Biographical Encyclopedia of Astronomers

Molyneux, William

Born Dublin, Ireland, 17 April 1656

Died Dublin, Ireland, 11 October 1698

William Molyneux, an influential figure in the scientific affairs of Dublin in the late 17th century, gained the respect of Edmond Halley and John Flamsteed as an astronomer and wrote *Dioptrica Nova*, the first major book in English on optics.

William was the eldest surviving son of Samuel Molyneux and Margaret, daughter of William Dowdall, of Dublin. The Molyneuxs became part of the Protestant establishment that dominated Dublin's social and political life. Samuel, trained as a lawyer, was a skilled artillery officer, experimenting with gunnery for many years. William received a good schooling and entered Trinity College, Dublin, at the age of 15. After graduating, he went to London in 1675 to study law. However, law did not greatly interest Molyneux, and he devoted most of his time to applied mathematics and science. He returned to Dublin in 1678 and married Lucy, the youngest daughter of Sir William Domville, Attorney General of Ireland. Only two months later, she became ill, going blind and suffering from constant headaches until her death 13 years later. After a vain search in England for medical relief for his wife, Molyneux settled down in Dublin and passed the time by translating René Descartes's *Meditations*, published in London in 1680. He also translated Galileo Galilei's *Discorsi* from Italian for his own use.

Molyneux's wife's affliction probably led him to pose the Molyneux problem, which assumes that a man blind from birth who gains his sight is confronted by a sphere and a cube that he had previously learned to distinguish by touch. Can he identify at first sight which is which? Molyneux believed not. John Locke, George Berkeley, and other philosophers discussed the problem

Molyneux's first important achievement in astronomy was to record the lunar eclipse seen in Dublin on 1 August 1681. He sent his observations to a friend in London, Charles Bernard, who passed them on to Flamsteed, the Astronomer Royal, whom Molyneux had previously visited at Greenwich. This led to a correspondence between Flamsteed and Molyneux that continued for the next ten years in which problems of optics, astronomy, ballistics, and tides were discussed. Molyneux learned a great deal about optical instruments from Flamsteed's letters; the exchanges were remarkable for their cordiality, as Flamsteed was reputed to have a short temper

In 1684, Molyneux became involved in a controversy between Robert Hooke and Johannes Hevel. In his *Machina coelestis* (1673), Hevelius had claimed that open sights were better than telescopic sights. Hooke vigorously disputed the claim, and in 1679, Hevelius went to Danzig to test the rival theories. Halley supported Hevelius and gave him a written testimonial to that effect. Hevelius repeated his claim in 1685, in his *Annus Climactericus*, which Molyneux

reviewed, showing Hevelius's conclusions were invalid and telescopic sights were more accurate

In October 1683, Molyneux and some colleagues from Trinity College formed a society on the model of the Royal Society of London. It was called the Dublin Philosophical Society; it met in rooms owned by an apothecary and included a garden for plants and a laboratory. Sir William Petty was the first president, and Molyneux was secretary. The society exchanged minutes with the Royal Society and the Oxford Philosophical Society. Papers read in Dublin were frequently published in the *Philosophical Transactions of the Royal Society*. The society was the forerunner of the Dublin Society (1731) that became the Royal Dublin Society (1820), promoting the utilitarian aims of the original society.

In 1685, Molyneux was elected a Fellow of the Royal Society. That same year, he visited his brother Thomas (afterwards Sir Thomas), who was studying medicine in Leiden, the Netherlands. The brothers visited Christiaan Huygens at The Hague, where he showed them a telescope in his garden and a planetary clock. In Paris they visited Jean Cassini and saw a clockwork device for driving a telescope.

Returning through London, Molyneux visited Flamsteed, and he also ordered the construction of a combined dial and telescope of his own design, to which he gave the name *Sciothericum telescopicum*. Flamsteed later examined the device and was not impressed. The following year Molyneux published a book describing the instrument.

When James II arrived in Ireland in 1688, Molyneux fled to England, settling in Chester. There, his son Samuel Molyneux was born; he was a source of great interest and pride to his father and became an astronomer.

During his two-year stay in Chester, the elder Molyneux wrote *Dioptrica Nova*, which was the first book on optics published in English. The book was received favorably and became a standard text. In a dedication to the Royal Society, he made a complimentary reference to Locke, which led to a long and friendly correspondence between the two men

After the defeat of James II in July 1690, Molyneux returned to Dublin and became involved in politics. He was elected as one of the university representatives in the new Irish parliament in October 1692 and was reelected in 1695. As a result of his concern about the effect of the English parliament's legislation on the linen and woolen industries in Ireland, early in 1698 he published the work by which he is generally best known: *The Case of Ireland's Being Bound by Acts of Parliament in England*, stated. It was an attempt to prove the legislative independence of the Irish parliament, and it provoked strong opposition from the English parliament.

Despite the unfavorable reaction to his book in England, Molyneux went to London in July 1698 to fulfill a long-standing promise to visit Locke. Upon his return in September, he soon suffered a recurrence of a kidney ailment and died.

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