

ESSAYS IN MEDICAL BIOGRAPHY**Author** John Trevor Hughes**Publisher** Rimes House**Published in 2008****Hardcover, 204 pages****ISBN** 978-1-874317-01-2**Retail price** £20.00

Essays in Medical Biography is written by Dr John Trevor Hughes, Emeritus Fellow of Green College and retired Oxford Consultant Neuropathologist at the University of Oxford. Dr Hughes is well known for his works on medical history and biographies. This book features an array of doctors who have contributed not only to Medicine and Science, but also to many other areas of human endeavour. Consequently, this work is a treasure trove of knowledge regarding the lives and contributions of famous doctors. It also portrays doctors as individuals with many varied talents, apart from their inclination towards medicine and science. In this review, it is my intention to provide the readers with a glimpse of this remarkable book. I have done this through mini-summaries of the lives and work of the characters in Hughes' book, in an attempt to promote his work, which in my opinion, is certainly worthy of the attention of the medical community.

This work spans a period from the 17th to the 20th century, beginning with George Sharpe (1851–1637), who graduated with a Master of Arts degree in 1583 from Edinburgh University, but had to pursue his medical studies at the University of Montpellier as the medical school in Edinburgh was developed only towards the last quarter of the 17th century. Sharpe obtained his Bachelor of Medicine degree in 1606 and his Doctorate in Medicine in 1607. In 1619, he was appointed to the Chair of Medicine at Montpellier until 1634, after which he left for the Chair of "Theory of Medicine" in Bologna, the oldest of the Italian schools and the richest at that time. Sharpe was a wily and obdurate fellow, though considered a learned man and an able logician. It is interesting to note that Sharpe, a Scotsman, managed to keep the Professorial Chair for 15 years in a foreign country. Before he left for Bologna, he even nominated his own successor, Jacques Duranc, as his *locum tenens*. This led to an uproar from senior colleagues who wished to nominate a candidate of their choice. A legal challenge ensued, and it was alleged that Duranc had paid Sharpe for his appointment. The case was sent to Toulouse for trial. The parliament at Toulouse finally declared the chair vacant, but the legal wrangling continued. An influential friend of Sharpe's had affirmed that Sharpe had gone to Bologna with the King's permission. Read more about the exploits of Sharpe in the Faculty, the Huguenots and the religious wars in France, and how the physicians at Montpellier struggled through the period.

Thomas Browne (1605–1682) was an English author of varied works and whose wide learning in diverse fields included Medicine, Religion, Science and the esoteric. He was also a geographer, botanist and zoologist. He attended Oxford University and studied Medicine at various continental universities, including Leiden University. He was famous for his book, *Religio Medici* (Religion of a Physician), and was considered a consummate literary craftsman. He was also a fellow of the College of Physicians and a frequent correspondent to the Royal Society. *Religio Medici* is the most celebrated work of one of the great 17th century stylists of English prose. It is a meditative essay, which was immensely popular, and established Browne's fame as a writer. It has been described as a prose-poem, a confession of faith and private diary of the soul. Although written by a physician, it is neither medical nor scientific. Indeed, as Browne explored the central themes of faith and charity, he acknowledged the need to keep religion separate from science for "many things are true in Divinity, which are neither inducible by reason nor confirmable by sense; ultimately the nothingness of the world when seen in the perspective of eternity is emphasised". Browne had another famous work, entitled *Pseudodoxia Epidemica*, where he revealed his knowledge in zoology, making frequent references to America, a country he described as abounding with beasts of prey and noxious animals. Browne was appreciative of William Harvey's 1682 discovery of the circulation of the blood, and in a correspondence wrote, "be sure you make yourself master of Dr Harvey's piece of *De Circulatio Sanguinis*; which discovery I prefer to that of Columbus (i.e. that of America)."

Henry Power (1626–1669) was a distinguished doctor and scientist. In 1653, he experimented with the mercury

column, made barometric measurements and calculations before Robert Boyle demonstrated Boyle's Law in 1662. He also published the first English work on microscopy, before Robert Hooke. In 1652, Power examined William Harvey's work, *De Motu Cordis* on "Cardio Pulmonary Circulation of the Blood" at a time when Harvey's ideas were considered revolutionary. Power confirmed Harvey's findings through his own research work and experiments, and supported Harvey against critics from England and Europe. The pulmonary circulation had been described in the 13th century by Ibn Nafis, a physician in Cairo, and a translation in Latin may have existed in the 16th century. This lesser circulation was also described by Servetus who wrote, "By a signal artifice... the subtle blood is driven through the lungs and cleansed from its fumes, so at length it is stuff fit to become the vital spirit". Servetus was burnt alive in Geneva in 1553, with nearly all the thousand copies of his offending book, *Restitutio Christianismi*. Servetus disproved Galen's statement that channels in the interventricular septum permitted blood to pass between the ventricles. This was also doubted by Vesalius. Nor could Leonardo da Vinci, who performed more than 100 autopsies, find Galen's pores.

Thomas Willis (1621–1675) lived in Oxford under Oliver Cromwell's rule. He was a Royalist and was elevated in 1666 when King Charles II commanded his appointment to the Oxford Chair of Natural Philosophy. Willis taught anatomy, physics, psychology, chemistry and pharmacy. He wrote three books on Neuroscience dealing with the anatomy and pathology of the brain. The names he coined for certain structures in the brain, like cerebral peduncles and medullary pyramids, are still in use today. He described *myasthenia gravis* and *the circle of Willis*, which were named after him. Thomas Willis was the first Oxford Neuropathologist. His work of anatomical dissection was based on the necropsies of patients. Preservation of the tissue was obtained by the use of spirits of wine which was pioneered by Robert Boyle in Oxford. Willis' co-workers were Richard Lower and Christopher Wren. Wren made major contributions through his technique of injecting spirits into the blood vessels and his distinctive style of drawing. Willis wrote, "The Vertebral Arteries not only supply the hinder part of the Brain but also the upper part of the Spinal Cord. The Vertebral Artery pays to the superior part of the Spine as great Tributes of Blood as to the Head itself."

William Petty (1623–1687), an Oxford Anatomist and Physician was a scientist, inventor, ship designer, surveyor, statistician, demographer and political economist. He was a hyperactive and inventive child, skilled in the crafts of blacksmiths, instrument makers, watch makers and carpenters by the age of 12. He studied Medicine at Leiden University and in 1648, was appointed to the Chair of Public Anatomy at Oxford. The Modern Teaching of Anatomy began in Bologna when Mondinus began public dissection of the human body in 1315. The Chair of Anatomy was created in Cambridge only in 1707. At that time, body snatchers or resurrectionists dug up human bodies from the churchyard and carried them to the college for dissection. Vivid accounts of the body snatchers, the life and death of Laurence Sterne, a famous person whose corpse was stolen for dissection, the exploits of Burke and Hare, and the passage of the Anatomy Act in 1832 provide fascinating reading.

Sir Victor Horsley (1857–1916) was appointed as the first neurosurgeon of the National Hospital for Relief and Cure of the Paralysed and Epileptic when it opened at Queens Square in 1860. He pioneered Neurosurgery for cerebral trauma, intracranial haemorrhage and brain abscess. Horsley was on the committee which assessed Pasteur's claim of the efficacy of his prophylactic treatment for patients bitten by rabid animals; a claim that had aroused interest as well as scepticism. Horsley visited Pasteur's laboratory in France, and obtained rabies-infected spinal cords and two injected rabbits. He performed tests similar to Pasteur's and confirmed Pasteur's conviction that muzzling of all dogs and quarantine of imported dogs would eradicate rabies. Subsequently in 1886, Horsley also confirmed Pasteur's discovery of prophylactic immunisation of persons bitten by rabid animals and treatment of hydrophobia. By 1902, the Muzzling Order and Quarantine of Imported Dogs had eradicated rabies in Great Britain. As a neurosurgeon, Horsley developed various surgical techniques as well as surgery for epilepsy and trigeminal neuralgia.

Huge Cairns (1896–1952), a Rhodes scholar from Adelaide and a young neurosurgeon at Oxford in 1935, was struck by the tragic death of Lawrence of Arabia due to a head injury in a fatal motorcycle accident. Lawrence, a gifted young man of 46, had won international fame from his exploits in leading the Arab revolt against the Turks in the World War II. Cairns set about to identify and solve the problem of motorcyclists who died from traumatic head injuries. In 1937, Cairns was appointed to the Nuffield Chair of Surgery. His first and most important paper on the subject appeared in the British Medical Journal (BMJ) on October 4, 1941. He observed that among 149 cases of death from motor vehicle accidents involving motorcyclists, head injury was the only cause of death in 102 cases and the only severe injury in 85 cases. In contrast, among those wearing crash helmets, all seven were in the non-fatal accident

group. Cairns' article attracted editorials from both the Lancet and the BMJ. Cairns died in 1952 from a cancer in the abdomen. It was only 21 years after he died and 32 years after his first scientific paper, that crash helmets were made compulsory, due to tardy legislation. It was felt that had Cairns been alive, it would unlikely have taken so long for the legislation to be passed. Read more about Cairns' mobile neurosurgical units and Lawrence of Arabia in the book.

Julius Hallervorden (1882–1965) was a key participant of the Nazi Programme of Euthanasia. Euthanasia or mercy killing became the merciless murder of persons unwanted by Hitler's regime. Millions of Jews, gypsies, Poles, Russians and other unwanted persons were killed. The prisoners were executed using carbon monoxide in the gas chambers initially, and later intravenous petrol was used. Many children were also starved to death. False death certificates were issued. Hallervorden, who studied medicine and psychiatry, was one of the principal doctors who participated in this programme. He witnessed the killing of these victims by carbon monoxide poisoning, performed necropsies and removed the brains himself. Hallervorden's collection of more than 110,000 specimens from 2,800 cases was intact, despite the bombing in Berlin. They were catalogued with the histological slides of selected cases, including clinical notes and published papers arising from these cases. His superior was Hugo Spatz, a neuroscientist of comparable stature, though six years younger than Hallervorden. Both of them presented their research papers arising from the programme at international conferences. However, there was disquiet from the scientific community as some considered such research on concentration camp inmates worthless, as they believed that the care of the patients and the method of killing might have caused changes other than the condition being studied, e.g. starvation often preceded death. There are various accounts in the book regarding the administration of the Nazi programme, details of procedures and type of data collected. Read about the War Crimes Tribunal at Nuremberg and the numerous papers published in German journals of pathology, psychiatry, neurology and neurosurgery arising from the experiments on prisoners of war. In the book, EP Richardson Jr, writing from Boston in 1990, commented: "It is impossible to escape the suspicion that some of the observations were made without appropriate considerations of the provenance of material on which they were made".

Ironically, on August 28, 2009, when I looked into the internet to read about the Geneva Convention, someone had posted "Nazi Doctor given Medal, Treated as Hero" as reported in the Daily Kos on Friday July 31, 2009. The posting on the web read: "Despite being linked to the savage murder of 900 children in the Nazi death camps, a former SS doctor is to be awarded the German Federation of Internal Medicine's highest honour". For decades, 92-year-old Dr Hans Joachim Sewering has been protected by the Bavarian government and judiciary, avoiding prosecution for crimes he committed against mentally and physically disabled children during World War II. Now this man has been singled out by his fellow German physicians for the federation's most prestigious award, the Guenther-Budelmann Medal. More than 900 orders to transfer children to Eglfing-Haar were made by Sewering, undertaken in the full knowledge that Eglfing-Haar was an extermination camp where tens of thousands of children with mental and physical disabilities were murdered. In fact, it was a killing centre carrying out a secret Nazi policy of murdering handicapped children who were declared "useless eaters" by the Nazis.

The book is richly endowed with numerous illustrations and photographs of persons, places, buildings and reproductions of original handwritten manuscripts, like Harvey's first description of the Circulation of the Blood, Powers' manuscript from the British Library, figures from *De Motu Cordis* showing how the valves regulate the filling of the veins, engravings of the birthplace of Thomas Willis and the title page of *Cerebri Anatome*, as well as photographs of the operating theatre at Queen Square showing the personalities involved in neurosurgery, Lawrence of Arabia on his motorcycle, the villa at Tiergartenstrasse 4 in Berlin used for the Nazi's euthanasia programme, and Hallervorden and Spatz. The bibliography is extensive, and every chapter in the book is well referenced.

This is indeed a splendid book with a captivating narrative style. The personalities in the book fire your curiosity and lure you to continue reading to find out more about their characters, how they lived, their associates, their work and other activities, how they achieved their goals and their eventual medical discoveries. The book describes the great contributions to medicine, science and humanity from these multitalented individuals, apart from their medical and scientific inclinations. I would strongly recommend all doctors, paramedical staff, medical students and researchers to read this book so that they can learn from the lives of such great doctors, including those few who have taken the less-trodden path. We can all learn valuable lessons from them. Every medical and public library should have copies of this important work. At a price of £20, *Essays in Medical Biography* is indeed very affordable.

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