Harvey W. Cushing, MD, is the most renowned surgeon in American history. Every aspect of his career including his many accomplishments—articles, essays, and vast correspondence—has been documented and analyzed and is the subject of at least 4 biographies and numerous articles and reminisces. Despite this scrutiny, and given his active involvement in national and international surgical and scientific organizations, his relationship with the New England Surgical Society was tenuous at best and has not been examined.

One of the first members of the New England Surgical Society (NESS) in 1916, Harvey W. Cushing, MD, resigned 10 years later. His involvement in the affairs of the Society was minimal. He never presented a paper at a meeting; his extensive curriculum vitae does not mention the NESS. This, however, does not detract from the fact that one of his seminal contributions to surgery occurred at the 1926 Annual Meeting of the NESS. That it was a surgical procedure and not a formal paper before the assemblage still entitles us as a society to rightly take pride in it.

His surgical prescience and clinical acumen, combined with the innovative scientific genius of William T. Bovie, PhD, founder of the discipline of biophysics, resulted in the development of an electrosurgical unit that transformed all of surgery. In 1929, one year after publication, it was the subject of a best-selling novel and, later, a popular movie. This device and the clinical events surrounding its first chaotic use in the operating room are the subjects of this article. An evaluation of Dr Cushing and his unique and peculiar relationship with the Society will also be addressed.

In the history of American surgery, there has been no man who has been more written about and reminisced over or whose accomplishments have been as extensively documented as those of Dr Cushing. His many and seminal accomplishments in a variety of disciplines from neurophysiology to surgery to the world of literature are certainly unmatched. He has been the subject of at least 6 books and numerous articles and essays and is remembered to this day, almost 70 years after his death. His relationships and vast correspondence with the elite of the medical, scientific, academic, and political communities of his day have been and continue to be published.

Dr Cushing was the author of 14 books, 9 related to neurologic surgery and diseases and 5 pertaining to history and war, including his Pulitzer Prize–winning 2-volume biography of William Osler, MD. He published 330 articles from 1898 to 1939; this does not include many of his lectures and addresses. The prodigious output of his pen is astounding, and is estimated by his biographer, friend, and executor of his papers, John Fulton, to have averaged 5000 to 10 000 words per day.¹

A career so illustrious and well studied needs no elaboration. Most aspects of his personality and life as a physician, neuroscientist, endocrinologist, author, bibliophile, artist, philosopher, and scholar have been subjected to extensive study, analysis, and speculation. The development of the first anesthesia record with Codman in 1895,² his introduction of an

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Cushing's career. In response to his acceptance of membership into the NESS in 1916, the secretary, P. E. Truesdale, MD, assured him, “it is obvious that your work at the hospital and school should take precedence over all other interests that are less intimate and relatively less important,” adding, “as secretary of this new society I can assure you, insofar as the functions of my office permit in program constitution, due consideration will be exercised for the demands already made upon your time.”

This letter and others like it over the ensuing years urging, almost pleading with him to present a paper, were in vain. Truesdale once wrote asking Cushing for a presentation on trigeminal neuralgia, of which he was the world’s authority, noting that it was a subject of “great interest to the membership; or on any other subject about which you might be willing to speak.” After initially accepting, he eventually declined, citing other commitments. This pattern was repeated over the years.

In a letter dated May 5, 1926, supporting the application for membership in the NESS of John Homans, MD, Cushing stated, “The Brigham Hospital is hardly doing its duty by this important New England organization.” He than added, “P.S. In view of the limited membership of the society I rather feel that such an inactive member as myself had much better go on the retired list [there was no such category] so as to clear the slate for younger men. Won’t you please ask the committee to act accordingly.” He was 57 years old at the time, 3 years younger than the age limit for the category of “honorary list.” He had been a member of the society for 10 years and was at the height of his career. Membership was limited to 100 men in 1926 and increased to 110 in 1929. There is nothing in the files to indicate whether his request was acted on. Homans was accepted after a previous rejection and became president of this Society in 1939, the year of Cushing’s death.

Three months later in August 1926, Cheever, in planning the program for the annual fall NESS meeting wrote to Cushing, “I hope you will not be too busy to take a prominent part in it yourself.” Cushing replied that he “would be glad to take part. But I hope you will set yourself to arranging one of our usual programs so as to spare me as much as possible.” This was after he tendered his resignation from the society 3 months earlier.

Thus it was that on Oct 1, 1926, the first day of the meeting at the Brigham Hospital that Cushing made what is probably his greatest contribution to the Society. Rather than a formal paper, it was a unique and transformative operation, and probably coincidental with the timing of the meeting rather than as a planned presentation. His contribution that day was a demonstration of the use of a new electrosurgical device, now known as the Bovie, for the first time in an operating room. This was the result of collaboration between Cushing’s unique surgical prescience and the scientific genius of the eccentric Dr Bovie, the founder of what has become known as the discipline of biophysics. This resulted in a revolution in neurosurgery, indeed for all surgery. The sad story of Dr Bovie, his apparatus, its development, and his life has been well chronicled by Goldwyn.

The first patient was a 64-year-old man with a large bulging tumor on the right side of his head. Three days earlier, Cushing had tried to remove the tumor, a vascular myeloma, and failed because of extensive bleed-
ing. That fall day in 1926, the scene in the operating room must have been chaotic. In Cushing’s words:

This operation was a perfect circus—many ringed. The New England Surgical Association [sic] were here and almost every hand was occupied with them. I had persuaded Dr. Bovie to bring his diathermy apparatus over here to let me see what I could do with his cutting loop. This had necessitated re-electrifying the operating room. Dr. Greenough [Robert B. Greenough, a surgeon] appeared with four or five coughing Frenchmen with colds in their heads, the student who was acting as a possible donor [blood] fainted and fell off the seat. It was a little too much for Davidoff’s [Leo M. Davidoff, assistant resident in surgery] successor who has been here only 2-3 days so that I finally had to call in Horrax [Gilbert Horrax, his assistant and former trainee]. In spite of all this, and more, things went surprisingly well. Then with Dr. Bovie’s help I proceeded to take off most satisfactorily the remaining portion of tumor with practically none of the bleeding which was occasioned in the preceding operation. The loop acted perfectly and blood stilling with the fastidious technique and painstaking haemostasis that have already made in 1926. And it all began with Cushing, Bovie, and the NESS meeting on a fall day in 1926.

Cushing’s minimal involvement in the proceedings and affairs of the Society is difficult to explain; his involvement in multiple other activities such as teaching, societies, lectures, traveling, research, and administrative responsibilities at the hospital obviously engaged his time. In addition to his vast written output, Francis D. Moore, MD, a later Brigham Hospital surgical chief, noted that Cushing also had a large clinical surgical practice with the surgical beds. More than 540 operations between the seminal case with Bovie and his published report 2 years later in 1928 attest to his very substantial clinical practice.

There are, however, several examples of Cushing’s dif

However, it was aware that widespread embrace of this new technology by surgeons was not a simple matter, correctly concluding:

Surgery is a conservative art. It takes to novel methods reluctantly as an old dog to new tricks. It was slow to adopt the ligature; slow to adopt the principles of antisepsis; slow to adopt the fastidious technique and painstaking haemostasis that have largely put a stop to operating by the clock. It has been equally slow to adopt the principles of electrocautery which, from a technical standpoint, are likely to be no less revolutionizing.

This great moment in surgery also captured the public’s imagination. In 1929, one year after Cushing’s publication appeared, a novel by Lloyd Douglas, Magnificent Obsession, became a bestseller. The hero of the story, Bobby Merrick, magically became a neurosurgeon after a significant traumatic event in his life. Among his heroic fictional feats he developed an electrical device to control bleeding and thus revolutionize neurosurgery, as the following passages from the novel indicate. Its similarity to what had occurred in Boston at the Brigham Hospital just 3 years before was obviously more than coincidence:
variety of subjects, not just those related to neurosurgery, throughout the United States and abroad.

The reason for his resignation from this Society in 1926 at the height of his career certainly suggests his disinterest. He had probably left the Society intellectually and emotionally well before then. Addressing neurosurgeons gathered for the first International Neurological Congress in 1931, he said, “. . . we did not grow wholly out of neurology, for our roots are in the fertile soil of general surgery.” General surgery was what the NESS was mostly about at that time, and his roots were indeed there as well.

Whether this was the result of his many and varied commitments or whether it was related to hubris (he was not a modest man) is not known. His personality has been analyzed by many, and it is not for us to speculate. In his years at the Johns Hopkins Hospital he had had difficulty with his fellow house officers, according to Finney. There are 2 letters in 1902 from Osler acting almost in loco parentis, gently suggesting to Cushing that he tone down his public criticism of others and his perceived arrogance. Dr Cheever observed, “Cushing never put down deep roots in Boston, in spite of the favors and advantages, professional and social, which were so warmly heaped upon him.” Over the years he had an often contentious relationship with the Dean of the medical school, the hospital administration, and even with the President of Harvard University regarding a variety of issues. One in particular was over full time/part time practice of surgeons. His less than cordial relationship with Walter Dandy, MD, his colleague and rival neurosurgeon at Johns Hopkins, is well documented. Battles over budget, personnel, and space for beds and laboratory research, with acrimonious letters from Dr Cushing to the Dean and the hospital administration, are recorded as well as follow-up letters offering partial conciliation, if not contrition. At the 1946 meeting of the Harvey Cushing Society, Fulton noted, “The Chief was no plaster saint—he had an intense and at times a tempestuous nature which many of you know.”

Bliss noted that Cushing “could never get over his frustration at learning that he was not to be the head of surgery at the Harvard Medical School.” He speculated whether “Western-born men like Cushing and [Walter] Cannon can ever be more than outliers in contented imbed Boston.” This biographer went on to quote a Cushing letter to George Crile, MD, about his “unhappiness with the Brigham and Harvard, and perhaps Kate’s [Mrs Cushing] unease about social life in Boston, sometimes translated into thoughts of another move.” He also cited Cushing’s diary that his “books were too deep to leave the Brigham, though it is far from all one could wish.” He had many offers of surgery chairs throughout his career in Boston. Whether these issues reflecting dissatisfaction and unhappiness played a role in his disinterest in the NESS (and BSS) is worthy of consideration. However, in the final analysis and lacking appropriate documentation in his vast archives, the answer remains an enigma. Maybe he just had too much on his plate.

However, we of the NESS these many years later should be proud that such a seminal event in the history of surgery was presented at our 9th Annual Meeting. Although in retrospect the timing was probably coincidental, we can justly claim it as our own. If only he had given more of his great talents and interests to this Society.

He was certainly bigger than life, the premier surgeon of his time. In going where none had gone before he proceeded with bold caution, demonstrating a courage and prescience unique in the history of American surgery.

A complex, fascinating, and supremely gifted man, Harvey Cushing might well have been describing himself when he noted on the occasion of the bicentenary of the birth of the great John Hunter, “He did not travel by the ordinary road and it is impossible to measure him by the standards of other men.”

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