

THE MANCHESTER CONFERENCE AND A MEMOIR OF SILVANUS P. THOMPSON.

MANCHESTER 1895.

FOURTH DAY, ELEVENTH MONTH. 13TH.

This was the occasion of one of the busiest days in a very busy conference, lasting three days. This year, 1995, the Society of Friends in Britain is remembering the centenary of this event. To use the nineteenth-century Quaker language for the date may make it seem a long time ago, firmly set in an out-moded tradition, and consequently irrelevant to the present day. This is far from the truth. In fact, it was set in the middle of the 'Quaker Renaissance' and the topics discussed could well form the agenda for a modern day conference:-e.g. on this 'Fourth Day'

(a) (morning and afternoon) 'The Attitude of the Society of Friends to Social Questions'.

(b) (evening) 'The Attitude of the Society of Friends to Modern Thought'.

Topics which were considered in the other sessions included:

'Has Quakerism a Message to the World To-day?'

'The More Effectual Presentation of Spiritual Truths.'

'The Vitalising of our Meetings for Worship.'

It is clear that London Yearly Meeting had decided to have a wide ranging look at the current state of the Society of Friends and to consider possible ways forward for the future. It had undertaken the task at the suggestion of the Friends Home Mission Committee, meeting in February 1895. The relevant Minute of the Committee includes the following:

We have had laid before us in an interesting way the comparative ignorance and misconceptions which exist around us, as to the Society of Friends, and the importance of concerted action in the endeavour to dissipate the mistaken views to some extent current... The needs of the thoughtful and educated young people of our society have been adverted to, as well as those who are disposed to think that they obtain more religious help in other Societies than our own...

This Minute, except for a little difference of language, might well have

been written today. The circumstances have changed over 100 years, but the considerations of 1895 are by no means irrelevant to 1995.

This article will be restricted to the session on the evening of Wednesday, November 13th; followed by a memoir of one of those who contributed an important paper at that session. This is Silvanus P. Thompson, a distinguished scientist, who has always been better known outside the Society than in it.

THE SOCIETY OF FRIENDS AND MODERN THOUGHT.

The second half of the nineteenth century had experienced large changes in thought in particular in the realms of religion and of science. This had been a matter of considerable concern for the various religious denominations. For example, in 1860, seven distinguished members of the Church of England issued a publication called 'Essays and Reviews' which was "liberal" in tone and the essayists asked for freedom of thought in biblical research and dogmatic interpretations. This work aroused strong feelings (including a protest signed by 11,000 clergymen).

Friends were rather later in publishing a critical approach on similar lines. Then there appeared:

(a) in 1884; *A Reasonable Faith*, by 'Three Friends' (the three were well-known Friends, but preferred to remain anonymous at first.)

(b) in 1887, *The Gospel of Divine Help*, by Edward Worsdell. The author was very concerned about the way Friends were drifting away from the Society. He tells of many 'who drifted reluctantly into Unitarianism or Agnosticism, largely through failing to distinguish between the teaching of Christ and the assertions of theologians. And I know of a much larger number who, while retaining their faith in Christ, are sorely perplexed by much which they suppose they are, as Christians, bound to believe.' Traditionalists of Christian faith within the Society of Friends were naturally worried that such thinking might be undermining their roots and threatening their certainties.

During the same period there had been new scientific discoveries and changes in thinking. The greatest impact had been from ideas of evolution, following Darwin's publications (1859 and onwards) which threatened the traditional religious teaching on the creation and the nature of humankind. Also, there had been developments in physical science, which appeared to be questioning the solidity and the permanence of the material world. The culmination of this was the

publication in 1895 (the very same year as the Manchester Conference) of the discovery of radioactivity and of X-Rays.

Such developments in religion and science were part of the reason for the conference and, in particular, for the inclusion of the session on 'Modern Thought'. In this session the three key addresses were by J. Rendel Harris, Silvanus P. Thompson, and John William Graham. They were all among the younger members taking an active part in the conference, about 40 years of age. Rendel Harris was already a theologian and biblical scholar of repute who held the post of Professor of Theology at Leyden University and later became the first Director of Studies at Woodbrooke. Two quotations will serve to illustrate his approach to bible study and to the relation between science and religion:-

(a) We have been told in these meetings that the Scriptures are the ultimate test of truth; if that un-Quakerly proposition be true, the criticism of them is gross impertinence; but the internal discords of all Scripture, and of all explanation of Scripture, ought to be enough to convince us that there is no infallibility in the house, not a drop!

(b) The theory of the detachment of science and religion from one another has never been a working theory of the universe; the two areas must overlap and blend, or we are lost... We must not pretend that science has nothing to do with the Bible or theology. The theory of compartments is a hopeless one.

As we shall see, such ideas caused distress to many Friends in the meeting.

John William Graham was also a bible scholar. While his address was less provocative than that of Rendel Harris, he left no doubt that Quakers should welcome the conclusions of modern thought applied to the Bible. He compared the scholarly work on the Bible with the 'process of restoration of an ancient church, covered formerly with a uniform coat of speckless and infallible whitewash... after restoration we can understand its history and what it has undergone over the years.' 'The old building, with all its rugged edges, its patched up gaps and its evident repairs, is before us in many styles of architecture... We really know it now and for the first time... All this George Fox and Robert Barclay would have welcomed.' In conclusion, however, he takes pains to reassure 'any fearful ones' (i.e. the traditionalists of his day) with the words of Jesus: 'Think not I come to destroy the law and the prophets. I come not to destroy, but to fulfil'.

(The address by Silvanus Thompson came between those of Rendel Harris and John William Graham, but consideration of this is deferred until the second part of this article.

There was no time for discussion before the end of this long session of the Conference. However, there were a few closing remarks by Friends, which were recorded in the *Proceedings*. They show the tension which had grown in The Society of Friends arising from 'Modern Thought'. However, one at least speaks for those Friends who recognised and were ready for the change:-

- (1) I heartily support the proposal [that there was no time for profitable discussion]... on the understanding that many of us don't agree with many of the things that have been said.
 - (2) I believe the last point must be emphasised, or many of us will go home exceedingly burdened. If all these things go forth to the public as the views of the Society of Friends, the position will be exceedingly serious...
but also:
 - (3) Many of us feel that never in our lives have we so appreciated the privilege of being Quakers as tonight.
 - (4) Many of us feel that there is widespread sympathy with these papers read tonight, especially amongst our younger Friends.
-

SILVANUS P. THOMPSON (1851-1916)

The paper which Silvanus Thompson gave at the Manchester Conference was entitled: 'Can a Scientific Man be a Sincere Friend?' This paper serves as a good introduction to his thinking. He was a scientist of international repute, but the paper also shows how deep and scholarly was his knowledge of the history and thought of Christianity and of religion generally. While he was pungently critical of how, under ecclesiastical influence, Christianity had developed away from the original Christian gospel, he remained a fully committed Christian.

Naturally, he gave an affirmative answer to the question posed in his title; though, in fact, he was not so categorical as Rendel Harris about the blending of the realms of science and religion. Still, he was very clear about the methods of scientific thought and the way in which it could and should be applied to religion. 'The truly scientific attitude of mind,' he said, 'may be very well expressed by borrowing the apostolic phrase: "Prove [i.e. 'test'] all things; hold fast that which is good." he speaks of 'the touchstone of experiment', which should be applied to all statements of fact; their truth should not be accepted solely on past authority, however respected. Medieval science, which he had studied closely, contained many errors passed down and accepted 'on authority'

by succeeding generations. He gives one amusing example, which is worth quoting:- 'We find in the writing of Plutarch that if a magnet be rubbed with garlic or touched with a diamond, it loses its power of attracting iron, until such time as it is restored by being dipped in the blood of a he-goat. We all know now that the statement, though repeated again and again in medieval books on physics, is utterly false.' This is typical of his approach to his scientific work; he was a great teacher and a fine experimenter. What follows is a brief record and assessment of his life and work.

There have been only two biographical accounts of him. The really important definitive one is *Life and Letters of Silvanus Thompson*, written by his widow and his daughter, Helen; the latter was also a physicist and so was particularly qualified to assess his scientific work. This book gives a vivid and arresting portrait of him in all his activities and interests. The other is a small booklet, by Prof. James Grieg, *Silvanus P. Thompson, Teacher*, which was commissioned by the Science Museum and published in 1979.

EDUCATION AND EARLY TEACHING POSTS (1851-1885)

Silvanus Thompson came of a Quaker family and was educated at Bootham School, where his father was a teacher. He trained as a teacher at the Flounders Institute, a Quaker Training College and returned for some years to Bootham. This could not provide enough to satisfy his scientific ability so, after a year's study and research in London, he accepted a post at University College Bristol as a Lecturer in Physics. He stayed there for nine years, becoming a Professor and continuing research in Electricity and Magnetism. He found the working conditions increasingly inadequate, so when the post of Principal of Finsbury Technical College was advertised, he applied and was appointed at the early age of 34.

FINSBURY TECHNICAL COLLEGE (1885-1916)

For a University Professor to take a post at a Technical College would have been thought by many to be a come-down. Silvanus Thompson thought differently. He was a great educator and the provision of a first class education for technical students who were going straight into industry was a project close to his heart. The course of study was aimed exclusively at equipping students for a practical career in science or

engineering. He firmly resisted any suggestion that his brighter students should be entered for external academic examinations... In a Report to the Governors of the College, presented five years after his appointment, he described uncompromisingly the principles on which the College was working:-

The course of instruction is thoroughly practical... The College exists to give a *training*, not to enable persons to cram for examinations; the College does not undertake to prepare any person to pass any examinations whatsoever...

He is referring here to *external examinations*. The College set its own examinations, which were taken seriously, and for which hard work and commitment were demanded. Consequently, the acquisition of a Finsbury Certificate was something respected in the industrial world. Finsbury students were likely to get good posts and one would find them in senior positions on the Continent as well as in Britain.

It was the personality of Silvanus Thompson which obtained this success. He required high standards of work; he demanded and received loyalty to the College. It is significant that there was a strong and vital Old Students Association.

SCIENTIFIC WORK AND PUBLICATIONS

The 31 years he spent at Finsbury College were the productive years of his scientific life. His great ability lay on the experimental side of science and in communication of this to others. Although he was not primarily a theoretical research scientist, he was always close to the latest advances. For example, in February 1895 (the same year as the Manchester Conference) he observed the radiation which was being given off by uranium compounds. This radiation was observed simultaneously, but independently, by Becquerel in France. The latter was the first to publish his results, so Silvanus Thompson could not be credited with the discovery of radioactivity. In the same year, he was involved in the investigation of X-Rays, just discovered by Röntgen. In 1897 the Röntgen Society was formed, of which Silvanus Thompson was the first President. (Celebrations of Röntgen are due to take place this year, 1995, and memories of Silvanus Thompson will be revived).

He became widely known and respected for his contributions to the practical development of electricity and magnetism. He was President of the Institute of Electrical Engineers and his memory is still very much alive in their headquarters in London. He had many other contacts in the

area of electrical engineering; for example, he was a consultant to the Hampstead Battery Company, and his house was one of the first which this company lit by electricity.

He was elected a Fellow of the Royal Society in 1891 and the Society's obituary notice contains this comment:

Since 1878, his papers on scientific subjects are very numerous... These papers, of which 166 may be regarded as important, are mainly on light and electricity.

He published a number of scientific books. He wrote biographies of Faraday and of Kelvin; of his textbooks the most notable was *Dynamo-electric Machinery*, which ran into many editions and became the standard reference book on the subject. Sir Ernest Rutherford comments: 'I can well recall the strong impression left on me by the exceedingly clear, simple and logical statement of the essentials of a complex subject.' In fact, simplicity and clarity were the characteristics of all his writings. Probably the best known of all his books is *Calculus made Easy*, developed from his lectures to Finsbury students and written with characteristic wit. His introduction is a joy to read. The appeal of this book is such that it was still being published in 1979.

SILVANUS THOMPSON AND THE SOCIETY OF FRIENDS

The above account is by no means inclusive of all his scientific activities and his public involvements, so it is not surprising that he found little time for active work among Friends. He was, however, a dedicated Friend throughout his life. He had a deep knowledge of Quakerism and its Christian roots and was one of those in the forefront of the 'Quaker Renaissance'. He made a friendship with Edward Grubb in his early Bristol days, a friendship which remained close throughout their lives. He joined Westminster Meeting in 1885 and was appointed an Elder in 1889. Although his ministry in Meeting was much valued, he was not a 'Recorded Minister' until 1903. This apparent delay is probably because many more traditional Friends felt that he was unsound in Quaker doctrine. For example, one phrase which he used at the Manchester Conference and on other occasions, namely the importance of 'honest, sacred doubt', may have caused anxiety. John William Graham, in his obituary notice says:

He was a sound and earnest Friend, a weighty and valued minister. He had some torch-bearing to do and some accusation of heresy to suffer under in a period happily gone by; that needed courage and faithfulness.

Silvanus Thompson was unswerving in his opposition to all war, as inconsistent with the teaching and spirit of Christ. He was strongly critical of the Boer War and of the acquiescence towards it: e.g. 'Few clergy have glimpsed even yet the elementary truth... of the teachings of Jesus Christ, that *all revenge is wrong*... And that a warrior, who is capable of the barbaric deed of devastating a whole province - whether from the Tyne to the Humber or from the Vaal to the Orange River - whether he be called William of Normandy or Kitchener of Khartoum, [is wrong.] Where is the orthodox clergyman who has... dared to characterise his exploit as an inhuman crime?'

The contribution he made to Friends was more through his personality than through a multiplicity of writings. In 1907 he gave the Swarthmore Lecture on 'The Quest for Truth', a title which epitomises both his scientific and his religious ethos. The only other Quaker publication as a book was *A Not Impossible Religion*. This was published in 1918, after his death, but the title is his own. It contains a number of essays and addresses, which still have an appeal; especially to those who, while not wishing to abandon their religious faith, find that it is not satisfied by traditional Christian doctrines.

Apart from the Manchester Conference address, there are two notable public addresses:

(a) 'Christ in Modern Life'. This was the subject chosen by the Society of Friends, to be delivered in various cities of northern England in 1905, when the Yearly Meeting was held in Leeds (the first time for 200 years out of London). Silvanus was asked to give the address in Liverpool.

(b) 'Agnosticism and Christianity', delivered in Birmingham in 1908.

Both of these addresses are readable and enlightening.

He was apt to finish his addresses with a peroration, which might appear wordy to modern ears; however, part of that which ended his Manchester address is worth quoting, for it provides a good illustration of his dedication and devotion to Friends:

Being Friends, we are, to the unspeakable gain of our souls, preserved alike from those diseased word-battlings which afflict so many honest... but less enlightened Christians, and from the torturing fear that science may one day undermine our faith... We have learnt that... a man's religion is not that which he professes, but that which he lives.

Silvanus Thompson was a man of varied abilities and interests, beyond what has been possible to relate in this memoir. To appreciate his qualities fully, it is really necessary to read the *Life and Letters*, by his widow and daughter.

Among these abilities were: a knowledge of foreign languages (he could lecture to Italian engineers in their own language); and a considerable artistic skill with pen and water-colour. His library was extensive and very wide in interest. Many of his books, including some rare old ones, are housed in the London headquarters of the Institute of Electrical Engineers. One of the greatest impressions he makes is his sense of enjoyment in everything he did, together with his great sense of fun. He was a member of our Society, whom Friends should know better. They would value him for the *quality* of everything he did or touched; for his integrity and clarity of vision and for his sense of humour.

David Murray-Rust