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(*b.*Denton, near Darlington, Durham, England, 9 April 1791; *d.* Ely, England, 8 November 1858)

mathematics.

Peacock is known for his role in the reform of the teaching of mathematics at Cambridge and his writings on algebra. His father, Thomas, was perpetual curate at Denton; and Peacock was educated at home. He entered Trinity College, Cambridge, in 1809 and received the B.A. in 1813, as second wrangler; the M.A. in 1816; and the D.D. in 1839. In 1815 he was named lecturer at Trinity and was tutor from 1823 to 1839. He was a moderator of the tripos examination in 1817, 1819, and 1821. Peacock was a member of the Analytical Society, founded by [Charles Babbage](#) for the purpose of revitalizing mathematical studies at Cambridge. Toward this end Peacock, Babbage, and [John Herschel](#) published a translation of an elementary calculus text by Lacroix (1816). In 1820 Peacock published a collection of examples in differential and [integral calculus](#). These works, and his influence as moderator, tutor, and lecturer, were major factors in replacing the fluxional notation and the geometric methods, which had been entrenched at Cambridge since the time of Newton, with the more fruitful analysis and Leibnizian notation.

In 1837 Peacock became Lowndean professor of geometry and astronomy at Cambridge, but in 1839 he was appointed dean of Ely. (He had been ordained in 1822.) Although he moved to Ely and no longer lectured, He remained active in the affairs of Cambridge. In 1841 he published a book on the statutes of the university in which he urged reform, and he served on two government commissions dealing with the question. Peacock was a member of the Cambridge Philosophical Society, the Royal Astronomical Society, the Geological Society of London, and the British Association for the Advancement of Science. He was elected a fellow of the [Royal Society](#) in 1818. He married Frances Elizabeth Selwyn in 1847. They had no children.

Peacock's mathematical work, although not extensive, is significant in the evolution of a concept of abstract algebra. In the textbook *A Treatise on Algebra* (1830), revised in 1842–1845, he attempted to put the theory of negative and complex numbers on a firm logical basis by dividing the field of algebra into arithmetical algebra and symbolic algebra. In the former the symbols represented positive integers; in the latter the domain of the symbols was extended by his principle of the permanence of equivalent forms. This principle asserts that rules in arithmetical algebra, which hold only when the values of the variables are restricted, remain valid when the restriction is removed. Although it was a step toward abstraction, Peacock's view was limited because he insisted that if the variables were properly chosen, any formula in symbolic algebra would yield a true formula in arithmetical algebra. Thus a noncommutative algebra would not be possible.

Peacock's other works include a survey on the state of analysis in 1833, prepared for the British Association for the Advancement of Science. It is an invaluable source for a contemporary view of the important problems at that time. Peacock also wrote a biography of [Thomas Young](#) and was one of the editors of his miscellaneous works.

BIBLIOGRAPHY

Early works are Sylvestre Lacroix, *An Elementary Treatise on the Differential and Integral Calculus*, translated by Charles Babbage, George Peacock, and [John Herschel](#), with notes by Peacock and Herschel (Cambridge, 1816); and *A Collection of Examples of the Differential and Integral Calculus* (Cambridge, 1820). a treatise on Algebra (Cambridge, 1830) is rare, but there is a rev. ed., 2 vols. (Cambridge, 1842–1845; repr. [New York](#) 1940). Other writings include "Report on the Recent progress and Present State of Certain Branches of Analysis," in *Report of the British Association for the Advancement of Science* (1834), 185–352; "Arithmetic," in *Encyclopaedia Metropolitana* I (London, 1845); 369–523; *The life of Thomas Young* (London, 1855); *Miscellaneous works of the Late Thomas Young*, vols. I and II, George Peacock, ed., vol. III. John Leitch, ed. (London, 1855); and *Observations on the Statutes of the University of Cambridge* (London, 1841).

A complete bibliography of his writings can be found in Daniel Clock, "A New British Concept of Algebra; 1825–1850" (Ph.D. diss., U. of Wisconsin, 1964), 10–12; this work also contains an extensive discussion of Peacock's life and work.

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