

WARING, EDWARD
(1734–1798)

WARING, EDWARD(1734–1798), mathematician, born in 1734, was the eldest son of John Waring, a wealthy farmer of the Old Heath, near Shrewsbury, whose family had long dwelt at Mytton in the parish of Fittes or Fitz, Shropshire, by Elizabeth his wife. From Shrewsbury school he was admitted a sizar at Magdalene College, Cambridge, on 24 March 1753, being also Millington exhibitor. In 1757 he graduated B.A. as senior wrangler; he was already accounted a 'prodigy' in mathematical learning, and on 24 April 1758 was elected to a fellowship at his college. About this time the famous Hyson Club was founded at Cambridge, and Waring, Paley, and the 'highest characters at the university' became its members.

Waring's reputation in his particular branch of knowledge was so great that on 28 Jan. 1760, before he was qualified for the office, he was appointed Lucasian professor of mathematics at Cambridge, and he held the post until his death. In the same year he received the necessary degree of M.A. by royal mandate. Some of the older members of the university thought him too young for such a position, and to prove his exceptional fitness he circulated before the election the first chapter of his 'Miscellanea Analytica.' William Samuel Powell [q.v.] attacked it in some anonymous 'Observations,' and Waring defended himself in 'A Reply to the Observations' (25 Jan. 1760). Powell retorted in an anonymous 'Defence of the Observations,' and Waring answered in 'A Letter.' In the composition of these pamphlets he was aided by his friend John Wilson (1741–1793) [q.v.] of Peterhouse, senior wrangler in 1761 and afterwards judge of the common pleas. His examinations for the Smith's prizes were considered the most severe test of mathematical skill in Europe, and in conjunction with Jebb and Law he brought the 'schools' at Cambridge into a flourishing condition. But he did not lecture; 'the profound researches of Dr. Waring were not,' says Dr. Parr, 'adapted to any form of communication by lectures.'

Waring was elected F.R.S. on 2 June 1763, but withdrew from the society in 1795; and he was a fellow of the royal societies at Göttingen and Bologna. He was appointed a commissioner of the board of longitude. In 1767 he took the degree of M.D. at Cambridge, and he attended the medical lectures and walked the hospitals in London. Bishop Richard Watson [q.v.], when professor of chemistry at Cambridge, procured a corpse from London and dissected it in his laboratory, with Waring and Preston, afterwards bishop of Ferns (*Anecdotes*, i. 237–8). About 1770 Waring was physician to the Addenbroke hospital at Cambridge, and he practised for a time at St. Ives, Huntingdonshire; but he was very short-sighted and very shy in manner, so that he quickly abandoned his profession. Fortunately for him the income of his professorship was considerable, and he enjoyed a handsome patrimony.

When Waring vacated his fellowship at Magdalene College he thought that his brother Humphrey, who entered the college on 13 Dec. 1769 and obtained a fellowship in March 1775, would be elected into a better fellowship, but he was disappointed. He therefore quitted his old foundation and entered himself at Trinity College. In 1776 he married Mary, sister of William Oswell, a draper in Shrewsbury, and not long afterwards went to live in that town. Its air or situation did not suit his wife, and he retired to his own estate at Plealey in Pontesbury. He died there on 15 Aug. 1798. A tombstone to his memory was placed in the churchyard at Fitz (for the epitaph see *Gent. Mag.* 1801, ii. 1165).

In reply to a passage in Lalande's 'Life of Condorcet,' affirming that in 1764 there was no first-rate analyst in England, Waring claimed, in a letter to Dr. Maskelyne, the astronomer-royal, that his book of 1762 had received the approbation of D'Alembert, Euler, and Le Grange (*Monthly Mag.* May 1799, pp. 306–10). He also boasted that he had given 'somewhere between three and four hundred new propositions of one kind or other, considerably more than have been given by any English writer;' but he was driven to confess that he 'never could hear of any reader in England, out of Cambridge, who took the pains to read and understand' his writings (*Essay on Human Knowledge*, pp. 114–15). This was partly due to the fact that his inventions were expressed in too intricate and obscure language, and were 'defective in classification and arrangement' (BALL, *Mathematics at Cambr.* pp. 99–113). His handwriting was so confused that his manuscripts 'were often utterly inexplicable.' He was called 'one of the strongest compounds of vanity and modesty which the human character exhibits. The former, however, is his predominant feature' (*Living Authors*, 1798, ii. 364–5). Dugald Stewart calls him 'one of the greatest analysts that England has produced,' and speaks, from information derived from Bishop Watson, of his 'strong head' being at the last 'sunk into a deep religious melancholy approaching to insanity' ('Elements of Philosophy of Human Mind,' pt. iii. chap. i. in *Works*, ed. 1854, iv. 218). A portrait a half-length in a scarlet gown, is in the combination-room at Magdalene College.

Waring printed: 1. 'Miscellanea Analytica de Æquationibus Algebraicis et Curvarum Proprietatibus,' 1762. It was in Latin, and it made his name famous throughout Europe. Gleig calls it 'one of the most abstruse books written on the abstrusest parts of Algebra.' 2. 'Meditationes Algebraicæ,' 1770; 3rd edit., revised and augmented, 1782 (both editions were in Latin). 3. 'Proprietates Algebraicarum Curvarum,' 1772 (also in Latin); first edition appeared in 1762. 4. 'Meditationes Analyticæ,' 1776; 2nd edit., with additions, 1785 (both were in Latin). The sum of fifty guineas was voted by the syndics of the university press at Cambridge towards the cost of the second edition. 5. 'On the Principle of translating Algebraic Quantities into Probable Relations and Annuities,' 1792; very scarce; the copy at the British Museum came by gift from the library of Queens' College, Cambridge. 6. 'An Essay on the Principles of Human Knowledge,' 1794. As it was never published, a few copies only being presented to friends, this essay is very rare. It contains the author's opinions on a great variety of subjects. Waring supplied the 'Philosophical Transactions' with many valuable papers (*Gent. Mag.* 1798, ii. 807), and received from the Royal Society in 1784 the Copley medal. Essays by Vincenzo Riccati on his method of solving equations are the fourteenth and fifteenth articles in vol. xxi. of Calogiera's collection of 'Scientific Treatises.'

Sources

Gent. Mag. 1798, ii. 730; *Notes and Queries*, 2nd ser. xi. 89, 167; *Nichols's Lit. Anecd.* ii. 717–19; *Cunningham's Biogr. Dict.* vi. 263–6; *Account of Shrewsbury*, 1810, pp. 397–401; *Brydges's Restituta*, iii. 53, 163; *Gleig's Supplement to Encyclop. Brit.* ii. 764–7; *Hutton's Philosoph. Dict.* ed. 1815, ii. 584–5; *Wordsworth's Scholæ Acad.* pp. 31, 70–1, 77, 183, 390; *Mayor's St. John's Coll.* ii. 730, 934, 1069–70; information from Mr. A. G. Peskett of Magdalene College.

W P Courtney, Edward Waring, *Dictionary of National Biography* LIX (London, 1899), 383–385.