

## Book Reviews Recensions de livre

**HARVEY CUSHING: A LIFE IN SURGERY.** Michael Bliss. University of Toronto Press; 2005; 591 Pages; CDN\$50.00 ISBN: 0-8020-8950-X

In the course of nature the heavens often rain down the richest gifts on human beings, but sometimes with lavish abundance bestow upon one single individual . . . such ability united beyond measure in that individual that he surpasses other men.

In the emerging field of neurological surgery in the early part of the 20th century, Vasari's comments could most appropriately be applied to Harvey Williams Cushing (1869–1939). Michael Bliss delved deeply into the life of renowned Canadian physician, William Osler, in his successful book, *William Osler: A Life in Medicine*, then trained his keen biographical abilities on Harvey Cushing, who was one of Osler's Baltimore "latch key kids." The possession of one of these keys gave Cushing easy access to Osler's monumental library, next door at 1 West Franklin, and his close relationship with Osler while he was at Johns Hopkins would critically influence Cushing's life as an author and clinician.

Cushing was the product of a family with 3 generations of physicians. He obtained his undergraduate degree from Yale in 1891 and completed his medical training at Harvard, graduating *cum laude* in 1895. He then had the opportunity to study with William Stewart Halsted (1852–1922), remaining at Johns Hopkins until 1912, when he moved to Harvard as the Chief of Surgery at the Peter Bent Brigham Hospital. Halsted was a hard taskmaster, emphasizing meticulous surgical technique, especially for the control of bleeding. He carefully integrated surgical pathology and physiology, setting the tone for the development of scientific surgery in North America. He was the other critical influence on Cushing's career (Fig. 1). Halsted had been instrumental in the development of local anesthesia using cocaine injections in the vicinity of the nerves. After injecting the nerves of his own arm, he developed a cocaine addiction that kept him away from both his patients and the operating room. This absence allowed the young Cushing surgical responsibility that was more suited for more senior surgeons, which significantly advanced his career.

As a medical student in 1895, Cushing, along with a classmate, Ernest Amory Codman (1869–1940), developed the forerunner of the modern anesthetic record used today to monitor temperature, heart rate and blood pressure during operations. In an illustrative career, Cushing would author more than 300 articles and 13 books. These books always began with a discussion of anatomy, physiology, pathology and chemistry. He then delineated laboratory experiments and his astute clinical experience outlining innovative approaches to therapy. Cushing's major interest was cerebral tumours, and between 1912 and 1938, he published 5 books on his study and treatment of 2023 verified tumours. In the history of the development of Neuro-oncology no individual has eclipsed the contributions of Cushing.

His many contributions included the control of bleeding with silver clips, the development of electro-surgery and the development of technical methods for performing surgical operations. His basic science contributions included an understanding of the dynamics of intracranial



**FIG. 1.** The "All Star" operation. Photograph of William Stewart Halsted (operating with a mallet), Harvey Williams Cushing across from him, John M.T. Finney and Hugh Hampton Young participating in the first operation performed in the new operating room of Johns Hopkins Hospital. Reproduced with permission from *A History of Neuro-Oncology*, Rolando F Del Maestro. Montreal: DW Medical Consulting Inc; 2006.

pressure (ICP), the development of the pathological classification of glioma, and at the age of 63, the description of pituitary basophilia (Cushing Syndrome). His contributions to other fields were numerous. In 1926, he was awarded the Pulitzer Prize for his *Life of Sir William Osler*; his *A Bio-Bibliography of Andreas Vesalius* remains the dominant contribution in this field.

On a personal note, I own the first edition of Cushing's *Life of Sir William Osler*, sent by the book's publishers to Dr. Lewis Pilcher, the editor of *Annals of Surgery*. Pilcher pasted into the book the following note he received from Cushing, which reflects on Cushing's personality.

I am so pleased with your review of the Osler Volumes. It is good of you to have given the book such a generous send off in the *Annals of Surgery*. There is no one whose commendation about the biography I appreciate more than yours.

Bliss does attempt to address the issues of Cushing the man, husband and the father. His relationship, and one might say, outright competition with Walter Dandy, is outlined, giving a less than gracious picture of Cushing as a thoughtful individual. His comments concerning a superior during his time in the army in France almost got him court marshaled. Mrs. Cushing was primarily responsible for raising their 2 sons and 3 daughters. The death of his oldest son, William, in a traffic accident at the age of 22 is instructive. Cushing received the news in a telephone call in the early morning. He then informed his wife and continued to the hospital to perform his scheduled surgery. Cushing's 3 daughters would all marry into the upper echelons of high society and had lives that reflected the tumultuous upper classes of that time.

Cushing retired as the Chief of Surgery at the Peter Bent Brigham Hospital in 1932 and spent his remaining years in New Haven, at his alma mater, Yale. Never idle, he compiled his notes, drawings and wartime experiences in a book titled *From a Surgeon's Journal*. With Louise Eisenhardt, an eminent neuropathologist, he completed the groundbreaking monograph *Meningiomas*.

After giving the keynote speech at the

opening of the Montreal Neurological Institute in September of 1934 and visiting the Osler Library at McGill University, the wonderful repository of Osler's books, in which Cushing has deposited important documents relating to his *Life of Sir William Osler*, he donated his books to Yale. On the train home, he convinced his friend and future biographer, John Fulton, to do the same and soon enlisted his bibliophile friend, Arnold Klebs, in the endeavour. The Harvey Cushing/John Hay Whitney Medical Library is a lasting tribute to the mentorship and example that Osler had on Cushing.

Cushing began his postgraduate studies in Berne, Switzerland, in 1900–1901 and returned to give the keynote speech at the First International Neurological Congress on August 31, 1931. His presentation outlined his lifetime studies of intracranial tumours, and the audience included 25 of his pupils who had crossed the Atlantic to be with him. He outlined the significant decreases in mortality that had occurred in specific categories, such as gliomas (30.9 to 11.1%), pituitary adenomas (13.5 to 5.7%) and meningiomas (21.0 to 7.7%) in the 2023 verified tumours that he had operated on. He concluded his presentation commenting,

This report, which is certainly the last I shall ever attempt on the subject of brain tumours as a whole, cannot properly be concluded without paying tribute to my successive assistants and co-workers during these past many years who have faced the brunt of the work and shared the responsibilities.

He challenged both his students in the audience who were leaders in the field of

neurosurgery and all future neurosurgeons by quoting Leonardo da Vinci: "It is a mediocre pupil who does not excel his master."

Everyone who reads this fascinating book will come away with a new appreciation of Cushing the surgeon, the scholar and the man.

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**A HISTORY OF NEURO-ONCOLOGY. Rolando F. Del Maestro. Montreal: DW Medical Consulting Inc. 2006; 143 p. \$20.00. ISBN: 0771706359**

This is one of the most inappropriately titled books I have read. It originated from an exhibit prepared by Dr. Del Maestro in collaboration with the Osler Library to coincide with the 2006 Canadian Congress of Neurosciences. Although it is in the catalogue form prepared for that exhibition, the book is in fact a lavishly illustrated glimpse at the private collection of a significant enthusiast for history as the philosophy of who we are. The author's collection is supplemented with material from the Osler Library, itself the homage of a master of medicine to those upon whose shoulders his mastery was based. It is natural that Del Maestro would select the exhibits

from the perspective of neuro-oncology, but the title should not deter the rest of us from treasuring its contents.

The great subjects of medicine form the chapters, each of which takes the reader from early to modern times. Thus the first chapter, "Black Bile to Oncogenes," brings us from Hippocrates through Watson and Crick's Nature paper to a description of avian sarcoma virus by Varus and Bishop. In a similar manner, the subsequent chapters on anatomy, surgery, imaging and therapy cover their respective time frames. The topics are of interest to all surgeons. Del Maestro's use of illustrations from classic papers gives us a sense of looking over the shoulders of the great as they worked. Where original works were not available, the earliest printed editions are presented, maintaining the illusion. Juxtaposition of the classics with modern papers will inspire students with the hope that pursuit of a goal may result in their work being included in future progress catalogues.

Copies of this books can be found at <http://www.mcgill.ca/osler-library/about/introduction/sales> and should be placed casually around surgeon offices, and teachers should keep a stash for use as gifts. The text is of excellent value, not only in price, but also in the ratio of illustrations to text.

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**Competing interests:** None declared.