

1st of April, 1578. His education was conducted first at a grammar school in Canterbury, and afterwards at Gonville and Caius College at Cambridge. To minds of a certain order, some comparatively trivial event, carefully pondered, not unfrequently opens the path to discoveries of the greatest magnitude. There seems, at first sight, little relation between the fall of an apple, and the splendid scientific achievements of Newton. Yet it was a train of thought, directed by this apparently trifling circumstance, which conducted him to the whole of them. Thus it was with Harvey. In the course of his travels, for the completion of his medical education, he settled for a short time at Padua. *Fabricius ab Aquapendente* was then at the height of his reputation as a professor of anatomy in the university of that place. The theatre, built at his expense, is still exhibited to visitors at Padua. Its circular seats, rising almost perpendicularly one above another, now nearly black with age, give to the small apartment, which is wainscoted with curiously carved oak, a solemn and venerable appearance. The lectures were given by candlelight, as, from the construction of the theatre, no other light could be admitted. Here it was that Harvey caught the first glimpse of the discovery which has since immortalized his name. *Fabricius* one day pointed out the existence of valves in the veins—not however, that he had the slightest conception of their use, for the only conjecture that he could hazard was, that they might be designed to moderate the flow of blood from the trunks of the veins to their smaller branches, taking it for granted that such was the course of the circulation. This was enough for his intelligent pupil. There were valves in the veins undoubtedly; but could this be the intention of them? He would not place implicit dependence upon any teacher, however celebrated, but would examine for himself. Valves opening towards the heart seemed calculated to impede altogether, rather than to retard merely, the flow of blood, in a direction from that organ. Tie up a vein or compress it, as is done in the simple operation of bleeding, and that portion of the vessel which is at the greatest distance from the heart will swell and become distended. Whereas, he soon discovered that, if an artery were tied, just the contrary happened; that part became enlarged which was nearest to the heart. Hence he was led by various experiments, step by step, till he clearly demonstrated that the heart is first of all excited to contract by the stimulus of the blood, that this fluid is impelled through the arteries, and, after having served every purpose of secretion and nourishment, returns by the veins to recommence the circulation.

Great, however, as the discovery undoubtedly was—immense as was its practical advantage—simple and easily demonstrable as it now appears, Harvey durst not for many years even drop a hint upon the subject in his comparatively private lectures, and it was not until nearly thirty years had elapsed that he ventured to publish to the world, not in his own country, but at Frankfort, the results of his experiments. And then nothing could exceed the contempt and ridicule with which it was received. Had he lived in a country unblest with the light of the Reformation, he would probably have shared the fate of Galileo. As it was, he was accused of propagating doctrines tending to subvert the authority of Holy Scripture, the epithet circulator, in its Latin invidious signification, (quack,) was applied to him, it was given out that he was “crack-brained,” and his practice as a physician sensibly declined. In a quarter of a century more, his system was received in all the universities of the world, and Harvey lived to enjoy the reputation he justly merited.

The date of the first promulgation of his then novel views has not been accurately ascertained. Thus much is certain,—Harvey graduated at Padua and afterwards at Cambridge in the year 1602, soon after which he settled in the practice of his profession in London. In 1607, he was elected Fellow of the College of Physicians, and in 1615, he was appointed reader of the anatomical and surgical lectures founded by lord Lumley and Dr. Cadwell. In the British Museum, there is an original ms. of his lectures of the date of April, 1616, which contains the propositions on which his doctrine is founded. But it was not till 1628, when he was in his fiftieth year, that he published the great work already referred to. Some curious preparations, rude enough, but, under the circumstances of the case, highly interesting, which he either himself made at Padua, or procured from that celebrated school, and very probably exhibited during his course of his lectures, were not very long since presented to the College of Physicians by the

Earl of Winchelsea—a direct descendant of lord chancellor Nottingham who married Harvey's niece. They consist of six tables or boards, upon which are nerves and blood-vessels, carefully dissected out of the body; in one of them the semilunar valves of the aorta are distinctly to be seen. These valves placed at the origin of the arteries, must, doubtless, together with the valves of the veins have furnished the most striking and conclusive arguments in favour of the true system.

The talent and discoveries of Harvey soon recommended him to the notice of the court. From a letter of James I., dated February 3, 1623, it appears that he had then for some time been physician extraordinary to his majesty. In 1632, he was appointed physician to Charles I., who always treated him with much regard, and was an interested spectator of many of his experiments. About this time he appears to have accompanied the earl of Arundel and Surrey, lord high marshal of England, as his physician, in his embassy to the emperor. Aubrey states, that one of his excellency's attendants on this occasion told him that, in his journey to Vienna, Harvey would always be making excursions into the woods in order to investigate “strange trees and plants, earths,” etc., and sometimes was in danger of being lost, “so that,” adds he, “my lord ambassador would be really angry with him, for there was not only danger of thieves, but also of wild beasts.” In the following year, Harvey accompanied the king in his visit to his northern dominions, and when the civil war broke out, he still followed the fortunes of his royal master, attended him when he left London, and was present at the battle of Edge Hill. On this occasion, the prince afterwards Charles II., and the duke of York, were committed to his charge. While the fight was going on, he had not a mind to forego pursuits more congenial to his taste; accordingly, he withdrew with the young princes under a hedge, and took out of his pocket a book, which he began to read. He had not, however, pursued his studies long, before a cannon-ball grazed on the ground near him, which soon compelled him to remove his station. After an arduous struggle, both sides claimed the victory; but one result of the battle was favourable to the inclinations and designs of Harvey. The king continued his march, and took possession of Oxford, the only town in his dominions which was altogether at his devotion. Hither, with the rest of the royal household, his physician retired, and here he had abundant leisure to pursue his favourite studies; although under the disadvantage of having lost many most valuable notes of experiments, which he had previously made; for at the beginning of the rebellion, his lodgings at Whitehall had been plundered, and many papers containing curious observations upon the dissections of animals had totally disappeared. This was a loss which he never ceased to lament, saying, that “for love or money he could neither retrieve or obtain them.” He remained at Oxford about three years, during which time—in 1645—he was made warden of Merton College, by the king's mandate. It is related of him, that, during his stay there, he was in habits of intimacy with a kindred mind, Dr. Bathurst, of Trinity College. This gentleman kept a hen to hatch eggs in his chamber, which they opened daily to understand the whole process and results of incubation. “Eggs,” says Harvey, “were a cheap merchandize, and were at hand at all times and in all places; and it was an easy matter to observe out of them what are the first evident and distinct marks of generation; what progress nature makes in formation, and with what wonderful providence she governs the whole work.” This was a favourite study with Harvey, and forms the subject of his other great work, second only in the importance to his “Treatise on the Motion of the Heart and the Blood.” Dr. Charles Scarborough, afterwards knighted by Charles II., was another associate in whose society he at this time much delighted; except that he considered him in danger, under the contagion of those troublous times, of neglecting his medical studies for the more brilliant profession of arms. To check his military ardour, he accommodated the young doctor with a lodging in his own apartment, saying, “Prithee leave off thy gunning, and stay here; I will bring thee into practice.” But in the year 1646, Charles was persuaded to put himself in the power of the Scottish army at Newark, and orders were issued for the surrender of Oxford. Consequently Harvey was obliged to relinquish his short-lived appointment of warden to Merton College, and to return to London, where for some time he lived with his brother Eliab, a rich merchant, who resided opposite to St. Mildred, in the Poultry. How