

DR. GEORGE SALMON

DR. SALMON, who was born in 1819 in the city of Dublin, received his early education at a private school in Cork kept by a Mr. Porter, where he exhibited so much promise and was so well trained that by the time he was fourteen years of age he was fit for the university. At Trinity College, Dublin, he had a brilliant undergraduate career, gaining a classical scholarship and graduating in mathematics with the best honour degree of his year. He won his fellowship in 1841, and settled down at once to the work of a college tutor, and to the study of pure mathematics. During the next twenty-five years his life was thus spent, and by the end of that period he had gained a wide reputation in Europe as a mathematician, and his books had been translated into the principal European languages. In 1866, by the advancement of Dr. Butcher to the see of Meath, the Regius Professorship of Divinity in the university became vacant; and Salmon, who had made his mark not only as a mathematician but also as a preacher and theological lecturer, was offered the position. He thought it his duty to accept it, although it involved the resignation of his fellowship, and for two-and-twenty years he devoted himself to Biblical criticism and theology with the zeal and industry which characterized all his academic labours. These were critical years for the Irish Church, disestablished and disendowed in 1870; and it was of the utmost importance that the Divinity School should be under the control of a prudent and learned scholar, with a wider outlook than the shores of Ireland. During this busy and anxious period his best theological work was done; his principal books, *An Introduction to the Criticism of the New Testament* and *The Infallibility of the Church*, being expansions of his statutory lectures as Regius Professor. In 1888 the last great change of his life came, when he was nominated Provost of Trinity by the Crown; and until his death on January 22, 1904, in his eighty-fifth year, he ruled the college to whose service he had given all his working days.

Such is a bare outline of his life. It may be added that among the honorary distinctions which he received were the following:—D.C.L. (Oxon.), LL.D. (Cantab.), D.D. (Edinb.), D.Math. (Christiania), the Cunningham Medal of the Royal Irish Academy, and the Royal and Copley Medals of the Royal Society, of which he was a fellow. He was also an honorary member of the Royal Academies of Berlin, Göttingen, and Copenhagen, a foreign member of the Institute of France, and a fellow of the *Reale Accademia dei Lincei* of Rome. In 1878 he was president of the Mathematical Science Section of the British Association.

To few men is it given to attain to the first rank of investigators in two distinct departments, and yet this was Salmon's case. He had made his name as a mathematician before any one outside Ireland had heard of him as a theologian; and his mathematical textbooks are still widely read. The first to be published (in 1847) was his *Conic Sections*, which achieved an immediate success, and has gone through many editions. It was followed, in 1852, by a treatise on the *Higher Plane Curves*, a subject which heretofore had only been discussed in the memoirs of learned societies. About this time the theory of the invariants of quantics was being worked out by Professors Cayley and Sylvester in England, as well as by mathematicians on the Continent; and Salmon, perceiving the importance of this new and powerful calculus, published in 1859 his *Lessons Introductory to the Modern Higher Algebra*, in which he made public the researches of the past twenty years into the theory of transformations of binary forms. This work, which was originally undertaken with special reference to his books on the analytical treatment of conics and the higher curves, grew under his hands until it became a formal and elaborate treatise. Upon it he spent an immensity of labour, all of which was not equally fruitful, although the book as a whole was, and is, invaluable to the student. The calculations necessary, for instance, in order to formulate the E invariant of a sextic (a formula which occupied thirteen pages when printed) must have taken an amount of time and patience that few men would have been willing to bestow. In 1862 the first edition of his last mathematical book of importance, his *Geometry of Three Dimensions*, appeared, a volume which exhibited all the best qualities of its predecessors, in its exact acquaintance with recent investigation, its masterly statement of general principles, and its free and independent handling of special problems. There was nothing of the pedant about Salmon, and he broke loose at a very early stage from the traditions of the English mathematical school of his day, in

refusing to be bound by any one uniform method of treatment. He had been bred up among geometers, and he never scrupled to use a direct geometrical proof if one occurred to him, where the plan of his treatise would rather have suggested algebraic methods. His shrewd common sense displays itself even in his mathematical treatises, and this adds greatly to their interest, for the student feels at each stage that it is Salmon who is teaching him, and that he is not dealing merely with x , y , z .

For the newer developments of mathematics, such as the Theory of Quaternions, Salmon had no taste. He had a rooted distrust of metaphysical speculation, and always preferred *facts*, as he used to say, to *ideas*. And his 'facts' must be established with all the rigidity of mathematical logic. He never cared for the sciences of experiment or observation, or even for applied mathematics. But in the region of geometry and algebra he delighted, and even when an old man he spent many hours, as a pastime, in working at endless calculations which had to do with the theory of numbers. It was in these departments that he felt himself to be strong; and it is as a geometer of remarkable sagacity and an algebraist of unwearied industry that he will be remembered by historians of the progress of mathematics during the nineteenth century.

When Dr. Salmon became Regius Professor of Divinity, the speculations of Baur and of his disciples as to the origin and character of the books of the New Testament were beginning to affect English theological criticism, and it became incumbent upon him to inquire into their solidity. The result of his investigations is given in his masterly *Introduction to the New Testament*, perhaps the most powerful polemic in English against the Tübingen school of critics. It was not published till 1885, but it had been given in substance to his pupils many years before. It is strongly conservative, and has had a considerable influence in moulding the opinions of students in the United Kingdom. While it was in preparation, he was also engaged upon a series of important articles for the *Dictionary of Christian Biography*, chiefly upon the writers of the second century and upon the history of Gnosticism. This work, which proved so fruitful, was undertaken in the first instance at the solicitation of Lightfoot, who begged Salmon to write upon the early chronologers, a subject which it was natural to think would be congenial to a mathematician who had been converted to theology. It is not too much to say that some of his best work is contained in the pages of this *Dictionary*. Salmon did not care for metaphysical theology, nor did he occupy himself very specially

with problems of textual criticism (although a little volume published in 1897 showed how thoroughly he understood the principles of that science); his chosen field was history, and he was one of the most sagacious of historians. His critical insight was a perpetual wonder to those who worked with and under him; and whatever difficulty one felt at times in following his line of argument it generally happened that his conclusions were confirmed by later research.

His second theological treatise of importance was his book on the *Infallibility of the Church*, a subject too controversial for these pages. It is an unsparing polemic against the Roman Catholic doctrine of infallibility, and reveals not only the wide learning of the author, but his remarkable powers as an advocate and a controversialist. Most readers, whether they acquiesce in Salmon's conclusions or no, will agree that this book exhibits his sagacity as a critic in a marked degree. It is not a constructive treatise, and, indeed, leaves many questions open as to which theologians are accustomed to make positive pronouncements. But that is characteristic of its author. Salmon's intellect was analytic rather than synthetic; he was more of a critic than of a dogmatist; and in every department of thought he was more ready to point out the incongruity of suggested theories than to exhibit a constructive scheme of his own. This did not arise from any uncertainty as to his own theological position, but from the temper of his mind, and the same characteristic was often noted in his handling of practical matters of administration. He never founded a school of theology, although the number of his pupils was very large and the veneration they had for him unexampled in Ireland. But the reason was that he was more anxious to train men to see clearly than to train them to see what *he* saw. The impression which Dr. Salmon left upon those who came into contact with him may be well described in the words of the late Bishop Stubbs of Oxford. 'The Provost,' he said, 'is an extraordinary man. The first day I met him I was most struck by his gracious courtesy; the second day by his learning; the third day by his humour; and every day by his humility.' Those who knew him, however slightly, will not need to be assured that the words give a true picture of the most eminent of Irish theologians in the nineteenth century.

Principal publications:—*A Treatise on Conic Sections; Lessons Introductory to the Modern Higher Algebra; The Higher Plane Curves; Geometry of Three Dimensions; The Eternity of Future Punishment; Introduction to the New Testament; The Infallibility of the Church; Some Thoughts on the Criticism of the New Testa-*

ment; Commentary on *Ecclesiastes* in Bishop Ellicott's edition of the Old Testament; *Introduction to the Apocrypha* in the *Speaker's Commentary*; many articles in Smith's *Dictionary of Christian Biography*; and five volumes of cathedral and university sermons.

Further particulars respecting Dr. Salmon's life and work are to be found in the obituary notice in the *Times* of 23 Jan., 1904, and an article in the *New Liberal Review* for March, 1904, both by the present writer, who has drawn on them for this summary.

J. H. BERNARD.