A prominent historian once said, ‘Corporations are not necessarily soulless, and of all corporations universities are the most likely to have, if not souls, at least personalities’ (Becker, 1943, p. 193). For corporations, including universities, ‘personalities’ can be defined as enduring traditions of characteristic behaviours that are carried over time through many individuals. In fact, the same idea can be applied to professions. In neurosurgery, it is still possible to trace the existence and influences of distinct ‘schools’ within the larger profession (Laws, 1997). Among those discernible entities, neurosurgery (and all of the neurosciences) at Washington University in St Louis (not to be confused with the University of Washington, Seattle) has been ‘a powerful force in academic neurosurgery in the United States’ (Laws, 1997, p. 523). Thus, Robert Grubb’s extensive history of his own department and institution can be reviewed from a national perspective, despite the ostensibly local focus of the book. From the outset, it is obvious that ‘leadership’, in all of its professional and scientific meanings, has always been an essential part of the soul of Neurosurgery at Washington University.

Because of its location at the confluence of tributaries to the Mississippi River, the area that is now St. Louis, Missouri, was explored quite early in American history. The city dates its formal founding by French explorers to 1764. By the mid-19th century, St. Louis was thriving and it had two medical schools. In the later 19th century they amalgamated and became the Medical Department of Washington University in 1899—more than a decade before publication of the Flexner Report (1910), which transformed American medical education. When Abraham Flexner (1866–1959) gave the school a disparaging assessment, the University’s far-sighted (and wealthy) leadership had already started on a path towards scientific reform. The medical school was to be reshaped on the model of the Johns Hopkins Hospital, as Flexner had recommended. These events took place in 1909–11. At that time there were very few individuals in North America who could legitimately be called neurological surgeons. In Chicago Allen Kanavel (1874–1938) and Dean Lewis (1874–1941) did some neurosurgery, but they remained general surgeons. Thus, in 1911 full-time academic neurosurgery made its debut in the American Mid-West at Washington University, in the person of Ernest Sachs (1879–1958; Fig. 1). Like Harvey Cushing (1869–1939), who was 10 years his senior, Sachs intended to make neurosurgery his life’s work.

During the first 63 years (1911–1974) of its existence at Washington University, neurosurgery had only two leaders, Sachs and Henry Schwartz (1909–98; Fig. 2)—both with legendary reputations for being strong willed. Since they established the local personality of the specialty, I will concentrate on their stories, although Grubb’s thorough account takes us right up to 2010.

Sachs was born into a prominent New York family that included artists, financiers, educators and ‘Uncle Barney’ (E. Sachs, Jr, personal communication). The uncle, Bernard Sachs (1858–1944), was a prominent neurologist, whose name is attached to Tay-Sachs disease. Ernest Sachs took his M.D. at Johns Hopkins in 1904. While there he came into contact with Cushing, but he was most in awe of William Osler (1849–1919). After Sachs completed 3 years of surgical training at Mt Sinai Hospital in New York, Uncle Barney convinced the young nephew to obtain neurosurgical training, because the uncle was so discouraged by the disastrous results of contemporary efforts. In 1907 Cushing’s leadership of American neurosurgery was not yet established, but Victor Horsley (1857–1916) was well recognized in Europe. Sachs spent 2 years with Horsley, with much time also spent in clinics and laboratories on the continent. In Horsley’s laboratory, Sachs produced a long, definitive paper on the thalamus. In the
midst of that work, he received an invitation to become Cushing’s resident at Hopkins. He turned it down in order to finish his project with Horsley. In later years Sachs sometimes wondered whether he had made the right decision, but concluded that, ‘Dr Cushing was known to be a difficult man to work with, and I was not a saint myself, so we might not have been too happy together, while as it was we were friendly colleagues for many years’. A decade later, with half a continent’s distance between them, Cushing and Sachs were a successful team in the formal organization of the profession.

Washington University had tried to recruit Cushing to its chair of surgery in 1910, but Harvard quickly came courting, and everyone knows the result. Nonetheless, the appointed chairman of surgery, Fred T. Murphy (1872–1948), saw the opportunity to develop neurosurgery in the Mid-West, and he invited Sachs to lead that endeavour. Over the next 35 years Sachs established one of the world’s leading programmes of fellowship training and research in neurosurgery. It had a strong clinical base, of course, but its most prominent feature was (and is) the intimate connection to other basic and clinical neurosciences, especially neurophysiology. Sachs, after all, was trained by Horsley, who was a highly qualified neurophysiologist. Grubb’s thorough account of Washington University’s activities in all of the neurosciences suggests that cross-fertilization was crucial to success of the entire enterprise.

During Sachs’ tenure in neurosurgery, the physiologists Joseph Erlanger (1874–1965) and Herbert Gasser (1888–1963) did their work with the cathode ray oscilloscope, which brought them the Nobel Prize in 1944.

On the other hand, Sachs’ pattern of conflicts with so many others makes one wonder how he could have accomplished so much. At least some of the answer is found in his personal traits. As a faculty member and administrator, he was tough and relentless. In the operating room he was meticulous but often abusive—he was an old-fashioned instrument thrower. At the same time, he was a sincere and effective teacher, and privately he was quite generous. In the early 1920s he financed his department and laboratories from his own practice funds. He also quietly covered medical expenses for his fellows, as well as hospital charges for some of his indigent patients. In the presence of his beloved wife, Maisie, he was always the perfect gentleman!

Given Grubb’s longevity at Washington University, and his extensive work in its archives, it is obvious that he knows which skeletons are in whose closets. He does not let them out simply for amusement, but he is not afraid to rattle a few when it is necessary to make the story accurate and coherent. In the interest of brevity, I will forsake most of those juicy local details in favour of the larger perspective. For Sachs, the opportunity to gain national influence came in 1919, and he embraced it. In that year Cushing gave a paper on brain tumours to the American College of Surgeons. The enthusiastic response to that presentation marked the first professional recognition of ‘neurological surgery’ as a distinct specialty in North America—well ahead of Europe. In the hubbub after Cushing’s paper, the idea of a formal society arose. Reportedly, Cushing turned to his younger colleague and said, ‘Sachs, why don’t you be the secretary and arrange a meeting’ (Alexander, 1986, p. 116). From that point until his retirement, Sachs was active in most of the formal organizations that developed within American neurosurgery. Much of that organizational work was related to the profession’s educational activities,
especially with regard to trainees, which was probably Sachs' greatest professional passion. I will come back to that theme later, because it was also a passion for Sachs' successor.

Henry Schwartz (1909–98) grew up in New York City as a first generation American. During his final year of medical school at Johns Hopkins (M.D. 1932), he worked in the clinic of Oftrid Foerster (1873–1941) in Breslau, Germany, where a few years earlier Wilder Penfield (1891–1976) had also spent several formative months. Schwartz was a fellow in neurosurgery with Sachs in 1936–38, and he served meritoriously in World War II. In 1946, when Sachs was near retirement, Schwartz was appointed chief of neurosurgery by Sachs' long-time adversary, Evarts Graham (1883–1957), the chairman of surgery at Washington University. That move put Sachs in a subordinate position to Schwartz, and it ignored Sachs' wish that he be succeeded by another of his former trainees, Leonard Furlow. In Sachs' view, things went further downhill from there, and he left St. Louis in 1949 to spend the remainder of his years happily at Yale.

Of the poisoned relationship between Sachs and Schwartz, Grubb (p. 104) observes that, 'Both men were demanding and stubborn, with dominating personalities', so their conflict was probably inevitable. Nonetheless, 'A major part of the legacy of Sachs was his influence on Schwartz'. Sachs had guided neurosurgery at Washington University to national prominence, and Schwartz took it to an even higher level. Exactly how Schwartz did that is not easy to fathom, but the evidence for its reality is arrays in this book and elsewhere. Referring to the activities of Schwartz's residents at the national level, Grubb (1999, p. 600) says there was a 'legendary, but entirely fictitious St. Louis Mafia'. If one substitutes ‘old-boy network’ for ‘Mafia’, I submit that the phenomenon was not at all fictitious. Old-boy networks are real and important. Indeed, American neurology was not nationally coherent and unified until after World War II (Gavrus, 2011), and Schwartz took it to an even higher level. Exactly how Schwartz did that is not easy to fathom, but the evidence for its reality is arrays in this book and elsewhere. Referring to the activities of Schwartz's residents at the national level, Grubb (1999, p. 600) says there was a 'legendary, but entirely fictitious St. Louis Mafia'. If one substitutes ‘old-boy network’ for ‘Mafia’, I submit that the phenomenon was not at all fictitious. Old-boy networks are real and important. Indeed, American neurology was not nationally coherent and unified until after World War II (Gavrus, 2011), when Derek Denny-Brown (1901–81) began to train a generation of neurological old-boys at the Boston City Hospital (Vilensky et al., 2004).

The idea of a ‘Mafia’ implies malevolent control, and surely there was nothing evil about Washington University's old-boy network. On the other hand, ‘leadership’ does include some element of control, and that there was. When I began my neurological residency at another centre in 1970, I soon realized that faculty and graduates of the Washington University programme were everywhere—and perhaps dominant—in the organizational structure of American neurosurgery. Over the past four decades, I have pondered sometimes how this worked, and the invitation to review this book has led me to some tentative conclusions. The key, as Grubb (1999, p. 600) clearly states, was Schwartz's ‘immense emphasis on loyalty’. He gave it unstintingly to his residents and, ‘In return he expected them to remain loyal to their fellow residents and their training program’. Part of that kind of loyalty means mentoring and helping each other.

Needless to say, the first network of old-boys in American neurosurgery consisted of Cushing's trainees. There was hardly anyone else to compete with them, because Cushing had a head start in training neurosurgeons. Sachs would have been his first resident if he had accepted Cushing's offer in 1908. Since Cushing's last three trainees were all graduated in 1932 (Cushing, 1993, p. 93), the influence of that group extended into the 1960s. To the best of my ability to determine, Sachs' training programme at Washington University was the second to come into existence in North America, in 1917. At Johns Hopkins, Walter Dandy (1886–1946; who had been initially trained there by Cushing) took his first trainee in 1922. Other programmes that started during the inter-war years were at the University of Pennsylvania [Charles H. Frazier (1870–1936)] and New York Neurological Institute/Columbia University [Charles Elsberg (1871–1948) and Byron Stookey (1887–1966)]. Probably the most famous was Penfield's programme at the Montreal Neurological Institute/McGill University. He began to take trainees in the middle or late 1920s (M. Preul, personal communication, April 2012). I have known many of their graduates, and there is an interesting contrast to Sachs and Schwartz's ‘Mafia’. Those who were trained by Penfield himself remember him with great respect and even fondness, but somehow he fostered loyalty to the institution (Montreal Neurological Institute) rather than to himself personally.

Finally, there is another distinctive characteristic of the Washington University training programme. There is a difference between appointments of an institution's graduates to chairs and professorships on the one hand, and election to offices of national organizations on the other. The groups tend to overlap, of course, but they are not the same. Schwartz's graduates excelled in each category. For both, it appears to me that the percentage of Washington University's trainees who have attained these honours is very high. That is, a large majority of the programme's graduates are involved in those kinds of academic and national activities. This conclusion is starkly evidenced by Grubb's Appendix 9. Leadership in Neurosurgical Organizations. Washington University Neurosurgical trainees and Faculty Members'. It extends to four pages. Now there are many books and articles about leading neurosurgeons and about leaders in other fields. Such publications often list the names of one person's trainees or those of an institution (e.g. see Cushing, 1993, pp. 93–5). But I have never seen such a list of national offices held by the trainees. It was obviously put in this book partly as a matter of pride and partly because that is the way they think in Neurosurgery at Washington University. They want to be leaders, and they work at it.

Samuel H. Greenblatt
Department of Neurosurgery, Warren Alpert Medical School, Brown University Providence, Rhode Island, USA
E-mail: samuel_greenblatt@brown.edu
Advance Access publication July 25, 2012

References

Cushing H. A bibliography of the writings of Harvey Cushing. Prepared on the occasion of his seventieth birthday April 8 1939 by the Harvey


