

role model

The surgeon as



Presidential Address:

HARVEY CUSHING and the unity of surgery



The surgeon as scientist



The surgeon as humanist



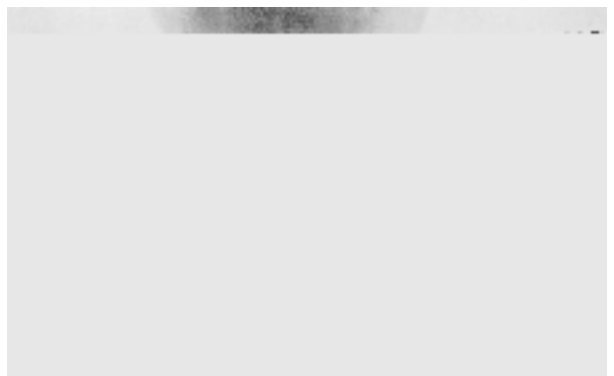
The surgeon as

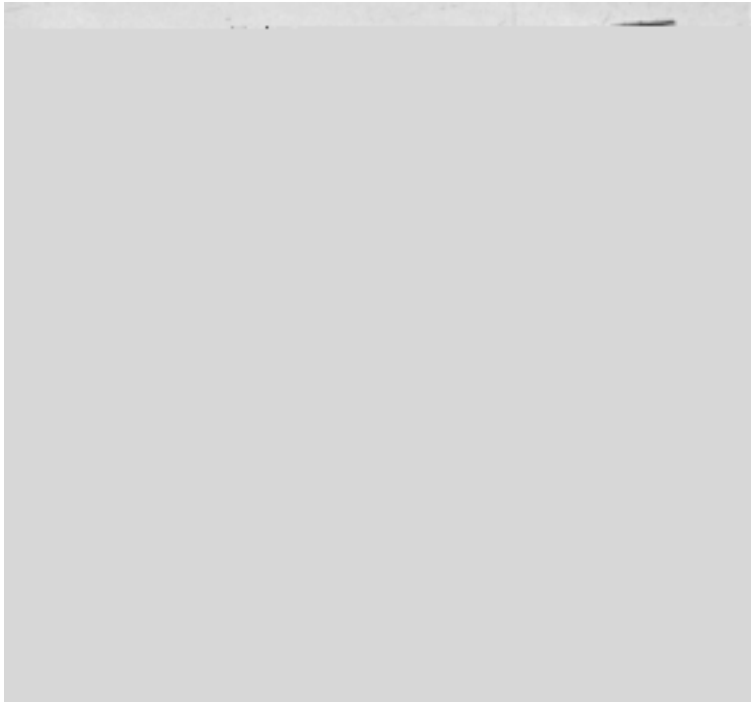
The surgeon as philosopher

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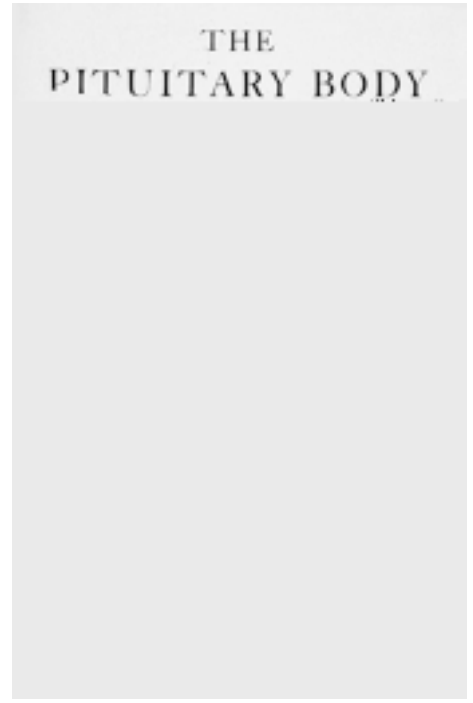
Dr. Cushing's early contributions to surgery reflected the major influences of the time. Remember that infectious disease was rampant at the turn of the twentieth century, and that a case of cancer was unusual enough to warrant the attention of all the faculty and students. Trauma, of course, was ever-present. Dr. Cushing's publications of 1898-1900 (early in his residency) focused on a variety of contemporary problems, including: intestinal perforation in typhoid, cholecystitis and cholelithiasis, gunshot wound of the spine, thoracic duct injury, splenectomy for splenic anemia, jejunal fistula, gonococcal peritonitis, anesthesia for hernia and thyroid surgery, amputation, and carotid thrombosis.

These publications reflect the basic principles set forth by William S. Halsted, MD: a keen sense of observation; attention to the details of history and physical diagnosis; and thorough and honest reporting of the outcomes. These principles remain the foundation of our current evidence-based approach to clinical and research problems in all of surgery. These concepts were embraced and perfected by a resident in surgery, and residency education as we know it began at





The Hunterian surgical research laboratory.



Dr. Cushing's monograph on the pituitary.

hydrate metabolism, saline irrigations, and infusions; the bacteriology of the upper gastrointestinal tract; pituitary and hypothalamic blood supply and physiology; neuro-ophthalmology; cardiac valvular surgery; neuromuscular physiology; and the transplantation of glands.

Dr. Cushing was a strong and uncompromising taskmaster in the laboratory. At times he became prematurely convinced about the outcomes of certain experiments and was unhappy when results were contradictory. This was one of the sources of controversy between Dr. Cushing and his brilliant pupil, Walter Dandy, MD.

By the time Dr. Cushing joined the faculty at Johns Hopkins in 1908, he had begun to concentrate on neurosurgical problems. He published articles about the treatment of trigeminal neuralgia, peripheral nerve surgery, and pediatric neurosurgery and, in 1912, produced a definitive monograph on the pituitary and its disorders (see figure, this page). The most in-

spiring aspect of this book, which contains the basic aspects of all we know about pituitary disease, is that it was derived from the careful clinical observation of only 47 patients!

In 1912, after rejecting several other offers, Dr. Cushing became surgeon-in-chief at the Peter Bent Brigham Hospital and professor of surgery at Harvard. There he was responsible for all of surgery, and superb progress in many areas of surgery flourished under his leadership. He went to France in 1915 and again in 1917-18 to assist the Allies in the war effort, and there he made many important and lasting contributions to modern military surgery.

The ability to adopt modern techniques and to apply them scientifically continues to characterize American surgery. These characteristics allowed Dr. Cushing and his students to develop the field of neuropathology, to apply the principles of blood transfusion to neurosurgical cases, to study and experiment with hormone replacement therapy and the control of hyper-

