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SALMON, GEORGE (1819-1904), mathematician and divine, born at Cork on 25 Sept. 1819, was only son of Michael Salmon, linen merchant, by his wife Helen, daughter of the Rev. Edward Weekes. Of three sisters one, Eliza, married George Gresley Perry [q.v. Suppl. I], archdeacon of Stow. Salmon, after attending Mr. Porter's school in Cork, entered Trinity College, Dublin, in 1833, where he had a brilliant career, winning a classical scholarship in 1837 and graduating as first mathematical moderator in 1838. He attended some divinity lectures in 1839, as scholars of the house were bound to do, and was persuaded to sit for a fellowship, without much preparation, in 1840. He obtained Madden's prize, i.e. was next in merit to the successful candidate, and in 1841 was elected fellow of the college, under the old system of public examination, conducted *viva voce* and in Latin, his general scholarship gaining him success at an earlier age than was customary.

Salmon settled down at once to the work of a college don (M.A. 1844), and was ordained deacon in 1844, and priest in 1845. His work was mainly mathematical, but in 1845 he was appointed divinity lecturer as well, and his long life was devoted to these two diverse lines of study. For many years he was a college tutor; from 1848 to 1866, the period during which his mathematical books were written, he was Donegal lecturer in mathematics.

Salmon's first mathematical paper, 'On the properties of surfaces of the second degree which correspond to the theorems of Pascal and Brianchon on Conic Sections,' was published in the 'Philosophical Magazine' in 1844. In 1847 there appeared his 'Conic Sections,' the work which made him known as a mathematician to a wide circle (6th edit. 1879). Admirably arranged, and constructed with an unerring sense of the distinction between important principles and mere details, it exhibited more fully than any other book of the time at once the power of the Cartesian coordinates and the beauty of geometrical method; and for half a century it was the leading textbook on its subject. It was followed in 1852 by a treatise on the 'Higher Plane Curves' (3rd edit. 1879), a subject of which little was then known, and which was introduced to the ordinary student by Salmon's labours. The investigations of Cayley and Sylvester into the invariants of quantics were beginning to attract attention; and Salmon proceeded to apply their results to geometrical theory, the result being his Lessons Introductory to the Modern Higher Algebra' (1859; 4th edit. 1885), in which he incorporated much original matter. Finally in 1862 appeared the 'Geometry of Three Dimensions' (5th edit. 2 vols. 1912), in which the sections upon the general theory of surfaces are specially remarkable (the work was translated into French, German, and Spanish). Upon these four treatises his fame as a mathematician rests, while many minor papers by him appeared in the learned journals. Salmon's methods made little use of the calculus, or of the quaternion analysis invented by his contemporary, Sir W. R. Hamilton [q.v.]; nor, again, did he ever handle the non-Euclidean geometry. His strength lay in his complete mastery of geometric and algebraic processes, and this, coupled with his indefatigable industry as a calculator, enabled him to produce original work of permanent value. In later life, the theory of numbers fascinated him; and he spent many odd half-hours in determining the number of figures in the recurring periods in the reciprocals of prime numbers. His last mathematical paper was upon this subject ('Messenger of Mathematics,' 1873), but he never published his latest results, and he used to speak of his calculations as a useless amusement.

Salmon's mathematical labours by no means exhausted his energies, and he took a large share in the work of the Divinity School of Trinity College from 1845 to 1888. He proceeded B.D. and D.D. in 1859, and from 1866 to 1888 he was regius professor of divinity. He played an active part in the reconstruction of the Irish Church after its disestablishment in 1870, and enjoyed a unique position in the General Synod and as a member of the Representative Church body, his skill as a debater and his ability in the management of the church's finance being equally remarkable.

Salmon's first publication on a theological subject was a sermon on Prayer (1849), the precursor of a long series of printed discourses. His preaching always commanded attention, but his sermons (of which five volumes were published) were better to read than to hear, for his voice was hardly effective in a large building. In 1852 Archbishop Whately made him an examining chaplain, and the archbishop's influence upon Salmon's theological opinions seems to have been considerable. Both men were strong Protestants, and viewed the rise of the Oxford movement with suspicion and dislike, Salmon co-operating with Whately and others in the issue of 'Cautions for the Times' (1853), intended as a counterblast to the famous 'Tracts.' He was also a frequent contributor to the 'Catholic Layman,' which dealt with the Roman catholic controversy, and he printed anonymously three short 'Popular Stories' (Dublin 1854) written in the same interest. This preparation bore fruit later on, when, as divinity professor, he lectured on the points at issue between Romanism and Anglicanism; and his lectures formed the material of 'The Infallibility of the Church' (1889; 2nd edit. 1890), a trenchant and brilliant polemic which exhibited his learning, his humour, and the vigour of his controversial methods. Salmon founded no school of theological thought, deeply as he was revered by his pupils, his genius being analytic and even destructive rather than constructive and synthetic; but his tendency was towards a liberal evangelicalism, which distrusted (and more and more as years went on) the appeal to any authority other than that of the individual conscience.

The studies by which he became most widely known as a divine lay, however, outside the sphere of dogmatic theology, and his work as a New Testament critic attracted a larger audience. His numerous articles in the 'Dictionary of Christian Biography' (1877-87) show his grasp of the history of the second century; and his 'Introduction to the New Testament' (1885; 7th edit. 1894) was acclaimed on its publication as a powerful reply to the dissolvent speculations of German criticism. Conservative in tendency, the book is destructive of extravagant theories of Christian origins rather than a positive statement of the results which a sober scholarship is prepared to maintain. The same characteristic of the author's method was apparent in his criticisms of Hort's reconstruction of the Greek text of the New Testament, which appeared in 1897 ('Thoughts on the Textual Criticism of the New Testament '), criticisms of which the sagacity has since been widely recognised. During the last ten years of life, Salmon spent much time upon the Synoptic problem, and his illuminating notes were carefully edited after his death in 1907 by a former pupil, N. J. D. White, under the title 'The Human Element in the Gospels.'

In 1888 Salmon was appointed provost of Trinity College by Lord Salisbury, on the recommendation of the lord-lieutenant of Ireland (Lord Londonderry), with the unanimous approval of the fellows. In 1892 he presided with dignity over the tercentenary festival of Dublin University. A conservative in politics, he was also conservative of academic tradition, and as provost he rather opposed than promoted changes in the university system under which he had been trained. He was *de facto* as well as *de jure* master of the college. The admission of women to university degrees, which was carried in the last year of his life, was almost the only important reform, introduced into the academic system under his rule, which was distasteful to him.

Salmon received many academic honours, besides those which his own university bestowed. He was a member of the Royal Irish Academy (1843), which awarded him the Cunningham medal in 1858, besides being a foreign member of the Institute of France, and honorary member of the Royal Academies of Berlin, Gottingen, and Copenhagen. He was fellow of the Accademia dei Lincei of Rome (1885); was made hon. D.C.L. Oxford (1868), LL.D. Cambridge (1874), D.D. Edinburgh (1884), D.Math. Christiania (1902); was fellow of the Royal society (1863), which awarded him the royal medal in 1868 and the Copley medal in 1889; became F.R.S.Edinburgh, and was on the original list of the fellows of the British Academy (1902). He was president of the Mathematical and Physical Section of the British Association in 1878. He was also chancellor of St. Patrick's Cathedral (1871), and was presented with the freedom of the city of Dublin in 1892.

Hospitable and kindly, Salmon had many friends and interests. In youth a competent musician and a chess player of remarkable powers, he cultivated

both recreations until an advanced age. He was always an omnivorous reader (except in the two departments of metaphysics and poetry, for which he had no taste), and had a special affection for the older novelists, being accustomed to recommend the study of Jane Austen as a liberal education. The homely vigour and the delightful wit of the long letters which he was accustomed to write to his friends entitle him to rank as one of the best letterwriters of the last century.

Salmon died in the Provost's House on 22 Jan. 1904, and was buried in Mount Jerome cemetery.

Salmon married in 1844 Frances Anne, daughter of the Rev. J. L. Salvador of Staunton, Herefordshire (*d.* 1878); of his four sons and two daughters the eldest son (Edward William) and the younger daughter (Fanny Mary) survived him.

A striking portrait of Salmon, painted by Benjamin Constant, at the request of the fellows of the college, in 1897, is preserved in the Provost's House at Dublin; and an earlier portrait (by Miss Sara Purser in 1888) belongs to the common room at Trinity. A posthumous bas-relief of his head, in bronze (by A. Bruce-Joy), forms part of the memorial in St. Patrick's Cathedral; while a seated statue in marble executed by Mr. John Hughes for Trinity College was unveiled on 14 June 1911. The Salmon fund (for poor students), and the Salmon exhibitions for members of the Divinity School, were endowed by him at Trinity while he was provost, in addition to other benefactions to the college. A window is dedicated to his memory in the church at the Riffel Alp, where he had spent several vacations.

Among Salmon's works, in addition to those already described, and apart from pamphlets, occasional sermons, and articles in reviews or magazines, are the following: 1. 'Sermons preached in Trinity College Chapel,' 1861. 2. The Eternity of Future Punishment,' 1864. 3. 'The Reign of Law,' 1873. 4. 'Non-miraculous Christianity,' 1881; 2nd edit. 1887. 5. Commentary on *Ecclesiastes* in Ellicott's Old Testament Commentary, 1884. 6. 'Gnosticism and Agnosticism,' 1887. 7. 'Introduction to Apocrypha' in the 'Speaker's Commentary,' 1888. 8. 'Cathedral and University Sermons,' 1900; 2nd edit. 1901. JOHN OSSORY.

[Memoirs by the present writer in The Times (23 Jan. 1904), The New Liberal Review (March 1904), and Proc. Brit. Acad. (1904); obit. notices of the Royal Society (1904, by C. J. Joly), of the London Math. Soc. (1904, by Sir R. S. Ball), and in Nature (4 Feb. 1904); funeral sermons by the present writer and Bishop Chadwick of Derry (Dublin, 1904); Celebrities at Home in The World (6 Dec. 1899), by F. St. J. Morrow; Review of the Churches, by G. T. Stokes (15 June 1892); Minutes of Royal Irish Academy (1903-1904); Reminiscences in Weekly Irish Times, by Canon Staveley (9 July 1904); Dublin University Calendars; personal knowledge.]