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(b. London, England, 4 June 1809; d. Ghazipur, India, 28 December 1871)

mathematics.

Pratt was the son of Rev. Josiah Pratt, secretary of the Church Missionary Society. He received the B.A. at Gonville and Caius College, Cambridge, in 1833 and the M.A. at Christ's and Sidney Sussex colleges in 1836. His missionary zeal, coupled with his exceptional scientific aptitude, propelled him into both arenas, sometimes separately, sometimes simultaneously.

Through the influence of Bishop Daniel Wilson, Pratt obtained a chaplainry appointment with the East India Company in 1838 and, in 1844, became chaplain to the bishop of Calcutta. He was appointed archdeacon of Calcutta in 1850, a post he held until he died. In 1866 he became a fellow of the [Royal Society](#).

Of Pratt's several books only his first, *The Mathematical Principles of Mechanical Philosophy* (Cambridge, 1836; revised 1842; expanded and republished in 1860 as *A Treatise on Attractions, LaPlace's Functions, and the Figure of the Earth*), is exclusively concerned with science. The focal point of this book is the shape of the earth.

The theory of fluids suggests that the earth is essentially spheroidal. Pratt began by calculating the Newtonian attractive force exerted by a homogeneous sphere on a point, then successively relaxed the constraints on composition and shape. He ended the first part of the treatise by considering local gravitational effects, those due to irregularities in the earth's crust.

In the second part Pratt turned his attention to the fact, first demonstrated by Newton, that the earth is not a sphere, showing that the fluid hypothesis leads to an oblate spheroidal shape. He next produced a sequence of arguments intended to show that the lower bound of the thickness of the earth's crust is 1,000 miles (current estimates range from five to eight miles). Pratt concluded by showing that the [precession of the equinoxes](#), the period differential for pendulums as a function of latitude, and geodetic data all support the conclusion that the earth is an oblate spheroid. He gave the difference between the equatorial and polar axes as 26.9 miles, a figure that compares favorably with current measurements.

For most of his professional life Pratt was concerned primarily with the propagation of the faith. He was a not undistinguished member of that informal fraternity committed to the proposition that revelation and science are complementary avenues to the acquisition of knowledge.

BIBLIOGRAPHY

With the exception of *A Treatise on Attractions*, Pratt's works do not appear to have survived in the major collections; nor have his publishers, through a complex of unfortunate circumstances, been able to preserve copies of his works, the more scientifically oriented of which include *Scripture and Science Not at Variance; With Remarks on the Historical Character, Plenary Inspiration, and Surpassing Importance of the Earlier Chapters of Genesis Unaffected by the Discoveries of Science* (London, 1856; 7th ed. 1872); *The Descent of Man, in Connexion With the Hypothesis of Development* (London, 1871); and *Difficulties in Receiving the Bible as a Divine Revelation Arising From the Progress of Human Knowledge* (Calcutta, 1864).

Jerome H. Manheim