Past personalities and present problems

The 1971 AANS presidential address

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The president of the AANS relates anecdotes based on the friendship between Harvey Cushing and the Mayo brothers. He discusses and reproduces unfamiliar letters from Dr. Cushing to Dr. William C. MacCarty, the president's father. He also discusses selected contemporary neurosurgical problems such as malpractice suits and fragmentation within the specialty.

KEY WORDS Mayo Clinic • subspecialties in neurosurgery • Harvey Cushing • malpractice suits • neurosurgical education

I know well that many among you should be standing at this podium in my place this evening. A few of you have done so and some of you will do so in the future. For me, the fact that I have been chosen to be your president has been sobering indeed when I consider the vision and firm resolve reflected in leaderships of the past which transformed our organization from the status of a small club to that of the parliament, so to speak, of our specialty. I can think of no greater honor or more impressive recognition that can be accorded to any man inevitably represent to a considerable degree the influences of his teachers, his colleagues, and the often unsung contributions of his predecessors in the same field.

Three Great Friends
An internationally famous authority in another field, remarking on the fact that the form and beauty of the letters in inscriptions on the monuments and buildings of ancient Rome have never been surpassed, observed ruefully: "The old fellows stole all our best ideas." This was his ironic way of acknowledging his debt to the ancients.

In our own field, especially, since it cannot be said that we even approach a century of autonomous existence, we owe much to our predecessors, almost all of whom were general surgeons. I have not lost sight of the fact that in my own institution the founder of the section of neurologic surgery began his career as a general surgeon, and indeed his successor entertained, until he died, a keen sense of nostalgia for the days when he likewise had been a general surgeon.

The tradition of such a succession of events was very strong in the environment from which I sprang. The late Dr. Charles Horace Mayo, 35 years old at the turn of the century, found himself involved more and more extensively in the surgery of the head and nervous system as his country practice
and that of his brother, Dr. William James Mayo, expanded and demanded more sophisticated advancements.

As a rustic folk tale has it, a patient once asked Dr. Will if he was the head surgeon in the Mayo practice. He shook his head and said: "No, that's my brother, Charlie. I am the belly surgeon." It was a village Witticism which embodied much truth, for in the days before our specialty became established as an entity and recognized as such, it was more likely than not the general surgeon who would be called upon to do the best he could in an unfamiliar anatomical area hedged by great peril and the very slightest prospect of success.

It is known that Dr. Charlie, for instance, penetrated the skull as early as 1892 to ligate a ruptured meningeal vessel; and that in 1899 he did a craniotomy to remove part of the gasserian ganglion.

We also know that Dr. Will Mayo knew Dr. Cushing, for whom our society originally was named, as early as 1900. On a hot afternoon in the summer of that year Dr. Will, Dr. Cushing, and Dr. Albert J. Ochsner sought relief from the oppressive confines inside the building and went out to sit down and rest a while on the steps of the Ecole de Médecine in Paris. One thing led to another: there they sketched out plans for the founding of the Society of Clinical Surgery, which came into being in 1903. It must have been an interlude of much native American color and appeal—Cushing, 31 years old, only 5 years out of Harvard, but already working with Halsted in the great Johns Hopkins galaxy of notables; and Dr. Will, 40 years old, senior partner in an obscure country practice, 17 years out of a somewhat primitive Midwestern medical school and still not known to the mass of practitioners in the United States.

Cushing apparently never forgot that sultry afternoon in Paris, for 35 years later he wrote to Dr. Charlie Mayo:

"At a recent meeting here of a young group of neurosurgeons [the Harvey Cushing Society] I read to them that unfinished skit I once wrote about the early days of the Clinical Society—the forerunner of all these many interurban groups of the present time. They all seem to be most flourishing societies, but I doubt if any of them will ever accomplish more for surgery or have as good a time in doing so as did our old crowd whose ranks are now thinning fast."

HC (as we shall call Dr. Cushing) knew his man well, for there was nothing CH (Dr. Charlie) loved better than good-natured banter. Once, in response to a request for his photograph (Fig. 1), HC replied:

"Dear Charlie:

"Thanks for your note. Nothing would give me greater gratification than to have my picture added to that of the other criminals that have been hung in the Clinic!"

Parenthetically, you will note that the photograph of Dr. Cushing was that sent to Dr. Charlie, but the one depicted (Fig. 1) is the one that was given to my father.

HC's daughter, Betsey, had married James Roosevelt in 1930. This will explain CH's amiable reference to President Roosevelt in CH's reply to HC's previous shaft:

"My dear Harvey:

"Thanks so much for the nice picture. It is just the kind I wanted. I like to see people at work.

"Under separate cover I am sending a picture [Fig. 2] of father, and Will, and me which I hope will take the place of the one you left at Brigham. I also am sending you a picture [Fig. 3] taken when the President was here last year; I know you won't have any difficulty in getting the missing signature."

Four years later, at the time CH and WJ died, Dr. Cushing wrote about them thus:

"They felt only an amused pity for those who thought they were wasting their talents in a small town and who ventured to offer them positions elsewhere of supposedly wider influence.

"W.J. once said to me, 'When Charlie gets so busy on his farm he forgets to have his shoes cleaned, he takes a night sleeper to Chicago knowing that he will find them well polished under his berth in the morning.' Had he been encountered by some traveler on the train who with Mid-West informality asked his occupation, he would have replied: 'A Minnesota farmer.' Had Dr. Will been similarly asked who he was by some chance companion, he probably would have replied: 'I'm C. H. Mayo's elder brother.'"

All three of these great men were warm friends and, perhaps prophetically, all died
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Fig. 1. Harvey Cushing at work.

Fig. 2. Father and sons (left to right): Charles H. Mayo, William W. Mayo, and William J. Mayo.
in 1939. The impact on their lives of the Society of Clinical Surgery which they developed in the early portion of this century is not readily apparent; but study of their extensive correspondence shows that the organization was the bond, both socially and scientifically, which measurably affected their desires and accomplishments. In subsequent generations neurological surgeons have experienced this same attraction, as evidenced by the number of excellent and eminently useful neurosurgical societies and travel clubs we now have. It is the foresight of our immediate predecessors which has brought about inclusion of the several major neurological societies within the structure of the society founded in honor of Dr. Cushing in 1931.

Parenthetically, I cannot resist noting the following phrase from the original constitution of the Society of Clinical Surgery: “Active members shall be men engaged in general surgery between the ages of thirty and fifty-five years; after fifty-five they shall become Senior members.”

This Spartan stipulation must give some of us an uncomfortable feeling of déjà vu.

**Fragmentation in Surgery**

In the early days of our specialty, interest was directed toward patient care. This is clearly shown by the activities and interests of Cushing, the Mayos, Dandy, Adson, and Craig (Fig. 4), to name but a few. Most considered themselves primarily surgeons who subsequently branched off into subspecialties. Dr. Charlie may have been the exception, because he had a restless, inquisitive mind that impelled him into numerous fields of surgery until his retirement.
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Now we perceive that the process of additional subspecialization is taking place within our specialty, neurosurgery. Such a development, I believe, is inevitable, and since this is the case, I think it should be encouraged in an orderly manner by this society. At the same time, there are a few questions to which we ought to address ourselves.

For a man to become a recognized pediatric neurosurgeon what background is necessary: surgery? general neurosurgery? pediatrics? Would those of you who are immediately interested in this particular subspecialty care to devote approximately 100% of your time to the type of surgical practice indicated? Do you envision the establishment of a subspecialty board? These are but a few queries which come immediately to mind; many more, as yet impalpable, unquestionably will arise. I have no ready answers to any of them, but I am certain that in several sectors these questions are being considered.

We all know that the field of microneurosurgery is rapidly expanding. Now, shall we say that microneurosurgery is in fact a new specialty or only a manifestation of adaptation of a new tool, reminiscent of the Bovie unit introduced by Dr. Cushing in 1927?8

Stereotaxic surgery is another ramification in the field which is well established. Should it not be incorporated under the aegis of the American Association of Neurological Surgeons?

There may be other areas of endeavor, especially in neurological surgery, which will become sharply constricted. Will some of us be required to confine our activities exclusively to the spinal column, brain, peripheral nerves, or to the surgery of trauma and the like? If this trend continues, will our training programs need to be altered accordingly?

Neurological surgeons of my generation have observed and been affected by rapid changes in our specialty. An impelling attraction to the young graduate to become a neurosurgeon 30 years ago was the wide diversification offered by a branch of special surgery which was then scarcely 2-score years old. At that time neurological surgeons were the true general surgeons, for they operated intracranially, intraspinally, and in the thorax, abdomen, and extremities. A neurological surgeon then operated on the central and autonomic nervous systems and peripheral nerves.

During the course of the past 20 years inroads made in our activities have been much influenced and even altered by the introduction of new drugs and by certain incursions of other surgical specialties. In some areas we have lost suzerainty by default. May we anticipate further losses of jurisdiction when gliomas are destroyed by chemical agents, when chemonucleolysis cures intervertebral disc disease, when trigeminal neuralgia finally yields to the activated needle or probe, when aneurysms are obliterated safely by arterial injections, and when movement disorders are corrected by metabolic chemicals? All of you can project other possibilities.

Actually, in many respects we are in the forefront in developing techniques which ultimately may deprive us of the exercise of our art and craft. Mayfield14 once observed that "I don't care who gets the business so long as the patient doesn't get the business." Philosophically, we are inclined to agree; altruistically, we must do so. I hasten to add that the foregoing observations do not represent a prediction of impending doom; far from it. I simply point out that changes in our profession which we all can perceive are taking place, as might be expected. I am confident that neurological surgeons will continue to pioneer, to develop new techniques and refinements in the art and to maintain their position as leaders in the therapy of neurological diseases. But I am no suprasentient seer.

Our Cannibalizing Environment

The effects of what the sociologists call our "highway automobile culture" are devastating in terms of human life. This must change, and soon. The ravages of pollution, overcrowding, deterioration of urban environment, widening demotic ills caused by natural catastrophes all place an increased burden on us. In many areas the surgery of trauma actually has shouldered aside brain-tumor surgical practice. This has become true to such a degree as to invite a beguiling speculation: If the emergency wards suddenly became quiet, how many of us would have an abundance of leisure time?

The application of highly technical surgical procedures has tended to be concentrated in large medical centers. Should such a tendency reach full expression, there might be
little need to train so many surgeons in our specialty. The end of this disquieting devolution of surgical practice is not immediately in sight.

As specialists in a limited periphery of the broad area of general surgery, our total numbers are small. Even so, we ought to do what we can to eliminate or at least ameliorate the overwhelming annihilation which our contemporary environment is inflicting upon us. We can see, for instance, the power exerted by others in current society. We all recognize the formidable power of the highway lobby, which has an enormous allocation of funds to expend upon its objectives. What we could help to do would be to join others in seeking to redirect the expenditure of these funds, once the interstate system has been completed, into other patterns of mass transportation. That is, get the large, ponderous cargoes off the highways and back onto the rails; rejuvenate passenger travel on railroads and monorails at whatever cost for subsidy; make it a statutory obligation for manufacturers to build safe automobiles equipped with radar devices, crash-resistant bodies, and other refinements. Any nation that can send men to the moon and get them back safely should be able to safeguard the physical well-being of its parapatetic population. It is a grave problem to which we ought to give much thought. A beginning might be consideration of establishing a lobby, possibly in company with the orthopedic surgeons and others, to do what we can in a concerted attack on this wanton and needless carnage. Here again, it is not difficult to foresee that ultimate success of such efforts might mean loss of practice to all—a welcome prospect.

Grave Perils in Everyday Practice

The mere practice of our art and craft today is so infinitely complex and so profoundly interconnected with other medical specialties such as neurology, neuroradiology, and orthopedics—to say nothing of necessary relationships with medical schools, hospitals, federal and state agencies—that I could not begin to describe all the intricate responsibilities which must be observed in the course of our day-to-day work. Still, I am impelled to say a few words regarding our relationship to members of the legal profession, and specifically, plaintiffs’ lawyers.

Last year Dr. Walker spoke of the rising incidences of malpractice suits against members of our profession. A decade ago Love, in his presidential address, warned us that “... we are practicing in perilous times, just as we are living in a perilous age.” He discussed in detail our relationship to the public and the law.

In November 1969, the Subcommittee on Executive Reorganization of the United States Senate, under the chairmanship of Senator Abraham Ribicoff of Connecticut, reported an investigation of medical malpractice made by that committee. The report was entitled “Medical Malpractice: The Patient Versus the Physician.” Among the important conclusions of this committee was this passage:

“Most malpractice suits are the direct result of injuries suffered by patients during medical treatment or surgery. The majority have proved justifiable. These suits are the indirect result of a deterioration of the traditional physician-patient relationship. The publicity given to higher malpractice judgments and settlements, based frequently on new legal precedents, is likely to trigger increasing litigation in other states. The situation threatens to become a national crisis. Already, higher judgments and settlements are having the following direct results:
(a) Companies providing malpractice insurance are increasing the cost of coverage.
(b) These costs—in the form of higher charges—are being passed on to patients, their health care insurance companies, and Federal health care programs. The rising number of malpractice suits is forcing physicians to practice what they call defensive medicine, viewing each patient as a potential malpractice claimant. Physicians often order excessive diagnostic procedures for patients, thereby increasing the cost of care. Moreover, they are declining to perform other procedures, which in themselves, may entail some risk of patient injury. At present, it appears that no one affected by the rise in malpractice suits and claims has been able to deal with this problem in a manner that promises to alleviate this situation. The lion’s share of the total cost to the insurance companies of malpractice suits and claims goes to the legal community. There is a definite Federal role in the malpractice problem.”

In our age of enlightened concern for our fellow citizens, we agree that medical care
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for all is a right and not a privilege. Certainly our people as a whole accept this doctrine. It is not the problem but the solution which escapes us, meaning that the impeding dilemma is bound up inextricably in the interrelationship among the physician, the patient, and the patient’s lawyer. A reprehensible state of affairs is becoming worse, and probably will continue to do so before it improves. We are the ones in direct jeopardy because our particular specialty is recognized as being characterized by surgical intervention which is often precarious.

Certainly, none of us would deliberately injure a patient. None of us would desire or be pleased with a poor operative result. All of us have spent anxious hours of concern and watchful attendance upon our patients. But none of us is infallible. Any practitioner who has ever been sued for malpractice can never forget the successive horrors of anger, despondency, frustration, and disappointment thereby inflicted upon him and his wife. Whatever operative successes we achieve and whatever eminence we attain in our field have to be gained in the face of the constant specter of such a melancholy destiny. What can be done about it? Should each patient be asked to buy risk insurance when he undergoes an operation and thereby obviate any likelihood that the surgeon will be sued for malpractice postoperatively? If medical care for all is indeed a right, should all members of the total population be financially protected against losses incurred by medical disability by means of equal taxation? Certainly, as the Ribicoff report states, there is a definite role for the federal government to play in correcting this national problem of malpractice suits.

Many are inclined to blame the contingency fee as a major element in our dilemma. The possibility of eradicating this practice, I am told, is remote. The American Medical Association as yet has failed to propose a solution. As members of our society we are too few to constitute an effective voice. Concerted efforts such as those made in California for cooperation among the physician, the hospital, paramedical personnel, and the patient on a contract basis may be a step toward the solution. Prepaid contractual medical care may be the mode of practice in the future, and, if so, contractual arrangements may become part of a general plan to reduce or eliminate medicolegal suits. Somewhere within such a mechanism there undoubtedly would be provision for a board of review by medicolegal peers.

All our troubles do not have an origin in the state of California, nor can we blame our ills on the withdrawal of insurance coverage in New Mexico and Hawaii; but the bizarre manifestations of strife among patients, lawyers, physicians, and insurance companies in those states clearly illuminate the crisis. As neurological surgeons, we are too few to be able to be self-insured through the agency of this society. Our colleagues in fields less subject to litigation are now well protected by insurance purchased at low premiums. “Airplane insurance,” meaning a separate policy on each operation, is impractical financially for us. Resort to the contingency fee will not simply disappear; consequently, we shall be reduced to a search for alternatives. As I have said, the federal government could take over the entire burden of medical liability and sustain costs of such a new venture by means of equal nation-wide taxation. I can hear stirrings amongst you about the hazards, extravagance, delays, and inefficiencies inherent in total governmental control of medicine and, inevitably, of our professional lives as well. What I have said about recent sociomedicolegal developments in California, where the outrageous conflicts among physicians, patients, lawyers, and hospitals seem to have begun on an intolerable scale, may be a step toward the solution.

“A Riddle Wrapped in a Mystery Inside an Enigma”

To explain what I have just said, let me digress a moment to provide an example. On July 1, 1969, eight southern California hospitals embarked upon a demonstration project in the use of arbitration as an alternative to court litigation of malpractice claims against hospitals and attending physicians. The agreement to arbitrate is explicit in the admission form signed by the patient as a condition for admission to a hospital.

Contractual arrangements between patient, physician, hospital, and paramedical personnel are made prior to the start of medical care. If unhappy events follow, appeals must be made within 30 days to a board of
Dear Dr. MacCarty:

Thank you for your letter. I am much pleased to know that you are contemplating another visit to Baltimore. I expect to be here through the month and hope that I may have some work on hand that will interest you, whether in the clinic or in the Hunterian Laboratory. I regret that Mrs. MacCarty is not going to accompany you, for I would greatly like to see something more of her than the brief glimpse I had of her when you were last here.

With best regards and sincere greetings for the new year, I am,

Very truly yours,

Dr. William C. MacCarty,
Rochester, Minn.

Fig. 5. Letter from Harvey Cushing, March 25, 1908.

Fig. 6. Letter from Harvey Cushing, January 5, 1909.
My dear Mac:

A patient named Minnie (Mrs. Peter) Steketee was operated upon, July 8, 1920, I believe, by Adson for pituitary tumor. Could you, without too much trouble, have your secretary send me a copy of your histological note on the tissue?

Very sincerely yours,

Fig. 7. Letter from Harvey Cushing requesting information on a pituitary tumor case, April 17, 1922.

My dear Dr. MacCarty:

The stain has just come, and I am greatly obliged to you for sending it to me, and shall look forward to using it on our next tumor. I am hoping to be able to get to New York by the 16th to go to your meeting too.

Very sincerely yours,

Fig. 8. Letter from Louise Eisenhardt regarding staining of fresh frozen sections, April 11, 1930.
3 August 1935.

Dear Mac:

You being an old, trustworthy friend, I am enclosing for your information a copy of a letter I have just written to Dr. Costello whom I do not happen to know. I suppose that you must have checked on these findings that he has reported, and I would like to know your private opinion about them. I have heard from Manchester that Dr. Susman has had very little experience in endocrinological pathology and is scarcely to be looked upon as reliable.

You have probably seen MacCallum’s article in the last number of the J.H.H. Bulletin describing a case which they recently had at the J.H.H. That’s what I call a basophilic adenoma – scarcely microscopic.

Always yours,

[Signature]

Dr. William C. MacCarty,
The Mayo Clinic,
Rochester, Minnesota.

Fig. 9. Letter from Harvey Cushing relating to “Cushing’s disease,” August 3, 1935.

peers representing the principals involved. This system might settle injustices promptly and equitably, but there is, of course, the possibility that the expenses of maintenance of such a system will be borne by all patients in the form of increased medical costs. Ultimately, whether the costs of such a plan are obtained by way of the government or private initiative, it is the consumer who must absorb them, either in his fees or his taxes.
Dear Mac:

Thanks for your nice note. I am afraid I may have sounded a little peevish in my letter to you regarding Dr. Costello. I am sure he is a hard-working lad, and I hope his paper may finally be worked up and published. He has been good enough to send us four or five sections—I presume of his best basophilic adenomas. We have looked them over and sent him our slant on them. If you see him, he will perhaps show you our letter.

I am glad to have news about your boys. If William is going into the third-year class at Hopkins this fall, he is going to meet a great group of boys. I know several of them.

Willie MacCallum has just been here paying me a visit and I wish you might do the same sometime when you are in this bailiwick.

Always affy.,

Dr. Wm. Carpenter MacCarty,
The Mayo Clinic,
Rochester, Minnesota.

Fig. 10. Letter from Harvey Cushing relating to “Cushing’s disease,” August 19, 1935.
Dear Mac,

Did I or did I not write to you a year or two ago in regard to the relation of gastric ulcer to intracranial disorders? If I did write you, I am sure you answered, but as I don't remember definitely about it, I am writing you again.

I have seen three cases of multiple acute perforations, gastric (one case), duodenal (one case), esophageal (one case), coming on within twenty-four hours of an extensive cerebellar operation. Certainly this must have happened to other people too, and it is possible that gastric lesions may have occurred more often than we realize with intracranial troubles, for in the event of a necropsy we not infrequently secure permission to examine only the head.

I find that there is quite a good deal of literature on the subject. From what I have seen, I have the impression that lesions of the third ventricle are particularly apt to cause vagal symptoms with vomiting - oftentimes bloody vomiting - with small lesions of the gastric mucosa.

You perhaps know about Unacillus's studies of gastric ulcer produced by large doses of pilocarpine in rabbits. We find that we can produce ulcer by small doses of pilocarpine put into the ventricles.

So do like a good man, with your wealth of material, give me some hints as to whether you have ever noticed anything of this kind.

Always yours,

Dr. William Carpenter MacCarty
Mayo Clinic
Rochester, Minnesota

Fig. 11. Letter from Harvey Cushing relating to “Cushing ulcers,” March 4, 1931.

which Dr. Cushing had operated transtemporal in 1912. The request for pathological details in this case, in which Dr. A. W. Adson operated on June 15, 1920, was dated April 17, 1922, at a time when Dr. Cushing was involved with his treatise on pituitary tumors. A subsequent note from Louise Eisenhardt (Fig. 8) regarding the fresh-frozen section staining technique was in response to a mutual request by HC and her to use the stain and also to appear jointly with my father at a meeting in New York City.

Some subsequent interesting correspondence was related to Dr. Cushing’s description of basophilic adenomas during the period in which the historic discovery of Cushing’s disease was at hand (Figs. 9 and 10).

One of the most interesting letters dealt with the relationship of gastric ulcer to intracranial disorders, an association which later came to be known as “Cushing ulcers” (Fig. 11).

Cushing always had a strong interest in pathology, my father’s field, and the characteristic regard for “Popsy” Welch of Hopkins entertained by both men is apparent in a letter (Fig. 12) from Cushing in response
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Dear Mac:

I am so happy to see your tribute to Popsy in the Proceedings of the Clinic. It's come just in time for me to add it to some other papers and documents about him I am getting bound.

I am complimented that you should have hit upon and used my note from the 80th birthday volume.

The picture you have selected is, I think, one of the best. The figure above his left shoulder is a photograph of Livingood who went down in the Goyne disaster, a fine fellow if there ever was one. It was with him that I was doing the bacteriological study for Popsy's Festschrift.

Always yours,

Yale U.

FIG. 12. Letter to W. C. MacCarty regarding a tribute to "Popsy" Welch, November 22, 1934.

to a tribute to Welch published by my father in 1934.12

Hail and Farewell

"If God did not exist, it would be necessary to invent him," wrote an irreverent Voltaire. Fortunately, we neurological surgeons did not have to invent a great figure in our field. Someone else created him for us, the beneficiaries of his many talents, and then, as in a genial cadenza, gave him friends like the ones I have told you about tonight.

I am grateful for your indulgence and forbearance.

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