of human speculations; and the members of the Victoria Institute may reasonably hope, that when this is done it will be found, that the highest human wisdom will be in accordance with the Wisdom of the One God, Who has created all things very good."

This document is of importance, because it lays down in detail the principles by which the Institute has been governed throughout its existence. It is too long to quote in full, but far too important to dismiss with a brief notice.

After referring to the supposed contradictions of Religion and Science put forward in *Essays and Reviews*, and promulgated by Bishop Colenso and others, the author cites a "Declaration of Students of the Natural and Physical Sciences," signed by upwards of 700 gentlemen, the greater number being members of the learned professions and fellows of scientific societies, which shows that those who were engaged in the defence of the Scriptures against attacks made upon them in the name of Science could count on powerful support from the ranks of Science itself. This Declaration opens with the words: "We, the undersigned Students of the Natural Sciences, desire to

[1] Reproduced in *Trans. V.I.* i, p. 5ff

express our sincere regret, that researches into scientific truth are perverted by some in our own times into occasion for casting doubt upon the Truth and Authenticity of the Holy Scriptures. We conceive that it is impossible for the Word of God, as written in God's book of nature, and God's Word written in Holy Scripture, to contradict one another, however much they may appear to differ."[1]

Then, referring to the first "Object" as given in the Institute's Constitution, there is a footnote: "One or two gentlemen who have otherwise and generally approved of the objects of the Victoria Institute, and one at least who has joined it, consider that this "Object" is somewhat too negative in its scope. They would have preferred that the primary object of the Society should have been to show positively how scientific discoveries illustrate and corroborate the truths of Revelation. Of course, it by no means follows that this view may not yet prevail in the Society. But it should be kept in mind that the Victoria Institute, as a matter of fact, originated as a defence movement. The first work, therefore, it has set its members and associates, is the investigation of the alleged facts and so-called science which Dr. Colenso, Dr. Temple, and others have publicly declared to be in opposition to Scripture statements."[2]

The conflict was shown to be, not between Religion and Science as such, but between those who regarded the Scriptures as infallible and those who regarded Science as the ultimate basis of truth. It was a question of the mental attitude with which the problems were approached. "It is simply a fact that they do distrust science, and do not mistrust the Scriptures; and, therefore, they are in a manner bound to see whether their distrust of science can be fully justified or not. Besides, it can be a matter of little moment whether they expect to find one result or another, so that their investigations are really 'full and impartial,' as they profess they shall be. But some might fairly retort—in fact, the objection has been made—that the admitted preconceptions thus entertained may interfere with the impartiality of such investigations. The members of the Victoria Institute cannot, of course, dispute the probable truth of that general proposition. But they may claim it as an argument equally applicable to those who differ with them, and

[1] *Trans. V.I.* i, p. 6.
[2] *Ibid.*, p. 9.

on the other side assume that science is always right, and who are therefore ready, with the writers of the *Essays and Reviews*, or Dr. Colenso, or with sceptics generally, to set aside Scripture, or force upon it new 'interpretations'."[1]

Proceeding to deal with the second of the Society's "Objects," the author shows how difficult it was then, as now, to secure an impartial hearing for views contrary to those generally held. "If the arguments and disproofs even already put forward by individuals were brought together and well weighed, the public would be astonished to find how much there was to be said against the acceptance of what some persons boast of as scientific truth. And, it may be admitted, they tacitly allege that opinions and facts and arguments which happen to be against the predominant opinions of the leading scientific men, have scarcely a fair chance of a hearing in the existing scientific societies, and, at least, that they lose all influence as against theories which happen to have the sanction of some man, or men, of high scientific reputation."[2] Truly, things have not changed much in eighty-five years!

The author then goes on to show that attempts to reconcile Religion and Science had not always been particularly happy. "Very numerous attempts were made by Hugh Miller and other eminent writers, to reconcile the Scriptural statements with every fresh scientific discovery or supposed discovery in geology. But, unfortunately, in all these efforts, the 'science' of the day was always apparently adopted with too much readiness, as if *it* required no probable essential correction, while Scripture alone was constantly tampered with, in order to get it to mean something different from what its plain language had previously seemed to imply. 'Science,' it may be said, was allowed to pass uncriticised, while Scripture was ever being subjected to fresh and far-fetched interpretations. . . . It would really have been to the credit of scientific men if they had applied to 'science' somewhat of that vigilance to detect its possible errors, its contradictions, and fallacies, which has been freely enough and too exclusively exercised in our day upon the statements of the Scriptures, by those who have accepted without the least examination and with an almost absolute credulity, often at second hand, all that has been passing for science upon the authority of a few names of great scientific repute."[3]

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[1] *Ibid.*, p. 9.
[2] *Ibid.*, p. 10.
[3] *Ibid.*, p. 23.

We then have the trenchant remark: "We have speculations enough and theories in addition, but they are rash and ill-considered, because the sciences have been too much separated, and the great majority have devoted their minds to the details of some narrow speciality."

We give one more quotation, referring to the third "Object": "(This) Object assumes, no doubt, a fundamental principle—the existence of the all-wise God. It therefore precludes the advocacy of atheistic theories in the Society. . . . It does so, simply because its members and associates, as indeed the great mass of the scientific and unscientific, of the literate and illiterate alike, in this country, have no manner of doubt whatever of the truth so assumed. . . . That constitutes a major proposition, which must necessarily override and *ipso facto* overthrow all opposite and conflicting hypotheses. To teach that truth, and establish it, pertains to the ministers of religion, and, therefore, it is excluded as a question to be investigated, from the objects of the Victoria Institute. So are all purely religious or theological propositions. Science, in all its branches and ramifications, is what the Society will be properly occupied with."[1]

What Mr. Reddie had said in *Scientia Scientiarum* was stressed again by the Rev. Walter Mitchell, M.A., the first Chairman of the Council, in his Inaugural Address to the Society:[2] "As Christians, as honest believers in the Bible as a record of revealed truth, we know that, in the history both of modern philosophy and modern science, avowed Christians have taken no mean or insignificant place. I will go further, and say, that Christians have held the highest place as discoverers of the laws of nature, interpreters of the phenomena of nature, and careful and honest observers of those facts upon which science is based. We have derived our faith in revealed religion neither from cold philosophical thought nor from the feeble deductions of science, but from the highest source of all truth—the revelation of God to mankind. We regard this faith as His gift, the gift of the Spirit of Truth; and, when we know how distinguished Christians, who have held and do hold this faith, have been in the paths of philosophy and science, we ask why we should not investigate the pretensions of modern philosophers

[1] *Ibid.*, p. 26.

[2] *Ibid.*, p. 47. Mr. Mitchell was one of the three original Vice-Presidents of the Institute. The others were Charles Henry Burnett, M.D., and Philip Henry Gosse, F.R.S.

and modern professors of science when they call upon us, as lovers of truth, to abandon our faith. We believe that our honest investigation of these objections will tend to strengthen the faith of those who have not the time or do not possess the necessary scientific education to investigate such questions for themselves.

"If asked why the Victoria Institute should be founded for such investigations I think I could give a very sufficient answer from my own experience. I know no other society or institution where such subjects could be discussed.

A purely theological society would not feel competent to entertain the scientific side of the discussion. A purely scientific society would repudiate the theological aspect."

This last point was again referred to at the first Ordinary Meeting of the Society, when Mr. Reddie remarked: "It had been a matter of much anxiety to those who originated this Society, to have it clearly defined what we were going to do, and what we were not going to do; and it may be considered as settled, that we ought not to enter upon what are strictly questions of scriptural exegesis. Such were rather matters for theologians, and not subjects for discussion at these meetings."[1] But Mr. Mitchell, who was in the Chair, qualified this: "The question of exegesis. I do not see how we can exclude it from our discussions. We have not only to determine whether an objection is really scientific; but if so, whether it is contrary to a fair interpretation of the Word of God."

These extracts make clear what was the boundary of the territory the new Society was proposing to occupy: what it was proposing to do, and what it was proposing not to do. In the forefront of its "Objects" was the scrutiny of all claims put forward in the name of Science, in order to determine what was truly science and what was not; and it was hoped by this means to put some curb on those who indulged in wild and fanciful speculations, through the knowledge that such speculations would not be allowed to pass without challenge. It was also hoped to make known the results of its deliberations, so as to remove the misconceptions in the minds of the public, who were not in a position themselves to assess the value of what was set before them, and were thus liable, as they still are, to take at face value anything put before them in the name of Science.

[1] *Trans. V.I.* i. p. 103.

A further expectation was, that by associating together workers in different fields, something might be done to correct the divergencies that arose from working in too water-tight compartments, and to co-ordinate the views of " Science " into one harmonious whole.

The Institute, when first formed, was in a fairly strong position. It was able to attract to its ranks many men of sufficient eminence in their respective fields to command respectful attention. Even in those days it was difficult for views contrary to those most generally held, or held by persons of repute, to find expression in the scientific societies; but the channels of communication were not so completely blocked as they are in our own day. In other words, the Institute was able in some degree at least to make its influence felt and its voice heard.

It enjoyed another advantage, in that it had a virgin field to cultivate. Any subject with which it chose to deal was fresh. It had not been exhausted by being worked over continuously. It was not difficult to find themes for discussion, and persons competent to deal with them—and most generally, within the ranks of the Society itself.

The first Paper presented to the Society at an Ordinary Meeting was a survey of the field to be covered, by George Warington, Esq., F.C.S., under the title, " A Sketch of the Existing Relations between Scripture and Science." This Paper briefly summarised the objections raised to the Scripture, and the lines of defence adopted. The objections were listed as being: " First—It is scientifically inaccurate. Second—It is historically untrue. Third—It is philosophically incredible. Fourth—It is theologically erroneous." An important point brought out in this paper was that, too often, the defence of the Scriptures is weakened by the differing and inconsistent arguments used in its support.

In order to arrive at a correct understanding of the endeavours and achievements of our predecessors, we need to try to form some picture in our mind of the intellectual atmosphere of the time. To do this, we can find a good starting point in Dr. Temple's opening essay in *Essays and Reviews*, on " The Education of the World." In this essay, Dr. Temple divided the history of the world into three periods, of childhood, youth and manhood, characterised respectively by the dominance of law, example and principle—or reason. Of course, he regarded his

own age as having arrived at the last stage, that of manhood. As we read these essays to-day, however, the predominant impression they create in the mind is of adolescence. There is a youthful cocksureness, the assertion of a superior wisdom, a haste to formulate final conclusions before there has been time to accumulate the facts, or to sift the facts when accumulated—an "Athenian" love of "telling, or hearing, some new thing."

There were other tendencies, too—the proclamation of philosophical dogmas as criteria of truth, of which Professor Baden Powell affords an example. There was the dogma of the "chain of endless causation," according to which, in the words of Scripture, "all things continue as they were from the beginning of the creation"—if indeed there were any creation. How far these antecedent hypotheses could be carried can be shown by some of Professor Powell's statements in *Essays and Reviews*: "those *antecedent* considerations which must govern our entire view of the subject, and which, being dependent on higher laws of belief, must be paramount to all *attestation*, or rather belong to a province distinct from it"[1]—he even goes so far as to say: "An event may be so incredible intrinsically as to set aside any degree of testimony";[2] and, "Testimony can avail nothing against reason."[3]

It will be seen, therefore, as we have already remarked, that it was not merely argument with which the Institute was confronted but rather a whole attitude of mind.

When we turn to science, we find that scientific thought was in a state of flux. The earlier volumes of the *Transactions* of the Institute contain evidence enough of this, sometimes in the Papers contributed to it, sometimes in references to views promulgated elsewhere. Speculation was forever overrunning observation. Theories were being propounded, dropped, and after a time taken up again, till one wonders how anything so variable could have been made the test of the truth of anything else. There is frequent reference to the abandonment, or supposed abandonment, of the Nebular hypothesis and the plutonic theory, which seemed to be regarded as a great triumph for the cause of truth. Even the theory of gravitation could be called in question.[4]

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[1] *Essays and Reviews*, p. 107.
[2] *Ibid.*, p. 106.
[3] *Ibid.*, p. 144.
[4] See *Trans. V.I.* ii, p. 376.

The early discussions show how very difficult it is to be really objective in our thinking; how much more prone we are than we commonly realise to believe what we want to believe, and reject what we do not want to believe. There was a definite tendency to welcome any scientific theory or doctrine which *seemed* to fit in with what the Scriptures were understood to teach, just as those on the other side were apt to welcome theories with an opposite tendency. So the discovery in the Lower Laurentian rocks of the formation known as Eozoon Canadense, whose organic origin never seems to have been doubted, was hailed with delight, as disproving for ever the existence of an azoic age—this because it seemed to make it easier to accept the Mosaic account of the Creation.

It was undoubtedly a source of weakness that science was not so highly specialised as it now is, so that anyone with a smattering of knowledge could consider himself competent to judge of scientific issues. On the other hand it did mean that men were able to cultivate interests wider than their own to a degree that is hardly possible in our day. And so we have it that a Paper might be contributed on the origin of speech by a professor of mathematics, or on geology by a professor of theology.

It is strange that so strong an objection should be felt against the theory of the igneous origin of the primary rocks—any theory seemed to be preferred to this. In one of the earliest Papers read before the Society, Evan Hopkins, C.E., F.G.S., a mining engineer, who had done some exploration in the Andes, contended that granite was formed by crystallisation out of an aqueous solution—else, where did the water of crystallisation come from? The objection raised by a chemist that there was not enough water in existence to hold the ingredients in saturated solution was waved aside quite unceremoniously. On another occasion granite was spoken of as a metamorphosed sedimentary rock, "converted into its present state probably by the enormous pressure exerted on this globe, and by the transformations which are continually going on by crystallisation."[1] Another author, willing to believe anything but that heat could be the agent, asked why electricity might not have been the cause.[2]

Even Mr. Reddie himself hazarded the suggestion that the whole of the chalk formation might have been laid down in a

[1] *Trans. V.I.* iv, p. 151.
[2] *Ibid.*, i, p. 367.

century or two. He based his calculation on the possible rate of increase of foraminifera by geometrical progression.

The height of absurdity was reached in another paper by Mr. Hopkins, when he sought to explain the existence of tropical fauna and flora in temperate and sub-arctic regions by means of a theory that the land masses of the earth were continually shifting northward, or rather north-westward, at an angle of 23° 30″ to the equator (approximately the angle of the Ecliptic), the northerly movement being at a rate of no less than 20″, or three furlongs per *annum*. Mr. Hopkins was of course faced with the question of what became of the masses as they approached the pole, but he was equal to that too. They must be absorbed somehow, to re-appear later (possibly by means of some electro-magnetic action) in the southern regions and start their northward journey again. "The oceans and the lands emerging from the Antarctic Pole, merge again into the Arctic Pole, and thus circulate from pole to pole through the medium of the earth's axis."

It might have been thought that this kind of absurdity would have discredited the Institute altogether, but this does not seem to have happened; perhaps because it was by no means confined to the Institute. It is easy to cite instances. Here, for example, is a quotation from a Blue Book: "Poisson, in his *Treatise on Heat*, assumed the excessive cold of space has a condensing effect on air, causing it to become viscous; and a very eminent mathematician (Sir John Lubbock) lately wrote to me, saying that he inclined to a similar view, if not to a belief in its actual *congelation*."[1]

Then there is the spectacle of the Anthropological Society "gravely discussing a theory of one of its leading members" (Rev. Dunbar Heath). This theory supposed that the original inhabitants of Europe were mutes, who learned to speak from some Aryans who appeared amongst them, but, either through failure to apprehend the sounds correctly, or by perversity, altered the sounds—hence Grimm's Law. So, says Mr. Heath: "Let some better theory than my own be propounded. At present there seems none other which professes to account for Grimm's Law."[2] (We have not space to quote Mr. Heath on the rationalisation of emotion in guinea pigs.)

Thus, if some of our early members were guilty of absurdity at

[1] *Ibid.*, i, p. 105.
[2] *Ibid.*, ii. pp. 193ff.

times, they were in good company. And after all, is it so much more absurd than Darwin's speculation on the origin of the eye, or Dr. Broom's guess, more recently, to which Mr. Dewar has drawn our attention[1]—a guess which has since been endorsed by Professor Haldane[2]—as to how the bones of the reptile jaw became transformed into the bones of the ear, etc., of the mammal ?

We may add also, that the examples we have quoted are not typical, and the standard of most of the papers read before the Society was of a high order. After the first year or so, the Society had really found its feet.

How uncritical men could be in matters of science can be illustrated by a Paper on the origin of speech, by Professor J. R. Young,[3] in which he propounded the questions : " First—*Could* man, placed speechless upon earth, without any external aid, have invented articulate language ? Second—*Would* he, of himself, have originated and elaborated speech, even if he could ? " Unfortunately, the Professor based his main argument on the reluctance of deaf persons to talk, quite overlooking that he was importing a whole series of irrelevant considerations that vitiated his argument. One of the members (Mr. George Warington) was quick to point this out, but the point seems to have been largely lost on the rest of the audience. Uncritical as the early members could be in matters of science, a dialectical point would be taken unerringly. This seems to indicate a difference between the education and mental training of their day and ours.

In spite of all that has been said, the Society did try as best it could to preserve an impartiality of outlook and an objective philosophical attitude towards the questions that came before it. It was quite prepared to hear the other side, if only it might be allowed to discuss freely what was put before it. As is stated in the preface to the fourth volume of the *Transactions* : " There has been nothing of that stagnant uniformity of opinion which some persons dreaded would characterise our proceedings, or render discussion almost impossible ; and it should be kept in mind, that the fulness of the reports of our discussions, which is one of the distinctive features of the Victoria Institute, enables the Council to accept of Papers with the conclusions of which

[1] *Ibid.*, lxxiv, p. 51.
[2] *Is Evolution a Myth ?* p. 35.
[3] *Trans. V.I.* i, p. 231ff.

they may not in the least agree, mainly in order that they may be fully, fairly and openly criticised."

But the Institute was still somewhat suspect in outside quarters. An interesting incident occurred in 1867, when Thomas Huxley addressed a meeting of clergy at Sion College on "the difference supposed to exist between scientific and clerical opinion." Mr. Reddie, who was present, invited him to repeat his observations before the Victoria Institute. In reporting how he declined to do so, Mr. Reddie remarked: "Professor Huxley said he thought it would be inconsistent with his dignity to appear before what he called 'the tribunal' of the Victoria Institute. In inviting him to come here, no idea of any tribunal ever entered my mind, except that of the reading and intelligent public."[1]

This incident, and its sequel, illustrates also another characteristic of the Institute while in the vigour of its youth—its watchfulness and energy in striving to meet any new attack, and to meet it promptly. For though the syllabus for the forthcoming session had already been drawn up, an extra meeting was arranged at which Mr. Reddie gave a Paper in reply to Professor Huxley's arguments.

This account would perhaps not be complete unless something were to be said about the meetings of the Society in its early years. These meetings must have occupied a much longer time than is practicable now—perhaps members did not have to disperse over such wide distances—and frequent reference is made to the late hour of adjournment. Men had large appetites for discussion, and evidently more leisure than we enjoy. The Papers themselves were often (though by no means always) of much greater length than those to which we are accustomed. Sometimes, but again not always, they were inflated by a certain prolixity of language, especially in the introduction. The second volume of the *Transactions*, for example, contains some Papers which are quite short, but also a Paper "On the Relation of Metaphysical and Physical Science to the Christian Doctrine of Prayer," by Professor John Kirk, extending to nearly 59 pages; another, by Mr. Reddie, on Geological Chronology, of 38 pages; and a highly mathematical Paper on crystallography by the Vice-President, Rev. Walter Mitchell, of no less than 68 pages. The discussions were equally lengthy, and it was not

[1] *Trans. V.I.* ii, p. 335.

so very uncommon for a discussion which was not complete at one meeting to be continued on another occasion. A topic was not left, in fact, till it had been thoroughly discussed to exhaustion. There was also the cut and thrust of debate, and the chairman had a by no means passive rôle.

Conclusion.

The foundations of the Institute were well and truly laid, and the original principles have stood the test of time. But other things have changed greatly in the course of the years, and our task is to find how these basic principles can best be applied to the problems of the twentieth century, as they were to those of the nineteenth.

The battleground has largely shifted, though the battle goes on. The contents of the first volume of the *Transactions*, which are given in an addendum to this Paper, will show the kind of question that mainly occupied the attention of the Institute when it was first formed. In the eighteen sixties the issues were mostly simple and clear cut, and they ranged for the most part over a comparatively limited field. There were, firstly, those questions that were related to geology and the kindred sciences: the Mosaic cosmogony, the Flood, and the antiquity of the human race: whether man was made in the image of God, or whether he has risen to his present estate from primitive barbarism. Then there was the question of miracle in all its bearings: its credibility, its purpose and the philosophy of miracle. And so we have an interesting survey of geological history, ranging from Herodotus and Pliny, through the sixteenth and seventeenth centuries down to our own day, by Professor Kirk (though the author does put forward some strange notions); two or three Papers on the origin of man, and papers on the general relations between religion and science.

There were two striking and significant omissions. First, the higher critical theories regarding the origin of the Scriptures: these came into prominence at a somewhat later date. And secondly, Darwinism. This second omission was speedily rectified, for in the second volume there were two Papers dealing with Darwinism, not as to whether it was true, but as to whether it was credible, the protagonists being Mr. George Warington, for the credibility, and on the other side, Mr. Reddie. These two Papers occupied two sessions, and a third session was devoted to a continuation of the discussion.

To-day, in the twentieth century, the field to be covered is immensely broader. The original questions that exercised the minds of the Institute have not ceased to exist, or interest, but they no longer hold the dominating position they did in the past. partly no doubt because there seems comparatively little fresh to say except occasionally to bring our knowledge up to date, but more because other problems have become more insistent. Perhaps also we may question whether these points have ceased to be the centre of attack because they have largely ceased to be defended ?

There has also been a change in the intellectual atmosphere since the eighteen sixties. Open attacks against the Christian faith are not much in fashion. The methods used are more subtle, and more difficult to meet. It is easy to answer the attacks, but by no means easy to make the answer heard. Then as regards science, it has become much more stabilised, and (except where the theory of evolution is concerned) much less inclined to be dogmatic. With every new discovery, there have opened up fresh vistas of discoveries still to come, and pride of achievement has been largely displaced by a humble recognition of how little we know as yet of all that is to be known. We have come to realise that there is no finality in our knowledge. And further, *a priori* philosophical assumptions, like those of Professor Baden Powell, are no longer allowed to stand in the way of the acceptance of evidence and the progress of investigation.

The Institute has had to adapt itself to the changing thought of the decades, and will doubtless do so again ; but its foundation principles still stand secure, and we may rest in confidence that the Victoria Institute will still have a function to fulfil, *ad majorem Dei gloriam.*

ADDENDUM I.

List of Papers included in the first volume of the *Transactions*.

1866	
June 4th ...	"A Sketch of the Existing Relations between Scripture and Science." By George Warington, F.C.S.
June 18th ...	"On the Difference between the Scope of Science and that of Revelation as Standards of Truth." By Charles Mountford Burnett, M.D.
July 2nd ...	"On Comparative Philology, with Reference to the Theories of Man's Origin." By Rev. Robinson Thornton, D.D.
July 16th ...	"On the Various Theories of Man's Past and Present Condition." By James Reddie, Esq.
November 19th	Address by Chairman (Rev. Walter Mitchell, M.A.), opening the Second Session.
	"On the Language of Gesticulation, and on the Origin of Speech." By Prof. J. R. Young.
December 3rd	"On Miracles: Their Compatibility with Philosophical Principles." By Rev. W. W. English, M.A.
	"Thoughts on Miracles." By Edward Burton Perry, Esq.
December 17th	"On the General Character of Geological Formations." By Evan Hopkins, Esq., C.E., F.G.S.
1867	
January 7th ...	"On the Past and Present Relations of Geological Science to the Sacred Scriptures." By Rev. John Kirk.
January 21st...	"On the Lessons Taught us by Geology in Regard to the Nature of God and the Position of Man." By Rev. James Brodie, M.A.
February 4th...	"On the Mutual Helpfulness of Theology and Natural Science." By John Hall Gladstone, Esq., Ph.D., F.R.S.
	"On Falling Stars and Meteorites." By Rev. Walter Mitchell, M.A.

ADDENDUM II.

EXTRACT FROM FIRST ANNUAL REPORT (MAY 1867)

Taking the numbers upon the Foundation Lists, the total assets for the year ending December 31st, 1866, amount to £959 14*s.* 0*d.* . . . For the present year (1867), taking the annual subscribers standing upon the lists on 1st May (and omitting . . . possible withdrawals), the assets will be as follows :—

		£	*s.*	*d.*
219	Foundation Members, at £2 2*s.*	459	18	0
3	Members at £2 2*s.*	6	6	0
	Do., Entrance Fees	3	3	0
15	First Class Associates	31	10	0
28	2nd Class Associates	29	8	0
265		£530	5	0
18	Vice-patrons, Life Members, and Life Associates			
283	Total			

This income is quite sufficient to meet the expenditure of the Institute, so far as the Council can yet venture to endeavour to carry out its Objects. Convenient apartments as offices, and for holding the meetings of the Society, have been secured, on moderate terms, from the Architectural Union Institute ; and the primary objects of the Society have been already successfully advanced by the various papers read and discussed at the ordinary meetings of the Institute. But it must be obvious that before Objects 6 and 7 can be hoped to be undertaken or realised, there must be a large accession of numbers and an increase of the funds of the Society, and that thoroughly qualified paid officers must be employed to aid in carrying out these objects to the full extent contemplated. At present there is only one paid officer of the Society, Mr. C. H. H. Stewart, who is engaged as clerk at a moderate salary.

FIRST ANNUAL BALANCE SHEET FROM 24TH MAY, 1865 TO 31ST DECEMBER, 1866.

RECEIPTS.

	£	s.	d.
1 Vice Patron and Life Member	63	0	0
9 Life Members at £21 each	189	0	0
187 Annual Members at £2 2s. each	392	14	0
11 Associates (1st Class) at £2 2s. each annually	23	2	0
3 Life Associates (2nd Class) at £10 10s. each	31	10	0
22 Associates (2nd Class) at £1 1s. each annually	23	2	0
1 Ditto Subscription for 1867	1	1	0
A Subscriber (per J. J. Lidgett, Esq.)	1	1	0
Journals sold at Office	0	10	0
	£725	0	0
Balance in the Bank	46	0	8
Subscriptions for 1866 *since paid* :—			
1 Vice Patron and Life Member	63	0	0
3 Life Members	63	0	0
13 Annual Members	27	6	0
1 Associate (2nd Class)....	1	1	0
Carried forward	£200	7	8

EXPENDITURE.

	£	s.	d.
To Wyman and Sons, for Printing	170	18	0
,, Warrington, for Printing	12	11	8
,, Ortner and Houle, for Engraving	9	15	11
,, Hardwicke, for Scientia Scientiarum	26	2	8
,, Salary of late Assistant Secretary (6 months)	50	0	0
,, Salary of present Clerk (6 months)	26	0	0
,, Giles, for Reporting Meetings from June 4 to July 5	10	10	0
,, *London Mirror*	4	3	0
,, Chas. Tenpenny, for Rent, at St. Martin's Hall	10	10	0
,, Mr. Humphries, for Rent, at 32, Sackville Street	5	0	0
,, Lloyd, for Furnishing Office, 9, Conduit Street	19	0	6
,, Postages, for Journals, etc.	30	12	5
,, Advertising	14	7	6
,, Disbursements made by Clerk for Office Expenses, such as fuel, paper, etc.	15	13	7
,, Hire of Piano and two Singers at Dinner	3	3	0
,, Dinner Tickets to Editors and Musicians	13	13	0
,, Mrs. Wilkins, for Refreshments at Meetings, etc.	4	10	7
,, Invested in New Three per Cent. Annuities	251	10	0
,, In hands of Treasurer	0	10	0
,, Balance in Petty Cashbox	0	7	6
,, Balance at Bank	46	0	8
	£725	0	0
Brought forward	200	7	8
Subscriptions for 1866 *still due* :—			
1 Life Member	21	0	0
27 Annual Members	56	14	0
1 Associate (1st Class)	2	2	0
1 Associate (2nd Class)....	1	1	0
	£281	4	8

Examined and found correct, J. J. LIDGETT, W. VANNER } *Auditors.*

Discussion.

Dr. E. White (Chairman) said: We are indebted to Mr. Titterington for his interesting paper, and for the pains he has taken in digging out and searching old records.

It is important that we should continually keep before us the circumstances which led to the formation of the Victoria Institute, and the objects which the founders set before them as the goal of their attempted achievements. The Institute does not exist for the encouragement of metaphysical flights of fancy, nor is it to be used as a vehicle for the publication and propagation of freakish theories having no sound scientific or scriptural background.

The first and main object of the Society is "To investigate fully and impartially the most important questions of Philosophy and Science, but more especially those that bear upon the great truths revealed in Holy Scripture, with the views of reconciling any apparent discrepancies between Christianity and Science."

Outward circumstances have altered, and scientific thought has undergone revolutionary changes since the middle of last century when the Society was founded, but the need for such work as our Society is attempting, has increased rather than diminished in the years which have intervened since its foundation.

As Mr. Titterington has reminded us, the grounds of attack upon the truth as revealed in the Bible have shifted, but the battle continues.

In the latter half of the last century there grew up a mechanistic theory of the Universe founded upon the theory of the Reign of Law. Men were overwhelmed by the immense discoveries pouring out from scientific laboratories and workshops of the great scientists of the Victorian age, and the theories put forward by men of science were deemed sufficient to explain all phenomena occurring in the world around us. God became unnecessary and superfluous. The theory of evolution was invoked to explain such diverse processes as the origin of the stellar universe, and the origin of the body and mind of men. Herbert Spencer wrote a system of philosophy in several volumes—a work rarely read or referred to in these days—in which he completely explained, at least to his own satisfaction, the whole history of the formation of the Universe, including the mind of man, founded upon the Evolutionary hypothesis. A few

general principles could explain everything. He represented, in his thinking, the mature fruit of materialism and blind force. He had solved the riddle of the universe.

The beginning of the twentieth century saw the advent of new discoveries which shook the older scientific theories to their foundations, and the far reaching consequences of which we cannot even dimly foretell. I refer especially to the discovery of radio-active substances by Madame Curie, and the discovery of the Quantum theory, which together have revolutionised physics; and the discoveries of Freud and his followers which have revolutionised psychology.

The onward march of scientific research, opening out entirely new lines of thought, and leading to the rejection of older theories, has led to a somewhat humbler and less dogmatic attitude on the part of our leading men of science. The old materialism of the nineteenth century has become discredited but, unfortunately, a new scepticism has arisen, which tends to reject not only outworn scientific theories, but also the ancient creeds by which men have lived. God and belief in immortality are said to be the illusions of the human mind. to be thrown aside on the rubbish heap of outworn superstitions. The old beliefs are discredited, and the old faith rejected, but nothing has emerged to supply the security which they brought. As a result, the men and women of this age are asking questions, seeking for some light to guide them to the spiritual home which they have forfeited.

All this is a challenge to the Victoria Institute and all that it stands for. We have an open door set before us, and it is for us to seize the opportunity with wisdom and courage, following with unfaltering footsteps the path set before us by the founders of the Institute.

The Rev. C. T. Cook said: The dominant impression left on my mind by the discussions which enlivened the transactions of the Victoria Institute during its earliest years is that the attacks on the divine authority and inspiration of the Scriptures, which seemed so formidable to our fathers 85 years ago, appear singularly weak to us. May we not derive encouragement from this fact? Surely the fallacies of unbelief to-day will appear even more foolish to a later generation than they do to us? We may conclude that the

tremendous progress made in all branches of science has not made belief in the Bible more difficult now than it appeared to be 85 years ago.

Mr. W. E. FILMER said: It would appear from Mr. Titterington's most interesting paper that the Victoria Institute has always had to contend with the problem of making known the results of its researches. In this connection a number of selected papers were reprinted before the war, and I should be interested to know whether this policy is to be resumed and, if so, whether copies of some of these papers could be sent free to college reading rooms at the Universities, where they would come to the notice of those most interested in them.

WRITTEN COMMUNICATIONS.

Mr. E. H. BETTS wrote: We are heartily grateful to Mr. Titterington for this opportune and salutary paper. Perhaps chiefly should we be appreciative of the thread of firm faith in God and His Revelation which runs through it as being, and as having been, the prime principle of the Victoria Institute from its inception. Reminders of this are not unneeded. We still suffer those who solemnly take it for granted that what is academically current is soundly established, that the deliveries of leading men of science are above criticism, and that, consequently, all that is needed on our part is to trim the sails of our faith to the ever-changing winds of scientific weather. To make such assumptions—and they are most often perfectly implicit—is to lower the flag—to sell the pass. We are glad of our esteemed secretary's firm stand.

Let it be made as clear as daylight that we believe in God as He has revealed Himself—so gloriously—in Christ, of which revelation we have in Holy Scripture the divinely inspired record. Let it be added that if, as a further thing, we also believe in science, it is as a method of investigation and not as an authoritative oracle whose pronouncements put a term to all questionings. Scores of believer-scientists, not a few of whom have been men of great distinction, have testified that not one single *real discovery* of science is out of harmony with an intelligent belief in and understanding of the Scriptures reverently and accurately studied. They have found them to be, indeed, the Scriptures of Truth.

It is when science fails to observe the canons of its own declared method or when it is unable to distinguish between the forms of its descriptions and the reality it attempts to describe, or further, when it vainly sets out to construct or reconstruct a philosophy of nature, that we must abandon it to the follies which will one day be surely manifest to all.

The classical misconstruction of the whole history of human thought has been Darwinism. For it has taken undeniable processes of variation which have been duly observed but strictly limited in their scope and it has paraded these as " proof " of processes which have never been observed, which are purely hypothetical and which are put forward as unlimited in their action. To such fictions of the human fancy it has dared to attribute the whole difference between unicellular organisms and man with all his intellectual powers and moral responsibility. This is not science. Yet it is being broadcast as truth for the attention of innocent childhood.

Mr. T. FITZGERALD wrote : I heartily welcome this paper, as I have on several occasions throughout my years of membership urged the necessity of proclaiming the objects of the Institute and of making known the valuable contribution it has made to the reconciling of apparent discrepancies between Christianity and science. The stand taken has been that, " *revealed* truth and *discovered* truth either agree, or at least run parallel, in their never opposing course."

When the Victoria Institute was founded it was stated that " we are suffering from the consequences of a culpable stagnation of thought or from having failed to investigate fully and fairly but rigidly all the facts and arguments from time to time put forth as truths newly discovered by science and as being contradictory to the Scriptures.

" It is in order that this may be done thoroughly that the institution of a new Society for this express purpose is proposed. . . . There is no existing scientific body that fulfils these ends. At the present time the only thing almost that is considered a fair subject for question and free opposition from every quarter, in all such societies, is Revealed Truth. There is by no means an equal freedom allowed in questioning what is called ' Established Science.' "

Is not the position very very much the same in our day ? This

surely constitutes an urgent call for renewed effort to extend the operations of this Society.

I would urge that the Fifth Object should be emphasised: "When subjects have been fully discussed, to make the results known by means of lectures of a more popular kind." The Institute has largely failed in carrying out this object. A very successful attempt was made in the year 1910 (*see* Vol. XLIII of the Transactions) when country and suburban meetings were held in Upper Norwood, Barnet, East Croydon and Wimbledon. Several additions to membership resulted.

I can look back to over 35 years' association with the Institute (there are two others now living who joined the Society in the same year as myself, and seven living who joined before me) and I cannot recall any such effort as that which took place in 1910.

Mr. DOUGLAS DEWAR wrote: Mr. Titterington's very interesting paper stimulated me to take a look at the oldest volume of the V.I. Transactions (Vol. XVII, 1883–4) in my possession. From it I find that in that year the Institute had 373 members and 529 associates, total 902. The members were apparently a learned company. They included 5 English bishops, 1 Scottish, 1 Irish and 10 Colonial bishops (including Madras), to say nothing of 5 canons. Four members were fellows of Cambridge colleges, three were professors, one of these being Wace and another the Regius Professor of Divinity at Oxford. The members also included 2 dukes, 3 earls and 2 barons, and 4 M.P.'s. Among the Vice-Presidents were the well-known doctor, Sir Joseph Phayrer, and the famous Philip Gosse; and two of the foreign correspondents were Louis Pasteur, of Paris, and Sir J. William Dawson, Principal and Vice-Chancellor of McGill University, Montreal.

From this volume I learned that among the early readers of papers or addresses to the Institute were the afore-named Phayrer and Dawson, and Lord Kelvin, Sir Richard Temple, Bart., Sir Lionel S. Beale; the Assyriologist, T. G. Pinches; Monier Williams, Professor of Sanskrit; and the archæologists, Naville, Budge and Maspero; Tristram the biologist; and the geologists Dawson, Hughes, James Geikie, Sir J. Prestwich and E. Hull. Also the zoologists, Philip Gosse (mentioned above), H. A. Nicholson and H. W. Parker; and the botanists, Rev. G. Henslow and H. B.

Guppy. Then there is Sir G. G. Stokes, Professor of Mathematics at Cambridge, and President of the Royal Society. Among those who took part in the early discussions were the Duke of Argyll, Lord Halsbury, Lord Lister, Sir H. Howorth, Boyd Dawkins, H. Woodward and the German, Virchow.

Author's Reply.

There is little for me to say, except to thank those who have so kindly contributed to the discussion.

I think that Mr. Filmer's question is answered, at least in part by the fact that the Institute are now having an adequate number of reprints of current papers. It is unfortunate that many of the most interesting papers of recent years, for which enquiry is often made, are out of print, but it is hoped that this will be obviated in future.

Mr. Dewar's reference to Sir J. W. Dawson prompts me to say that the Institute possesses some unpublished manuscripts of his, which he presented to the Society, dealing with Biblical Chronology.

I ventured to include the second addendum to the paper because it seemed to me to convey in a concise form a mass of small detail, helping to fill out the picture of what the Institute was like in its beginning, which could not appropriately be included in the running text.