

# Presidential Address: Improving Ourselves and Our Specialty

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Neurosurgeons share a great professional gift; our lives have yielded an opportunity to help our fellow men in a unique and exciting way. For this presidential address, I want to share some of my sense of gratitude for and inner pride and joy in our specialty, although I know that for many of us the appreciation for this opportunity, this profession, this gift, is greater than the spoken word can convey.

As a physician, the neurosurgeon uses his life trying to help his fellow men, using skills which A. Q. Mowbray, in his book entitled *The Operation*,<sup>11</sup> has characterized as "Surely the most delicate, the most fateful, and to the layman, the most awesome of any profession." The Gallup poll has reported us to be among the most prestigious and highly skilled members of our society.<sup>6</sup> This enviable position and the irregular and incessant demands on the neurosurgeon's time serve to blunt our perception of our union with our fellow men and reduce our awareness of the circumstances resulting in the high esteem which we enjoy.

Foremost among the factors leading to our success is the benevolence of the universe around us. The fact that man heals and survives when injured or incised provides the surgeon with his vocation and serves as a constant reminder of the benevolent, protecting order around us. The momentous process of injured tissues knitting together is as essential to the life of the surgeon as the air we breathe is to the survival of humanity. We are surrounded by forces: atomic, molecular, viral, bacterial, and celestial, which could quickly overcome us, outstripping our finest medical and scientific achievements. Neurosurgeons stand together with those they serve, balanced on a planet swirling at the rate of 1000 miles per hour and moving in space about the sun at nearly 1,000,000 miles per day, surviving on a mixture of gases and at a range of temperatures alien to the remainder of the universe. The fact that humanity survives and that we can play a role in the process of healing are examples of the compassion and love that surrounds us.

The next gift we share is an historic one based on the standards set by early physicians. Hippocrates taught us that medicine is a difficult art,

inseparable from the highest morality and love of humanity.<sup>10</sup> The noble values and loyal obedience of generations of physicians since that time have raised the calling to the highest of all professions. This is evidenced by the fact that we were selected as college students to become physicians because we possessed the combination of high achievement and interest in people. Many of us were attracted to neurosurgery by both the meticulousness of the surgical craftsmanship and the intellectual challenge posed by modern clinical neurology and neurophysiology. All of us have submitted ourselves to the discipline of rigorous training, possibly the most demanding in modern society, and are capable of giving a great deal of ourselves.

The final circumstance leading to the esteem which we enjoy is the magnificent tissue with which we work, the human nervous system, the most complex machine in the universe. It contains millions of pathways for the transmission of information which are responsive to a multitude of chemical stimuli. Its complexity and failure to regenerate defy all efforts at transplantation. If it regenerates, thousands or millions of channels distal to the lesion offer the potential for innumerable inaccuracies. It is the only organ to be hidden within a fortress of bone. The brain, while not moving, is the most metabolically active of all organs, receiving 20% of the cardiac output while representing only 3% of the total body weight. It is exquisitely sensitive to touch, anoxia, and derangements of its internal environment. Its status determines whether the man, the humanity within us, lives or dies. It yields all we know of the world and synthesizes and integrates this information. It controls both the patient and the surgeon. The opportunity to serve our fellow man in this unique way, dealing surgically with the most delicate of tissues, our most treasured earthly possession, our brain, our mind, our nervous system, has brought us together here.

In my early years, I never in my wildest flights of imagination considered that life would yield such an exciting mission as being a physician, a neurosurgeon; and, least of all, that I would be a president of this great professional society. My early life was without exposure to physicians or hospitals and electricity or other modern conveniences. My birth was aided by a midwife in exchange for a bag of corn. The goal of being a physician seemed so unattainable that I had not entertained that possibility as I entered college. I first pursued chemistry, but the missing human element prompted a change to social work. This also failed to satisfy, lacking the opportunity to touch and help by working with the hands. The fact that I might be a physician did not enter my mind until a psychology instructor invited me to see an operation on the brain in his laboratory. To my amazement, a tiny lesion altered the small animal's behavior, but not its motor skills. That day I sensed some of the amaze-

ment that must have occurred in the 1870's as Broca<sup>2</sup> presented his early observations on the cerebral localization of speech based on the observation of his patient, Tan, and Fritch and Hietzig described their experiments on the cerebral motor cortex of dogs, as performed in Hietzig's home on Frau Hietzig's dressing table.<sup>5</sup> Prior to their time, interest in the brain and its function centered around philosophical discussions of the seat of the mind and soul, as had my experience, and not as a site possessing the localizing features suitable for the application of a physician or surgeon's skills. On that day in a psychology laboratory, I learned that surgery based on these concepts was possible, and I knew that I had found my calling. I know that many of you have had a similar meaningful experience.

Soon after completing my residency, I had the good fortune to attend one of the first microneurosurgery courses. I realized, as I watched the presentations, that I was seeing operative, anatomic, and pathologic detail that I had never seen before. One of my favorite personal goals has been to find pictures of a single operation performed perfectly, because the inner discipline of striving toward that perfection makes us improve. Such pictures are the essential building blocks for the improvement of the specialty. That first microsurgery meeting yielded many examples of operations performed better than I had previously experienced. I resolved then to progressively incorporate this new technique into my practice because it appeared to increase the safety with which we could delve deep into and under the brain. During my training and thereafter, I have lain awake many nights, as I know you have, worrying about a patient who faced surgery the next day, fearing the outcome of a needed, critical operation. With this new technique, I found that difficult operations carrying significant risk were done with greater accuracy and less post-operative morbidity. During my training I did not see a facial nerve preserved during removal of an acoustic neuroma which functioned normally in the immediate postoperative period. Today, that is a routine goal of acoustic neuroma surgery. In the past, in dealing surgically with pituitary tumors, there was minimal discussion of preserving the normal pituitary gland, but today the combination of new diagnostic and surgical techniques have made tumor removal, with preservation of normal pituitary function, a frequent goal. The application of microsurgery in neurosurgery has yielded a whole new level of neurosurgical performance and competence. Sir Edward S. R. Hughes<sup>9</sup> has said that microsurgery is the most spectacular advance in surgery in modern times and the American College of Surgeons and the American Surgical Association<sup>1</sup> have ranked its application in the treatment of brain tumors and cerebrovascular disease among the first order research advances between 1945 and 1970.

I realized, as I started to work with micro-operative techniques, that



there was a need to train many neurosurgeons in their use. When I moved to the University of Florida, I began trying to develop a center for teaching neurosurgeons these techniques. An NIH grant proposal aimed at teaching microtechnique to a group of neurosurgeons drew a quick reply that this proposal was unresponsive to any need that had been identified. Eventually, with the help of private contributions we were able to purchase the necessary microscopes and equipment for a laboratory where seven surgeons could learn at one time. The next task was to find seven individuals who were willing to come for a course. Finally, after much solicitation, seven surgeons joined us for a 1-week course. I was quite apprehensive about that course because I was not sure that we could keep seven surgeons busy for 1 week or even that we could anesthetize and maintain seven small animals, at one time, for the surgeons to learn the microvascular skills. It was comforting to learn that Harvey Cushing, early in his career, had developed a similar laboratory where surgeons, using dogs, could practice and perfect their operative skills.<sup>13</sup> I still remember and am grateful to each member of the initial group of neurosurgeons who was willing to invest 1 week of his valuable time in our course. During the first afternoon of that course, I walked into the lab and, to my amazement, found seven surgeons working quietly and diligently. Nothing was said for long periods of time. In the midst of this intense endeavor, there was an amazing quietness. I realized then that we had tapped into a great force: the desire of neurosurgeons to improve themselves. There are some who regard micro-operative skills as being for use by only a select few, but our experience with over 300 course participants has proved that the whole specialty can elevate its level of practice. Each individual neurosurgeon can acquire the new skills so that a new level of performance is achieved for the specialty. ENT and eye surgeons have made microsurgery a routine part of their specialty and so can neurosurgeons. Microtechniques are now being applied throughout the specialty, thus adding a new level of delicacy and gentleness to neurosurgery. The competence of the whole specialty has been improved and in this experience has come the realization that we, as a group, are constantly aspiring to and achieving higher levels of performance that are not based on advances in diagnostic equipment and drugs, but are dependent upon inspired individuals striving to improve themselves in order to better serve their fellow man, individuals seeking to reach a higher level of competence.

Just as we strive to improve our competence and operative skill, we also need to strive to grow in compassion. Competence is the possession of a required skill or knowledge and neurosurgeons have shown that they can grow in competence. Compassion, on the other hand, doesn't require a skill or knowledge. It requires an innate feeling, commonly called love,

toward someone else. It is vital to us and our fellow men that we grow both in competence and compassion. Both need to be developed simultaneously, as the giant oak develops its root system along with its leaves and branches. William Deal<sup>4</sup> has said that "Competence without compassion is worthless. Compassion without competence is meaningless." The caring, the love, the compassion must be developed as we continue to increase our competence in neurosurgery. There are further new exciting dimensions lying before us in the area of compassion. It is a great mission to kindly, tenderly, gently, and confidently lead one's patient through such a great life experience as neurosurgery. No experience is more awesome and frightening than being faced with the need for neurosurgery. No experience draws more frequently on those familiar words from the Book of Psalms,<sup>7</sup> "though I walk through the valley of the shadow of death." Death and darkness crowd near as we help our patients search for the correct path. Neurosurgical illness threatens not only their physical, but their financial security, because it is so expensive and the potential for disability is so great. We have the responsibility to develop the dialogue in understandable terms to help the patient, his family, and his society understand the meaning of his illness. The patient and his family deserve an understanding of what lies ahead, the risks, possible complications, and potential benefits. Society, through the legal system, has forced some of this upon us, but we, out of love and compassion, need to strive constantly to perfect a higher level of performance than the requirements forced on us by any judicial system. There is no substitute for an honest, concerned, and sympathetic attitude.

It is important that we plan our financial affairs so that our private financial condition does not influence our surgical judgment. This separation of the physician's need for income and the needs of the patient can be achieved only through a well-planned program of financial security, saving and selection of a life-style so that one's day-to-day living needs are met and not influenced by day-to-day income. We are not here to get all that we can out of life for ourselves, but to try to make the lives of others happier. This is the essence of the often-repeated admonition of Christ<sup>8</sup> "He that findeth his life shall lose it, and he that loseth his life for my sake shall find it" or the comments of Osler<sup>12</sup> "Throw away, in the first place, all ambition beyond that of doing the day's work well. Find your way into work in which there is an enjoyment of it and all shadows of annoyance seem to flee away. Let each day's work absorb your energy and satisfy your wildest ambition. Success in the long run depends on endurance and perseverance. All things come to him who has learned to labor and wait whose talents develop in the still and quiet years of unselfish work."

We work in an arena where the government, the legal system, insurance

companies, and other medical specialists present us with perplexing challenges. Examples include recertification, manpower needs, regionalized care, and the need to reduce health care costs while technology continues to yield increasingly costly improvements in patient care. This society, through its various committees, is attempting to respond to these issues. Unfortunately, these issues generate conflicting opinions even among the most knowledgeable and lead us into areas where even those dedicated to healing the sick and providing for the needs of others become embroiled in controversy.

Many are problems for which to expect absolute and final solutions is to misunderstand their nature. Some we cannot solve, but only diminish, not cure, but manage if we work together. This fact makes some frustrated for it is difficult to surrender a belief in the existence of total solution without also surrendering the ability to care. Some have become cynical or dropped out of the specialty because of such matters. In dealing with such matters William H. Danforth<sup>3</sup> has said "Too much faith is better than too little; wisdom lies in starting up afresh after each disappointment and in never allowing oneself to become cynical, jaded and mistrusting."

My conviction is that this society will achieve optimal resolutions of these problems if its committees are made representative of all neurosurgeons. The instincts of our members, rooted in high intelligence, excellent training, and altruistic motives, provide a sound basis for solution. This professional society will be best able to meet this challenge if the mechanism for selecting its executive and other committees is responsive to all neurosurgeons. As you know, the nominating process for the executive committee and officers of the Congress of Neurological Surgeons resides outside the executive committee. Only one of the seven nominating committee members is on the executive committee. The nominating committee has remained well-balanced with regard to the type of practice and geographic location and has striven to nominate outstanding individuals from all types of practice and geographical areas; however, I remain convinced that we can improve our representativeness in the future. I should note that during the six years that I have been on the executive committee, there has not been a single issue on which a vote was split by geography or type of practice. One evidence of the success of this society in harnessing the energy of its members is the fact that the Congress has more members working actively on committees than any other neurosurgical organization.

I will look back to the years of being allowed to serve you and work with the executive committee as one of the great experiences of my life. The Congress has been the source of many of my warmest friendships, of enrichment of our specialty, a vehicle through which we share our common mission of being able to better serve the public.



My belief that neurosurgeons as individuals can build upon the achievements of the past to grow in competence and compassion is accompanied by a firm conviction that this society can also grow in its capacity to represent all neurosurgeons in order to better benefit our patients and society.

#### References

1. American College of Surgeons and American Surgical Association. Surgical Services in the United States, p. 155. 1975.
2. Broca, P. New observations of aphemia produced by a lesion of the posterior half of the second and third frontal convolutions. In Wilkins, R. H., *Neurosurgical Classics*, Johnson Reprint Corporation, New York and London, 1965, p. 64.
3. Danforth, W. H. The Importance of Mutual Trust, Washington University Alumni Magazine, 48 (II): 14-18, 1978.
4. Deal, W. Oak Hall Commencement Address, University of Florida Medical School, Gainesville, Florida, 1978.
5. Fritch, G., and Hietzig, E. The Electrical Excitability of the Cerebrum. As cited in *Neurosurgical Classics*, edited by R. H. Wilkins p. 15. New York and London, Johnson Reprint Corporation, 1965.
6. Gallup, George: *Gallup Poll*, (Quoted by B. F. Sorenson in 1977 Congress of Neurological Surgeons Presidential Address, San Francisco, California, October 1977).
7. *Holy Bible*. The Book of Psalms, Ch. 23, Verse 4, National Publishing Company, Philadelphia, 1968.
8. *Holy Bible*. The Gospel According to Luke, Ch. 17, Verse 33. National Publishing Company, Philadelphia, 1968.
9. Hughes, E. S. R. Program on Microsurgery, The Royal Australasian College of Surgeons, p. 1. 1978.
10. Jones, W. H. S. *Hippocrates*, Harvard Press, Cambridge, Mass., 1923.
11. Mowbray, A. Q. The Operation (quote from flap on front cover). John Day Co., New York, 1972.
12. Osler, W. As cited in Camac, C. N. B., *Counsels and Ideals from the Writings of William Osler*. Houghton Mifflin Co., Boston, 1906.
13. Sweet, W. H. Lecture delivered as a Visiting Faculty member at the University of Florida, September 12, 1978.