

WILLIAM HARVEY

William Harvey was born on April 1, 1578. On the occasion of the four hundredth anniversary of his birthday, I would like to take the opportunity, first of all, to point out to the members of our campus community that there is a significant collection of books relating to Harvey in the UTMB Library. One will find, for example, numerous editions and translations of Harvey's work on the circulation of blood, known as *De motu cordis*. First published in 1628, this little book still provides interesting reading, as it sets forth in careful detail the empirical and philosophical considerations which went into the discovery of the circulation of blood. Harvey's lesser known work, *De generatione*, first published in 1651, covers his theory of generation and experimental work in embryology; today it is of more interest to biologists than scientists.

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A great deal has been written on Harvey since his death in 1657. Sir Geoffrey Keynes' *The Life of William Harvey* (1966) is considered the definitive biography, and *William Harvey, the Man, the Physician, and the Scientist* (1965) by Kenneth D. Keele is an excellent survey of Harvey's work and life. Various other monographs and periodical articles cover in detail specific aspects of Harvey's philosophical outlook and experimental work.¹

Here I will concentrate on Harvey the man, instead of summarizing duly Harvey's epoch-making work and reiterating his importance in the history of science and medicine. What kind of a person was he? More particularly, how did his contemporaries see him, and what did they say about him? There is fortunately a fascinating account of Harvey by John Aubrey (1626-1697).

¹See, for example, Walter Pagel, *William Harvey's Biological Ideas* (1967) and Gwenth Whitteridge, *William Harvey and the Circulation of the Blood* (1971).

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¹See, for example, Walter Pagel, William Harvey's Biological Ideas (1967) and Gwenth Whitteridge, William Harvey and the Circulation of the Blood (1971).

who was one of Harvey's friends in his later years. An English country gentleman with intellectual attributes, Aubrey loved to compile anecdotes about famous men and to note their personal characteristics. What he left behind was not a book, but a collection of scattered manuscripts which recorded facts and gossip alike about his contemporaries.² Recent research has shown that Aubrey's account of Harvey was fairly accurate.

Aubrey has provided us with a vivid portrait of Harvey: "He was not tall; but of the lowest stature, round faced, olivaster complexion; little Eie, round, very black, full of spirit; his haire was black as a Raven, but quite white 20 yeares before he dyed."³ When Aubrey met Harvey in 1651, he found him a "Cholerique" old gentleman, but "very communicative, and willing to instruct any that were modest and respectfull to him."⁴ At the time, Aubrey was getting ready to go to Italy, and Harvey had been there several times, first as a medical student at the University of Padua, where he had obtained his M.D. degree nearly fifty years earlier. Harvey told the young man "what to see, what company to keepe, what Bookes to read, how to manage my studies:"⁵ Aubrey recalled that Harvey advised him to read Aristotle, Cicero and Avicenna, condemning the moderns, or "the Neoteriques shitt-breeches."

From Aubrey's various remarks it becomes clear that Harvey was basically a pensive man, dedicated to the study and observation of nature. "He did delight to be in the darke, and told me he could then best contemplate." He and Aubrey sat together for two or three hours at a time, perhaps in

²Aubrey's manuscripts were arranged and edited by Oliver L. Dick as Aubrey's Brief Lives in 1949.

³Aubrey's Brief Lives, edited by O.L. Dick (Ann Arbor: The University of Michigan Press, 1957), pp. 131-32.

⁴Ibid., p. 129.

⁵Ibid.

the dark, in Harvey's "meditating apartment discoursing." Aubrey further relates that Harvey once owned a country house "where he had caves made in the Earth, in which in Summer time he delighted to meditate."⁶

Harvey was first appointed a physician extraordinary to King James I in 1618, and over the years he retained his position at the English court, becoming senior physician to Charles I in 1639. During an official visit to Vienna in 1636 Harvey accompanied the royal ambassador and had an opportunity to meet a number of eminent continental physicians. Whenever he had a chance, he would take short trips in the dangerous countryside to satisfy his curiosity about regional fauna and flora. As Aubrey reports, "he would still be making of excursions into the woods, makeing [sic.] observations of strange Trees, and plants, earths, etc., naturalls, and sometimes like to be lost, so that my Lord Ambassador would be really angry with him, for there was not only danger of Thieves, but also of wild beasts."⁷

Harvey's zeal for learning is revealed once again in another incident Aubrey relates. Following the outbreak of Civil War in 1642, Harvey remained with Charles I, and was with him during the Battle of Edgehill. On the morning of the battle, Harvey was in charge of the royal children. "...during the fight, the Prince and Duke of York were committed to his care. He told me that he withdrew with them under a hedge, and tooke out of his pockett a booke and read; but he had not read very long before a Bullet of a great Gun grazed on the ground neare him, which made him remove his station."⁸

The author of De motu cordis, a book which would become one of the most significant works in the development of the life sciences, appears

⁶ Ibid.

⁷ Ibid., p.131.

⁸ Ibid., p.128.

to have been a modest and patient man. Harvey's theories and experimental work presented in De motu cordis were known to his close associates long before its publication in 1628. Yet, the response to Harvey's revolutionary ideas on the circulation of blood in the years following its publication was not immediate acceptance but rather silence. "Among all the rabble of his antagonists," wrote a younger contemporary of Harvey in 1652, "we see not one that attempts to fight him at his own weapon, that is by sensible and anatomical evictions to confute that which he has by sense and autopsy so vigorously confirmed."⁹ Even two decades after Harvey's ideas appeared in print, there were many among his colleagues who refused to accept the new theory of blood circulation. And, Harvey patiently waited for the day when the validity of his experimental work would be obvious to all. One of Harvey's friends recalled Harvey's answer to those individuals who asked why he did not respond to his critics: "It is not weighty enough," Harvey said, "for me to trouble the Republic of Letters again on my own behalf." If his reasoning were faulty, and his observations and dissections not as accurate as he believed them to be, then his writings would be eventually neglected and forgotten. After all, he admitted, he is human and he can err. But, "if I am right," Harvey continued, "in the end the human race will not disdain the truth."¹⁰

Harvey's modest attitude is further confirmed by a remark made by John Aubrey. Harvey was in his seventies and Aubrey in his twenties, when the two men spent long hours together conversing on various topics. "Why, had he [Harvey] been stiff, starcht, and retired, as other formal Doctors are," noted Aubrey, "he had known no more than they.... Pride has been one of the

⁹Quoted in G. Keynes, The Life of William Harvey (Oxford: At the Clarendon Press, 1966), p.319.

¹⁰Ibid., p.322.

greatest stoppers of the Advancement of Learning." Aubrey added that Harvey was "far from Bigotry," and he liked to think that "man was but a great, mischievous Baboon."¹¹

When King Charles I was handed over to the Parliament in 1647, Harvey returned to London and began living at the various residences of his brothers in the city. He resumed his medical practice and faced only a small degree of prejudice because of his royalist connections and sympathies. Nevertheless, his practice remained limited. Even before the Civil War, his practice was not very large, partly due to a certain lack of confidence in his skills as physician. "All his Profession would allow him to be an excellent Anatomist," wrote Aubrey, "but I never heard of any that admired his Therapeutique way."¹² It is ironical that Harvey remained a physician to the royal family, while a number of his colleagues and citizens continued to doubt his medical skills. If such adverse feelings were not owing to a prejudice against his position at the Court, they were likely the result of a reaction to his revolutionary work on the circulation of blood. Even Harvey himself had admitted that his medical practice decreased considerably after the publication of De motu cordis. Aubrey recalled: "I have heard him say, that after his Book of the Circulation of the Blood came-out, that he fell mightily in his Practize, and that 'twas beleaved by the vulgar that he was crack-brained; and all the Physitians were against his Opinion, and envyed him."¹³ It was difficult to demonstrate experimentally that Harvey was wrong, but easy to spread the rumor that he was not a skilled physician.

¹¹Aubrey's Brief Lives, p.130.

¹²Ibid., p.132.

¹³Ibid., p.131.

William Harvey suffered from gout and kidney stones in his old age. In order to ease the pain in his legs, he would "putt them into a payle of water, till he was almost dead with cold," and then warm them up by the stove. We are also told that he kept "a preparation of Opium" in his study to relieve his discomfort. Inability to sleep at night was often a problem for Harvey, as "his thoughts working would many times keepe him from sleeping," He would get up and "walke about his Chamber in his shirt" until he felt chilled, and then return to bed and fall asleep.¹⁴

On June 3, 1657, Harvey died of a stroke. In the morning of his death he found himself unable to speak ("had the dead palsey in his Tongue") and realized that there was no hope of his recovery. He was bled in the tongue with no immediate relief, and he died in the presence of his brother, nephews, and his apothecary. Presumably, Aubrey was also at Harvey's death bed, as he observed, "the Palsey did give him an easy Passe-port."¹⁵

By the time Harvey died at the age of seventy-nine, most of his opponents were also dead. The younger generation of physicians and scientists were more inclined to accept Harvey's ideas on the circulation of blood, and Harvey lived to see the gradual establishment of his work. Poet Abraham Cowley (1618-1667) perceived Harvey's eminent position in the history of science and medicine perhaps more clearly than anyone else among his contemporaries. The composer of "Ode upon Dr. Harvey," Cowley understood how "Harvey sought for truth in truth's own Book" and "wisely thought" not to read merely commentaries on the workings of Nature.

¹⁴Ibid.

¹⁵Ibid., p.132.

Yet, Harvey could not go on forever pursuing relentlessly Nature's secrets.

For though his Wit the force of Age withstand,
His Body alas! and Time it must command,
And Nature now, so long by him surpass't¹⁶
Will sure have her revenge on him at last.

Inci A. Bowman, Ph.D.
Associate Curator
History of Medicine Collection

¹⁶Quoted in Keynes, The Life of William Harvey, p.429. Also see page 426.

NEWS AND NOTES

New NLM Literature Searches

A copy of each of the bibliographies listed below is on file in the Reference Department of Moody Medical Library, and may be used in the Library or photocopied. For a complete listing please inquire at the Reference Desk.

New titles received include the following:

- 77-4 Bismuth Toxicology
- 77-5 Ozone Toxicology
- 77-6 Thallium Toxicology
- 77-7 Bone Marrow Transplantation in Leukemia and Solid Tumors
- 77-8 Platinum Complexes in the Treatment of Cancer
- 77-9 Saccharin
- 77-16 Health Maintenance Organizations
- 77-17 Psychological Aspects of Cancer

Library Announces New Data Base: Toxicology Data Base (TDB)

A new on-line data base is being tested by the Reference Department. Unlike our other data bases, TDB contains facts and data regarding the toxicity, biological effects, chemical and physical properties, safety and handling, production, uses, antidotes and treatments, etc., of a variety of chemical substances. Our other data bases provide only bibliographic citations to the literature. TDB information, extracted from about 60 secondary sources (textbooks, handbooks, etc.), contains biological, pharmacological and toxicological data. This service is free to all during the current test phase. Call the Reference Department, Ext. 2372, for more information or come to the Library.