Biographical Encyclopedia of Astronomers

Wilkins, John

Born Fawsley, Northamptonshire, England, 1614

Died Chester, England, 16 November 1672

John Wilkins's popular astronomical works, *The Discovery of a World in the Moone* (1638) and *A Discourse Concerning a New Planet* (1640), appearing when Wilkins was only in his mid-twenties, became "the most influential English defense of Copernican astronomy in the second half of the 17th century." Though not scientifically original, they transmitted the insights and the excitement of Galileo Galilei and Johannes Kepler to a vernacular English readership in an engaging, speculative style that laid the foundation for the genre of science fiction.

Wilkins received a classical education at Oxford in the school of Edward Sylvester and was such an outstanding student that he matriculated at Oxford University in 1627, at the age of 13. After receiving his BA in 1631, he became a clergyman and served, among other roles, as warden of Wadham College (1648–1659), master of Trinity College, Cambridge (1659–1660), and Bishop of Chester (1668–1672). Wilkins's theological position was unclear, but he was sufficiently adaptable ecclesiastically and politically to flourish both before and after the Restoration (May 1660). In 1656, Wilkins married Robina French, the widowed youngest sister of Oliver Cromwell.

Wilkins chaired the November 1660 meeting of the newly founded Royal Society at which it was resolved to petition King Charles II for a charter. Wilkins's lifelong sociable encouragement of science earned him praise as "a great preserver and promoter of experimental philosophy."

Before Wilkins's publication of *The Discovery*, serious popular attention to, or even awareness of, the Copernican model in England was rare. For this reason, Wilkins was careful in introducing the most shocking, counterintuitive tenet of Copernicanism, namely, that the Earth moves and is therefore a "new planet." Although the main focus of *The Discovery* is lunar, Wilkins explicitly draws the inference of "other worlds" theory that follows from Copernican cosmology: If the Earth is a planet, then perhaps the planets (including the Moon) may be conceived to be Earths

The Discovery strove to overcome resistance to Copernicanism that results from literalistic interpretation of certain passages of Scripture, from the sheer novelty of the idea of a moving Earth, and from traditional notions regarding the physical uniqueness and mutability of the Earth, in contrast to the pristine realms beyond. This work's main inspiration at the imaginative level appears to be Kepler's posthumous *Somnium* (1634). At the physical level, however, it hews closely to Galileo's *Sidereus Nuncius*. Thus, Wilkins demonstrates the Earth-like, mountainous character of the Moon and offers a similarly Galilean account of how both objects reflect the Sun's light mutually.

This simultaneous poetic and physical domestication of the Moon then opens the way to its being imagined as another world, another place of habitation (not in the older dominant sense of "world" as universe).

Moreover, if light may travel from Earth to the Moon, so perhaps other things can. In the revised edition of *The Discovery* in 1640, Wilkins suggested how "our posterity" might "find out a conveyance to this other world." The possibility, and difficulty, of space flight led Wilkins to speculate on the nature of gravity. For the difficulty seemed less if, as Wilkins argued, that "natural vigour whereby the Earth does attract dense bodies unto it, is less efficacious at a distance." An account of precisely how much less this "natural vigour" grows with distance was offered later by Isaac Newton. But Wilkins's both imaginative and practical struggle to conceptualize human space travel helped to place the issue of gravity squarely on the agenda of physical theory

A further problem for space travel that Wilkins helped to remove from the popular imagination was the idea of the crystal-line spheres, which post-Copernican developments of astronomical thinking in both Tycho Brahe and Kepler had already effectively eliminated from scientific consideration. Robert Burton, in his contemporary *The Anatomy of Melancholy,* saw clearly what the removal of the solid spheres implied for possible human exploration: "If the heavens then be penetrable, it were not amiss in this aerial process to make wings and fly up." Following Galileo, Wilkins treated "the heavens or stars" as "of a material substance." And he built into this physical approach to astronomy was a satirical denial of materiality—indeed, the reality of the supposed crystalline spheres, "this astronomical fiction," as he called them.

Wilkins offered his vernacular audience touches of satire, patient logical and arithmetical refutation of objections against Copernicanism, simple diagrams and explanations, unwavering piety, and undeniable poetic and rhetorical charm. For his countrymen, these qualities combined to diminish the strangeness of the new astronomy and to open its vistas in a moderate, unthreatening way. Wilkins thus contributed to both a buffering and a kindling of the spirit of science, as well as of science fiction. He articulated, in a word, new scientific and cosmic prospects.

Wilkins's impact also extended to other literatures beyond English. Both *The Discovery* and *A Discourse* were translated into French by Jean de la Montagne under the title *Le monde dans la lune (*Rouen, 1656). This edition is said in part to have inspired Cyrano de Bergerac's *Histoire comique des états et empires de la Lune*, 1656, and, most influentially, Bernard de Fontenelle's *Entretiens sur la pluralité des mondes*, 1686. It is probable too that Wilkins helped stimulate the "other worlds" speculations of Christiaan Huygens, whose *Cosmotheoros* was published in Latin in 1698 and translated into English in the same year under the title *The Celestial Worlds Discovered*. Wilkins's first German translator was Johann Doppelmayer, whose edition appeared in 1713 as *Johannis Wilkins Vertheidigter Copernicus, oder, Curioser und Hürder Beweis der copernican Grundlagen.*

Dennis Danielson

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