



THE PERSONAL JOURNAL
OF THE AMERICAN ACADEMY
OF NEUROLOGICAL SURGERY

VOLUME 30, NUMBER 1

SEPTEMBER, 1970

THE JOURNAL OF
NEUROLOGICAL SURGERY

THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY



OFFICERS 1970-71

President	Robert Pudenz
President-Elect	William B. Scoville
Vice-President	Augustus McCravey
Secretary-Treasurer	Byron C. Pevehouse
Historian	Howard A. Brown

The contents of this publication are

CONFIDENTIAL

and for the use of members only

Volume 30, Number 1

September, 1970

(Previous issue: Volume 29, No. 1 - Sept. 1969)



ROBERT PUDENZ
President



WILLIAM B. SCOVILLE
President-Elect



AUGUSTUS MCCRAVEY
Vice-President



BYRON C. PEVEHOUSE
Secretary-Treasurer



HOWARD A. BROWN
Historian

THE NEUROSURGEON





Thomas and Elizabeth Ballantine, Jr.



I have been hard at work trying to complete a chapter (for Julian Youman's textbook) on cervical disc disease. These efforts have been handicapped by the fact that Elizabeth was recently operated upon for a bad knee and no sooner did she get home than my father entered the hospital for a prolonged stay relative to a prostatectomy. I am happy to be able to relate that both patients are now doing well but for quite a few weeks now my "general practice" and a little neurosurgery has competed for time with some of my extracurricular duties.

In reference to cervical disc disease, I should like our members to share a letter which I have just written to Dr. Neal Aronson as follows:

"I was greatly interested in your article which appeared in the June 1970 issue of the Journal of Neurosurgery entitled "Results of Using the Smith-Robinson Approach for Hemiected and Extruded Cervical Discs". If I understood your statistics correctly, 23 (66%) of 35 patients were 90 to 100% relieved of their pre-operative symptoms. In a further breakdown it would seem that 46% (15 patients) had only partial relief of neck pain and in 10 of your 35 patients the relief of arm pain was partial and in 1 it was unchanged. In your discussion of the post-operative status of these patients the statement is made that 'ventral excision of the soft disc protrusion is more effective than the posterior approach insofar as the relief of arm pain and neurological disability are concerned'.

I am currently writing a chapter on the treatment of discogenic disease of the cervical spine for a textbook of neurosurgery. The literature available to me indicates that the posterior approach to a laterally placed soft, cervical disc results in complete relief of neck and arm pain in from 85 to 90% of patients. I would, therefore, be most grateful for any references which you can give me indicating that the anterior approach is 'more effective' in these conditions so far as relief of arm pain is concerned."

Since I am trying very hard to be objective in writing this chapter I would be most grateful for the opinions of any of our members concerning the use of the anterior approach to the soft cervical disc. Let me say immediately, however, that I do not need to hear from Murphey, Raaf or Scoville!

Earl Walker's use of television at the World Congress has been productive of peripheral results: it is my understanding that the same technique of presentation of papers was used to good advantage at an international meeting of Obstetrician and Gynecologists; and the ACS is planning to use much the same format for some programs in Chicago during the annual meeting.



Howard A. and Dorothy Brown



The best news that I have to report is the marriage of Barton to Martha Connor at our home on April 25, 1970. It was a very happy occasion and our entire family and some of their close friends attended the ceremony and extended their best wishes for happiness in the future.

Dorothy and I were planning a boat trip to New Zealand in October and then onto Australia and then back through Fiji and Honolulu. However, last week the Matson Navigation Company cancelled the trip, as they have sold the Lurline to some of the wealthy people in Greece. Needless to say, we were much disappointed, as we were unable to make other plans to go at a different time.

Consequently, we will travel to Idaho for our annual visit at Payette Lake.

Work here is going along very well and we are very happy to have Dr. Tom Kenefick with us who was recently on the Staff at the Mayo Clinic.

Within the next two or three months, we plan to move our offices to a new building which is under construction and which allows us to design our office space in an effective and efficient manner.

We are very pleased with Charlie Wilson and his good work at the University in conducting our training program.

We have indeed had a marked improvement in the caliber of our Residents since he took over.



Charles B. and Mary Wilson



Our second year in California has been even more exciting than the first. We are very much at home in San Francisco. I find it hard to think of living anyplace else. Each trip away convinces me that the Bay Area is indeed a very lovely place to live.

A few highlights will indicate what I interpret as progress at the University of California. This past year began in the right way with the arrival of Yoshio Hosobuchi whom all of you will remember as the young man who won the Academy award for his paper on experimental glial tumors. Yosh is one of the few people whom I would characterize as brilliant and his capacity for work amazes me repeatedly. Sean Mullan and Doctor Evans should take great pride in turning out a man like Yosh. We have managed to purchase an electron microscope and within the next year you will be hearing of some exciting findings regarding tumors of the central nervous system and possible viral pathogenesis.

On May 6 we dedicated the Howard C. Naffziger Laboratories for Neurosurgical Research. This was a gala event, enjoyed most of all by Mrs. Naffziger who, despite her age, is keenly interested in neurological surgery at the University and who in all respects is a remarkably young person. Quite appropriately Gene Stern gave the principle address at the dedication ceremonies and I can't imagine an address more appropriate to the occasion.

Finally, neurological surgery is again a department, effective July 1, 1970. I firmly believe that neurological surgery must remain within the family of surgery in general, and this can be done through a number of mechanisms. At the University of Kentucky all surgical specialties were divisions and there was never any question concerning autonomy or conflict of interest. At the University of California the situation is much the same although names are different. The surgical specialties (with the sole exception of Urology) have departmental status and the family circle is a board of surgical chairmen of which Burt Dunphy now serves as chairman. Like most other universities, California is having its disappointments. Our hirsute students have not endeared us to the California legislature.

I will be joined in July by Julian Hoff. Hoff is completing his training with Bronson Ray at Cornell where his record has been outstanding in all respects. Both Doctor Ray and I offered Hoff a job but Doctor Ray began at a

disadvantage. In the first place, Hoff attended Stanford as an undergraduate and his mother now lives in Palo Alto. Second, his wife, Diane, has no desire to become a New Yorker. He will be full-time at San Francisco General Hospital.

After two temporary homes, we have finally settled in one of our own in Tiburon. We are on a fairly steep hillside which has the advantage of no lawn to cut but at the same time excludes any hope of ever having a tennis court. We have the space but would have to play at a 45 degree angle.



Stuart N. and Elva Rowe



The hard working officers and committee members who arranged the dinner at the time of the International Congress in New York, certainly deserve praise and thanks for a most pleasant evening. Over the years these gatherings have always been good fun but this one seemed to us outstanding.

On the personal side, I have to report that I have now partially retired and have given up surgery entirely. I am participating in some of the teaching conferences at the Medical School and am running the Electroencephalographic Department at one of the hospitals in town. These two jobs, plus helping out with the worry about two married children and five grandchildren, seem to leave insufficient time for my hobbies of boating, golf and travel. However, we did manage a three or four week leisurely trip to Florida in the fall, to take the boat to Fort Lauderdale and another little expedition in late February and early March to the Keys, where the weather and the wind seemed inappropriate to the latitude. However, it was considerably warmer there than in Pennsylvania.

While in Florida, we did see Gus and Jenny Gustafson, as well as their son, Gary. I understand that Gus is planning to devote full time to the grapefruit and orange groves in Texas and let someone else undertake the surgery of the nervous system in the Rio Grand Valley in the near future.

Being just an amateur at this business of reduction of professional activities, I am looking forward to getting some expert advice from such veterans as Wally Hamby or Jess Herman.



Donald F. and Betty Dohn

The Dohn family has managed to keep a busy schedule throughout the past year. Skiing has been the top interest for our kids (Deb 17, Doug 15, and Dave 11) so each vacation has found us in the mountains somewhere—usually Colorado. Racing has also caught their fancy, so Betty has spent most Saturdays at some hill or other, gate-keeping or timing. "Father" usually can't make it. My greatest memory of the year on the other hand, was a seven day sailing cruise on the Georgian Bay in August.

It seems as though most of my time and effort this past year has been directed to our service here at the Clinic and to related activities. To build our staff complement following Wally's retirement, we were most fortunate to have Phil Gildenberg join us. He trained at Temple and, of course, has a great interest in stereotactic surgery. In addition, while there, he helped develop the transdiscal method of percutaneous cordotomy and has continued his work with this. He is a research-oriented neurosurgeon (Ph.D. in neurophysiology) and now divides his time equally between clinical work and research. His efforts have been an important addition to our training program. My other associate, John Collis, and I have continued to be mainly clinically oriented. We have attempted to subspecialize to a certain extent; however, there are no hard and fast rules.

Two of our present research projects (conducted by the residents) may be of interest. One concerns experimental air embolus in dogs. Three points of information have been disclosed thus far: (1) the left lateral position does not protect against a threshold dose of air; (2) the inspiratory gasp is blocked by large doses of barbiturates and has its afferent medication over the vagus nerve; (3) air embolism is followed by a rise in the pulmonary arterial pressure suggesting an obstruction in the pulmonary capillary bed.

The other project is an attempt to assess the frequency of post-Pantopaque myelographic symptoms with a secondary study to determine whether intrathecal Depo-Medrol truly has a prophylactic effect against such complication.

One of our endeavors in November that proved quite gratifying and well received was a postgraduate course in "Neurosurgical Technics." We had excellent help from outside speakers including some Academy members and hope to repeat a similar type course at approximately two year intervals.

I am most honored and grateful to now be a part of the Academy group, and Betty and I look forward with great anticipation to the Mexico meeting.

It is reported from a usually reliable source (my son) that the Dohn Family gets to church at least occasionally — this DeSaussure found the Dohn Family in Westminster Abbey.



Homer S. and LaMyra Swanson



The request to hear of my year's successes, travels and troubles can be answered simply by stating that my successes have been few, my troubles many and my travels limited this year to first a Bone Fishing excursion in the Keys and the Southern Neurosurgical Meeting in Durham where Guy Odom put on a beautiful and well run meeting. The meeting in Durham was a real success, the fishing trip being marred by bad weather but none the less I did land a ten pounder. This fish, together with a 12 pound Permit caught in the same waters on six pound test line, has convinced me that my coronaries will not tolerate such foolishness. I shall hereafter confine my fishing experiences to trout fishing in North Carolina.

My troubles have revolved around a sudden rash of massive, extrasellar Pituitary Adenomas in the past five months. It's bad enough to have one to deal with but four in five months is a disaster. Three of these presented with the single complaint of failing vision in one eye. Two of the three had been followed regularly for four years by the eye people and in no instance had visual fields been done in spite of gross field defects. The fourth was one that I had operated upon twenty years earlier with good results but his pre-operative personality changes made his cooperation nil and I lost track of him a year post-operative when his course was satisfactory. He presented one month ago for evaluation on request by the Social Security people for disability rating only. He was a pitiful sight with marked dyspituitarism, blindness in one eye and literally little but light perception in the other eye. He still refuses any form of treatment. One of the four is doing well two months post-operatively and is back at work with full fields, with good vision in his best eye and much improved vision in the other. this in spite of a mass which extended well into the middle fossa as well as superiorly. The current case, now three day's post-operative and in critical state was seen merely to differentiate between organic and psychiatric disease prior to his dismissal from his job. Little

attention had been paid to his complete blindness in his left temporal field over a four year period. His mass, on the brain scan measures 9 X 10 centimeters and this was only a fraction of the real tumor. The last case, now five months post-operative is still a nursing problem. After a temporary period of marked improvement his course was marred by thrombosis of his Anterior Cerebral Artery one month post-operatively. This resulted in a huge area of hemorrhagic infarction in his frontal lobe since which time he has shown little progress.

During this same interval we have seen four other more or less routine cases, all of whom have done well and are back at work. The distressing feature of the four massive lesions is the fact that each instance the patients had been seen more than regularly by the eye people. One satisfactory result in four is discouraging to say the least but merely points up the need for an awareness of optic nerve and chiasmal compression as a cause of progressive visual disturbances. In spite of the numerous articles relating to the value of visual field studies, this simple diagnostic tool has been lost from the cabinet of many peoples' tool shed.

I now have a total of twenty-nine of these extrasellar Pituitary tumors of large size which I hope to get together for purposes of a long term follow-up. Oddly enough, the results in the earlier group have exceeded the later cases and this due to the late appearance of the last ten cases. One of the non-surgical fatalities presented the day before his death with a nasal mass which was biopsied and resulted in massive bleeding six hours following the biopsy. The first and only skull films were obtained on the morning of his death. I have found in the past that when one gathers a group of cases together for publication that thereafter these cases never present themselves again and I'm hoping that such occurs in this instance.

LaMyra and I hope to be in Stockholm in August for the Scandinavian Neurosurgical Meeting. I have always wanted to attend this particular meeting as well as to visit the homeland of my forefathers. Following the meeting we plan a short trip thru Denmark and Norway which will probably conclude my travels for the year.



Dr. Gurdjian and two skeptics.

David L. and Virginia Reeves

Somehow another year has vanished, and again the time for another contribution to our interesting, unique, and much admired Neurosurgeon has arrived. As always we look forward to the letter containing the news and views of our members and to the much appreciated photos.

The tribute to our honorary member, Dr. Eustace Semmes, "Pappy" by Paul Bucy, presented at the meeting of the Southern Neurosurgical Society in February 1969, at the request of its president and our own Sam Snodgrass was enjoyed thoroughly.

Now that so many of our members are living in the beautiful Autumn years, Wally Hamby's letter referable to retirement from "the hurley-burley" of the neurosurgical world strikes a note of pertinence. From an institutional point of view it seems logical that retirement at 65 be mandatory. As he expressed it, "the individual is relieved of the necessity of an eventual temporal decision, which often must be made at a time when judgment of one's capabilities may be clouded by unconscious egotism." As he further wisely indicated, "having a pre-set date of retirement allows the surgeon to plan for a relatively painless transition to other activities, and the longer the period of planning, the less painful it is." His description of retirement life in Fort Lauderdale was most enjoyable.

Retirement it seems should be freedom from the treadmill of our demanding profession and at long last to enjoy with our families the many dreams, whatever they may be for which in the past there was never time.

We heard from Alfred Uihlein at his hideaway in Naples, Florida that he has been enjoying teaching and consulting work. Because they will be in Australia as guests of the American Orthopedic Association, they will miss both the meeting of the Harvey Cushing Society and that of the Senior Society. They are looking forward to the Academy Meeting in Mexico City this fall.

Unfortunately my hospitalization with a bout of bronchopneumonia prevented us from enjoying Dorothy and Howard Brown's 40th wedding anniversary in San Francisco as well to celebrate Kate and Ed Morrissey's 41st. What wonderful friends from that beautiful city at the Golden Gate.

Our lovely community seems plagued by misfortune. As though our unsightly oil platforms and oil pollution were not enough, our University of California at Santa Barbara and its neighboring community have been the setting for riots, arson, and gunfire. Bill Sweet's letter in this regard strikes a timely note. No doubt its like being against motherhood to say that half of

those going to universities have no business being there and as well to question the value of whatever it is they may attempt to absorb.

It seems patently absurd there should be any question about immediate expulsion for the commission of such acts of violence as are being presently perpetrated.

Would there but be some Pied Piper, playing here we go gathering nuts in May to lead these long-haired sleazy beach bums into our channel to sink into its oil polluted depths with bubbling groans, unsung, unconfined and unknown.

Last fall after vacationing at Wickenburg, Arizona, en route home we enjoyed a brief visit in Phoenix with Georgia and John Green. During the course of conversation, the Mal Practice Dilemma raised its ugly head. In this problem California seems to be leading the parade. Rather obviously a discontinuance of the contingency fee would destroy the incentive for such acts. When an attorney receives forty per cent of a five hundred thousand dollar judgment, the race is on. It is said such suits cannot be instituted without a contingency fee, but one can be sure the suit is not undertaken unless it appears financially promising.

A letter from Eben Alexander tells us that his daughter Jean is now at the fine Mills College for Women across the bay from San Francisco.

How gay it was to learn that our former "confirmed bachelor" neurosurgeon, Bob Porter has given up his loneliness for a life of happiness with Aubrey Dean. Congratulations to him and best wishes for lifelong happiness to Dean.

Congratulations to Eldon Foltz for his appointment as Professor of Neurological Surgery at the University of California at Irvine. This should be a delightful spot for him and his family.

What a wonderful picture of Henry Heyl at the surprise party given for him for his much deserved election as Vice-President of the American Association of Neurological Surgeons.

Francis Murphey's wonderful "thank you note" for the concern of his friends on his joining the Coronary Club was indeed a masterpiece. We hope this will slow his life to one of leisurely enjoyment of the things he would like to do.

Virginia has been hobbling about on a broken ankle as the result of an inadvertent slip and twist at a dinner party. We had planned to visit our daughter Lander in Paris, but now are looking forward to such a trip in the fall. Lander is working as a secretary for the Atlantic Institute in Paris, directed by our friend Jack Tuthill, who was our ambassador at Rio de Janeiro when we visited there a few years ago.

We have enjoyed so much all of the interesting letters of the Neurosurgeon and are looking forward to this coming number with pleasure and anticipation.



Robert and Mary Ruth Pudenz

The past year has been marked by many changes in my professional activities. For many years Hunter and I have discussed pursuing some of our research ideas but the pressure of our clinical practice made this extremely difficult. However, we took the "bull by the horns" and in early 1967 I became the Director of Research at the Huntington Memorial Hospital on a part-time basis. Shortly thereafter I became more active at the University of Southern California School of Medicine and was appointed Chairman of the Stroke Committee under Regional Medical Programs. At the same time I continued to practice on a part-time basis. Everything seemed to proceed rather nicely until October of 1969 at which time I discovered that the company that carries our professional liability insurance had increased its rates astronomically. As a result of my famous 1947 lawsuit my annual premium was over \$9,000.00. Most of you will remember that this case resulted from a death following a pantopaque myelogram in a patient with a herniated lumbar disc. After sixteen weeks in court the jury acquitted me after seventy minutes of deliberation. However this case stands on my record and has been a thorn in my side ever since.

The marked increase in our overhead made it impractical for me to practice on a part-time basis so therefore on February 1, 1970, I became Director of Research on a fulltime basis. Under my new contract with the hospital I am permitted to perform neurosurgical procedures that are related to our research effort and can see patients in consultation but am not permitted to operate on them unless they can be placed in the clinical research category. It was very difficult severing my professional association with Hunter Shelden and John Garner, however we have continued to work together in some clinical problems as well as in several research programs.

There is much excitement these days at our Research Institute. The Board of Directors of the Huntington Memorial Hospital have approved the plans for an addition to the Research Institute. This new addition will more than triple our current size. Our current major research projects in the neurosciences are concerned with the electrical control of the nerve impulse and the production of congenital communicating hydrocephalus in the offspring of rats who are

fed tellurim during pregnancy. Research on the former project during the past three years has enabled us to set the specifications for an implantable biotransceiver which is currently being manufactured in its prototype form by General Dynamics in Pomona. Inasmuch as this device will have molecular electronic circuitry it will be small in size and hopefully can be implanted in any area of the body for either stimulation or blocking of nerve impulses.

Dr. Bill Agnew, our physiologist, has directed the hydrocephalus study. Currently he is trying to determine how tellurim acts on the organism to produce communicating hydrocephalus. He is using physiological, chemical and electron microscopic methods.

In addition to our own research activities we are collaborating with our colleagues at the California Institute of Technology and the University of Southern California School of Medicine in some programs. Currently I am working with Dr. Bob Sinsheimer, The Chairman of the Biology Division at Caltech in developing monthly seminars during the next academic year. Ted Kurze, Andrew Talalla and I have discussed a program stimulating the striate cortex in patients using a special brain-stimulator. It is amazing how little information we have on stimulation of the human visual cortex, particularly area 17.

We now have a very active program in cardiovascular research. Dr. Richard J. Bing, formerly Professor of Medicine at Wayne State University, has joined the Huntington Memorial Hospital staff as Director of Intramural Medicine and Cardiology. He brought his research staff with him and has several projects related to coronary circulation under way. Fortunately we have had strong financial support from the Boards of Directors both of the Research Institute and the Huntington Memorial Hospital. Furthermore, our patients have been particularly generous and have provided us with funds that support many of our projects. The Altadena Guild of the hospital is very active in fund raising and supports our library as well as a summer fellowship.

Our youngest daughter Sheila married Bob Cornell, a rancher from Turloc, California, last September. They are now living there. Sheila is finishing her college education and will receive her degree in July. Our older daughter Sandi and her husband Bruce Jones, have just bought a house in Manhattan Beach and are like kids with a new toy. Ruth and I live in an apartment but do have our ranch in Paso Robles. We drive up there as often as possible but this is only once every three to four weeks. Fortunately we have a very nice family living in the little house on the place and they look after our interests.

We built an apartment in the barn which is very cozy and comfortable.

It was certainly fun seeing many of you at the American Association of Neurological Surgeons meeting in Washington. Ruth and I are looking forward to seeing all of you in Mexico City in November. Judging from the current interest we should have an exciting scientific and social program.



Barton A. and Martha Brown



I am slow in sending information for The Neurosurgeon, but I delayed intentionally so that I could transmit the good news to you that on April 25th, I married Martha Ann Connor. The year has been busy, but there are no other events of comparable magnitude, so none will be included.

We look forward to seeing everyone in Mexico City.

—And we are looking forward to meeting the new bride.



Theodore and Emma Kurze

This year of 1970 seems to be an eventful one at the LAC-USC Medical Center. We finally moved in and have been operational for almost one year in our new quarters. These consist of a new office suite, conference room, operating rooms, neuroradiology suit, and 12 bed ICU all in immediate proximity to one another.

We have identified most of our planning errors in the new OR, which is primarily oriented to microneurosurgery, and these have been corrected. There is nothing like a whole string of operations to test drawing board plans.

We are especially pleased to have Dr. Robert Scanlon join our Department of Neuroradiology on a full-time basis with Drs. Tom Bergeron and Cal Rumbaugh.

I had a very nice trip to Spain sponsored by Drs. Obrador and Ley for the purposes of assisting with the development of Spanish microneurosurgical programs. I did a little teaching and operating, and learned a great deal about neurosurgery in Spain, bull-fighting, and flamenco, all of which was very pleasant.

A visit to Ted's should be stimulating, as Ted is an authority on microneurosurgery and Bob Scanlon is an authority on Irish coffee.

William F. and Gwen Collins, Jr.

After this past week of student dissent, and with the coming black Panther trial this summer, I wonder if writing about neurosurgery is relevant since nothing else appears to be. Our protest weekend passed perhaps in part because of the fortunate attack by Mr. Agnew upon President Brewster making him someone for the students to listen to but even more probably because of luck. The weekend has passed, Yale is still standing, and aside from minor damage to the skating rink, the faculty, students and buildings are intact, and the medical center is empty of injured dissenters. This past year, aside from the growing unrest of the undergraduate which fortunately has not extended to the neurosurgical residents, has been one of consolidation. The section of Neurosurgery has reached beyond the "honeymoon" stage of a new director with our wards, operating rooms, clinics and laboratories working in part, at least, as I want them. John VanGilder has joined us from Dr. Schwartz's program at Barnes, and Jim Mahnke left to join Eldon Foltz in Irvine, California.

As many members know, our section has contracted to train a faculty in neurosurgery for the University of Saigon. Its professor of neurosurgery, Dr. Dang-van-Chieu, visited New Haven for three months and was most interesting to have as a visiting professor. He considered himself a student so that he rotated through the wards through neurology and neuroradiology. He was interesting for the medical students since he lived in the medical school students' dorm and they were rather shocked to find that the Vietnamese did not agree that our imperialistic government was unwanted in Vietnam.

This training program should be interesting for the input to it will be chosen by the faculty of the University of Saigon and the men will be given a faculty appointment in Surgery with a possibility of being appointed in neurosurgery if Dr. Chieu and myself agree. The American Board of Neurological Surgery has agreed that the program, which is a considerable variance from standard programs, will allow those that complete it to be examined for a foreign certificate. The Minister of Health and the Minister of Education of the government of Vietnam placed a restriction on people being trained here that they must spend an equal time in Vietnam for each period they spend here and that no period here can be longer than one year. We will have some faculty rotating through the University of Saigon and any members of the Academy or any of their young residents who might be interested in a faculty appointment there can contact me and I will be happy to try and arrange it. At the same time, we have been setting up program learning courses in pathology, physiology, neuroembryology and neurochemistry so that the men while they are here can learn as rapidly as possible and can have the course material available to teach graduate students, future residents and undergraduate medical students in Saigon. The need for young faculty members who can give such courses is great in Saigon and since I have always felt that I have learned more teaching than being taught, I believe the giving of such courses could be advantageous to the Saigon residents. The basic plan is for the residents to have three years of instruction here and three years of instruction in Saigon. The first year will include language lab studies, basic sciences and outpatient and ward experience with the more senior years to include increasing hospital and operating experience. Since there is no paucity of clinical material in Saigon, they should have continuing operative experience there.

My reason for accepting the contract was in part my interest in contributing something concrete to the Vietnamese situation and also to see if when a faculty of a foreign school picks the candidate and when the program is tailored to the man's need and includes experience in his own hospital during training, whether we could not produce a man capable of returning and continuing and even developing his speciality in his own country.

Bill is taking on a formidable task and we all wish him well. This may well set a pattern for the training of foreign neurosurgeons in the future. One problem for foreign trainees is that they are sometimes not accepted in their country after being in the United States. This plan may make them more acceptable to their countries.

Bill now holds the Harvey and Kate Cushing chair at Yale. It is gratifying to have two endowed chairs for neurosurgery.

Blaine and Irene Nashold

As the year passes, the Nashold family in on the verge of sending three children off to college, and this is presenting somewhat formidable tasks. Susan, 18, is headed to Indiana University while Jim and Ann will probably come back to Duke after being away at prep school for the past three years. There may be some relief in sight because Jim, now 17, is 6'7" and is currently being recruited by several universities. Hopefully he may have an opportunity at a basketball scholarship.

This has been an extremely busy year for Irene in that she has been nursing back to health a 150 lb. Newfoundland pup that was run over by a car and subsequently had one hind leg amputated. Everyone predicted that this animal, as big as he was, would never be able to walk again, etc., etc., but leave it up to Irene to give him daily physiotherapy and psychological therapy. Mr. Booze is now said to get around the neighborhood almost as good as he did before his injury.

Neurosurgery at Duke doesn't seem to decrease any. We all seem to have more than we can do. The last year has been of particular interest to me in that the work on the function of the isolated spinal cord in paraplegic animals and bladder function has occupied a great deal of our time and thought. At this point it appears as if it may be feasible to apply this in a practical manner in human paraplegics when one looks at the statistics of causes of death in paraplegics and finds about 40% related to renal lesions. Another startling figure is a 30% mortality in patients with multiple sclerosis due to bladder or renal complications. I am more and more concerned about less direct interference in the nervous system and more activation of various ongoing systems to either potentiate or inhibit abnormal function.

Over the past six months we have carried our implantation of dorsal column stimulators in eight patients, implanting a peripheral nerve stimulator in one using the technique of Sweet and Wepsic. At this time we are very impressed with the initial results. Most of these individuals had intractable pain problems and had had all the other known neurosurgical therapies. We have confined the implants in the spinal column to patients with central pain due to paraplegia or cord injury and have done three patients with multiple low back operations, rhizotomies, etc. for pain. I am convinced that all bets are off when studying the sensory system other than in the human who can at least give you a reasonable answer about when he feels pain, etc.

I thought the meetings of the Society of Neurological Surgeons and American Association of Neurological Surgeons held this year were very outstanding in terms of the material presented and it appears that neurosurgeons in general are more and more interested in basic science and fundamental studies of the nervous system.



George and Enid Baker



It was a pleasure to see you in Boston and to see my good friend Francis Murphey circulating again. Missed "Pappy" Semmes but somebody has to work in Memphis when you two are away "politicizing."

With another personal communication and thank you to Tom Ballantine and Bill Sweet, and all the Boston group, I thought the meeting of the Fiftieth Anniversary of the Society of Neurological Surgeons was one of the best - both academically and socially. Their efforts were quite rewarding to us all.

After the Cushing meeting in Washington I joined my three brothers from Maryland for a few days on Tilghman's Island in the Chesapeake Bay and caught a boat load of striped bass or rock. We hit the spring run of fish and trolled with white bucktail jigs in 7 or 8 feet of water - it was a picnic. On the weekend of April 25 we took in the Maryland Hunt Cup Steeplechase Race close to the place of my birth in the Green Spring Valley. Returned to Minnesota on April 26 to find 85 degree weather, everything in full bloom, and a very early summer for us in this part of the country.

I am hanging up my scalpel in June and will stay here as a permanent address. Enid and I are hoping to travel a bit, visit our 8 grandchildren, and have them visit us. We are going to Wyoming, Idaho, British Columbia, Banff and Jasper in July, and I will take my fly rods and a set of golf clubs. When one retires from active duty you do not have to set a date to return. I feel that in the past 40 years I have enjoyed the finest in clinical surgery and neurosurgery and have no regrets about reaching the retirement age of 65. We will be attending many of the future neurosurgical meetings to see our many friends, and of course talk about the good old days.



John J. and Catherine Lowrey



We are looking forward to the arrival in July of a new addition to our Neurology-Neurosurgery Section of the Straub Clinic, namely Dr. Raymond Taniguchi. Since Ray comes highly recommended from the Doctors Woodhall, Odum and Nashold; we are sure he can teach us a lot. I look forward to his coming particularly because my administrative duties this coming year will be excessive. I become President of the State Medical Association in May, and I am already serving on the Executive Committee of our two-year medical school, the RMP and a few other less time-consuming duties. Our two-year medical school is appealing to the legislature hoping to obtain funds to proceed into the third and fourth year. They seem to have a good press agent at the moment and we hope they will be successful.

There is little further to note in our activities. We built a house on the beach on the island of Hawaii last fall where we hope, in time, to be able to spend more time. One son is skiing at Denver University and one son, age 15, is home taking an engine apart in the garage while my car sits out in the rain. This seems like a very satisfactory hobby and hopefully my car can benefit from his expertise.

I hope to see you all in Mexico.



Ed Davis and his prizes.



George T. and Katy Tindall

Galveston has had an active recruiting year.

Dr. Gene H. Samuelson joined our staff as an assistant professor June 1, 1969, and Dr. Glenn A. Meyer joined us, also as an assistant professor, December 1, 1969. Both are doing very well.

Sam Snodgrass is now taking a 6-month academic leave of absence. He and Margaret will spend it in Boston, following which he will return at the end of October to continue his private practice in neurosurgery.

Eben Alexander is sending his chief resident down to spend a year with us, beginning July 1. We are looking forward to his arrival.

And on the personal side: In March, I had a pleasant 10-day cruise to the Caribbean with the Postgraduate Course in Trauma, sponsored by Tulane University School of Medicine. I was not worked too hard and had plenty of time to enjoy the many stops we made...I helped to arrange the AMA program for Neurosurgery again this year, and was very pleased to see that neurosurgery now has a section of its own in this organization...I'm looking forward to the annual meeting of the Congress in St. Louis this year, where, as I'm sure most of you realize, Barnes Woodhall will be the honored guest of the organization...And I'm also planning to attend the meeting of the American Academy of Neurological Surgeons in Mexico City in November.

George, Eben Alexander, Ernie Mack, and Frank Mayfield have all been active in the A.M.A. We can thank them for the newly formed section for neurosurgery.



Larry and Angeline Pool



It was a joy to see Francis Murphey looking in top form at the American Association meeting in Washington after his cholecystectomy. That meeting, and the preceding gathering of the Society of Neurological Surgeons in Boston were both thoroughly enjoyable and of great educational value. Many of us commented enthusiastically on the Boston policy of arranging in-depth hour long presentations on pertinent topics such as Catecholamines in the Nervous System and hope this idea may be expanded at the Cushing meeting even more than at present. Bill Sweet's presidential address in Boston moreover was magnificent.

No particular news here save that we are proud of our two Training Grant Fellows, Dr. Richard Fraser and Dr. Jost Michelsen and their fine work, some of which was presented at both of the above meetings. Our two senior Residents are also fine young men, Dr. Ervin Hanson and Dr. William Shucart. Each has personally performed close to 100 major operations so far this year. Dr. Ronald Brisman, our chief resident for next year is another beaver: an able young man who manages to write a good article every couple of months and yet do all his clinical work well. (He wrote the Special Article on Lower recently in the Journal of Neurosurgery)

Microsurgery continues to expand and intrigue all of us. I have finally sent off the completed page proofs, index, etc. to C. C. Thomas for the greatly expanded 2nd Edition of our book on Acoustic Neurinomas. Unfortunately it is already out-of-date, as so many books are by the time they finally go to press.

We continue to see a goodly share of aneurysms, craniopharyngiomas, etc. and quite a few weird tumors such as ameloblastomas, and bizarre gunshot wounds, the latter in keeping with the times.

Our three sons flourish: the eldest in a publishing firm; the second head of a school English department, and the youngest going into university teaching.

I have personally been bitten by the fishing bug thanks to two internationally famous coaches who you all know. My West Coast coach is Ernie Mack who took me steel-heading on the Dean River in British Columbia last summer, and my East Coast coach is Henry Heyl who then took me salmon fishing on the Mirimichi in New Brunswick. Their patience and tact with this neophyte deserve an Academy Award!

Looking forward to the Academy conclave in Mexico, with all best wishes from Angeline and me --

It is rumored that at a midnight conclave a picture was taken of Francis Murphey demonstrating his cholecystectomy scar a-la-Johnson. This picture will not appear in print simply because the editor of this journal doesn't want the honor of being ridden out of Memphis on a rail.



Barnes and Frances Woodhall

This has been an extremely successful year for me, and Frances and I are sitting on top of the world. I say this because I have been fired from my job as Chancellor pro tem, effective July 1, 1970. This cruel thing came from the fact that we have all been working desperately for the past year and have found a very good new President, former Governor Terry Sanford of North Carolina. You probably recall him because of his extensive writings on higher education.

Beyond that, Frances and I have a travel schedule of Mexico City, Camelback, Japan, Grand Cayman Island, and are looking for utopia.

Unfortunately, my friends out in the patient world heard about my early demise, and they have begun to flock back in larger numbers. This is encouraging and gratifying, but will certainly interfere with my travel plans.

Barnes will round out the year as Honored Guest of the Congress of Neurological Surgeons. -- Congratulations.



Donald F. and Ellie Coburn

Ellie and I have recently given up our house and joined the high-risers and at present are very comfortably situated on the top floor of an apartment which overlooks the Country Club Plaza. We are very happy with it, are practically settled now although miss a good many of the things that we had in our home which was considerably larger than the apartment. It certainly will be easier living and I hope that we will be able to get away with less difficulty, although being solo that is still a problem, as far as I am concerned.

Although I haven't made reservations, I am still hoping that we may see all of the Academy in Mexico City this fall. I have never been there and am looking forward very much to the opportunity to attend the meeting and see our many friends.

Shari is still in Los Angeles and her husband, Woody, is with a large corporation law firm as many of you know and they have three what we consider to be delightful children. Nancy, who is married, lives in San Antonio now and is with a new airline which recently opened and serves the southern part of Texas and I believe flies into Mexico. Susan is living in Wichita, was to be married in July but has changed her mind and decided she would wait a while. She is working at a radio station there which is owned by a man who would have been her father-in-law had she married the boy she planned to. It is all very complicated.

Please convey Ellie's and my best to all of the group and as I mentioned above we do hope to see all of you in November.



The President and his advisors.



James and Mary Greenwood, Jr.



It was great seeing everyone at the Academy dinner in New York at the International Congress. The previous week, I was privileged to moderate a panel at the Congress of Neurological Surgeons on Spinal Cord Tumors, with an illustrious group of panalists, including Larry Pool, Prof. M. G. Yasargil, Dick Schneider, Wally Hamby, and Joe Ransohoff.

The last of November, I was able to complete the chapter on Spinal Cord Tumors for Julian Youman's new text on neurosurgery, and this work, which covered eight months, allowed me to crystallize our thinking on the surgery of cord tumors. This, together with the work on two previous panels, made it possible for me to accept an invitation to give the Semmes Annual Lecture at the Southern Neurosurgical Society on Surgery of the Spinal Cord, with emphasis on progress, present status, and predictions. I was able to include some principles of AV malformations of the cord because of a somewhat terrifying case Paul Bucy was kind enough to send to me who had been operated upon at another clinic with transient complete quadriplegia which was apparently precipitated when the dura was opened. The patient was left with residual marked weakness of the intrinsic muscles of one hand and moderate in the other but little else in the way of neurological findings. He was bed-ridden because of frequent subarachnoid hemorrhages and discomfort.

Very excellent angiograms by Jorge Weibel showed the major vessels of supply coming from both posterior inferior cerebellar arteries, anterior spinal arteries, ascending cervical, thyrocervical and radicular branches, the bulk of the malformation lying chiefly on the left side of the cord at C2 and C3, being drained by one large dilated vein at C2-3 on the left side. Details of the case will appear in the Semmes Lecture if a suitable place can be found for publication; otherwise, the case report will be sent in separately.

Our son Jim, at age 33, is a candidate for Congress from the 7th Congressional District and in the primary came within 1% of winning without a run-off, so it looks as if he will have a good chance in the November election.

Mary and I send best wishes to everyone.

Jim has kindly consented to a publication of his lecture. His work with spinal cord tumors is remarkable.

SPINAL CORD SURGERY

PROGRESS AND PREDICTIONS

R. EUSTACE SEMMES LECTURE

James Greenwood, Jr., M.D.*
Houston, Texas

To follow Barnes Woodall and Paul Bucy in giving the Semmes Lecture and to try to substitute for Francis Murphey on short notice is an assignment which no man in his right mind would undertake unless he were either a supreme egotist or, because of deep affection for Eustace Semmes, would be willing to try to make a humble contribution in honor of a man whom all of us love very much.

My first contact with Dr. Semmes was in 1938 when I was a guest at the San Francisco meeting of the Society of Neurological Surgeons. Realizing that I did not know many people, on several occasions Dr. Semmes saw to it that I sat by him and made me feel comfortable and wanted. We have all had similar experiences with his unselfishness. I remember other great men in neurosurgery who were warm and kind, particularly to young men, such as Howard Naffziger, Howard Fleming, Percival Bailey, and Jason Mixter. There were others who at times exhibited pride and even a touch of arrogance when young, but who nevertheless were totally dedicated to their work and to service for their fellow man. Through their lives they have given help to those who asked and have been servants of those who needed them. I would include Alfred Adson, Winchell McK. Craig, Francis Grant (who did many things for me but always tried to keep me from knowing), Paul Bucy, Earl Walker, Jim Watts, Eben Alexander, Francis Murphey, Jim Poppen, and many others. In trying to direct my own life in neurosurgery, it was my objective to incorporate most of the good things in these men, invariably I found that it was Eustace Semmes whom I wanted most to be like.

My fervent wish was for the development of strong neurosurgery and neurology in Texas. My father a neuropsychiatrist, was a kind man and, like Dr. Semmes, helped many colleagues, both old and young. In 1935 there were no neurosurgeons in Houston, and as this area grew, I had some personal influence in encouraging or discouraging men who wished to practice in Houston. Good men and qualified neurosurgeons were encouraged, since I felt even at that time that a population of 50,000 could easily support a neurosurgeon, and this was somewhat opposed to an earlier concept of Walter Dandy who I understand told Ernest Sachs that there was no room in the United States for a third neurosurgeon, since with Cushing in Boston and Dandy in Baltimore, the field was crowded. Good competition only strengthens the field and improves the

*Given at the Southern Neurosurgical Society Annual Meeting, Durham, North Carolina, March 7, 1970

quality of work, and the future horizons for neurosurgical development will continue to increase the need for topnotch neurosurgeons. Nearly all who do good work are busy. Because of this attitude by all of us in Houston, the work has so increased that for the last ten years it has been impossible to get enough beds for work at the Methodist Hospital, and young men have been encouraged to develop service at other hospitals, so that with a fairly large number of neurosurgeons, our area has good neurosurgical coverage. Indeed, Houston for many years has had more neurosurgeons for its size than any other city in the world, with the one exception - Memphis, Tennessee - where Eustace Semmes and Francis Murphey were the first. They have done much for neurosurgery, not only nationally and internationally but in their own area as well, including the formation of The Southern Neurosurgical Society, which is the third largest in the world.

In the development of our subject for the annual Semmes Lecture, Spinal Cord Surgery (or perhaps it should be Spinal Canal Surgery), one should note the lines along which progress has been made, the present status, and include prediction in this particular branch of neurosurgery. The failure in certain areas of progress and antiquated methods should be reviewed and the needs and potentials for development in the future should be outlined. It is hoped that some of the younger neurosurgeons with vision can see the needs and potentials and develop new ideas, new principles and techniques which are needed. Older men with experience and often great wisdom have set patterns of thinking which limit their imagination and inventive processes. The term "older men" does not include the speaker who is 39, and holding !

In neurosurgical diagnosis, thorough knowledge of neuroanatomy and the careful neurological examination, preceded by an accurate history, are still of primary importance and will remain so. The neurosurgeon must be a first-class neurologist, as his accuracy is so frequently checked at the operating table. Myelography remains the most important diagnostic procedure, although its practice today must be considered antiquated, since there have been few changes since I saw in Boston in 1941 that Lipidol could be removed through an 18- or 16-gauge needle, and shortly thereafter the introduction of a better contrast material, pantopaque, which as far as I know is the same material we have used for over twenty-five years. A material which could be varied in opacity for different occasions might reveal a great deal more than our present contrast medium which often hides as much as it discloses and explores usually only the anterior half of the spinal canal, although this is increased to some extent by rocking the patient to one side or the other. The early reports on pantopaque, that any left in the spinal canal would eventually absorb, were exploded when skull films were taken. Myelography, when carefully used, is a good guide as to the type of lesion and the side on which to open the dura in certain tumors (a cross-table lateral view is indispensable). With a small AP diameter of the canal, with or without a transverse spondylitic bar, differentiation from an intramedullary tumor cannot always be made, and on occasion we have repeated the postoperative myelogram to confirm a normal cord diameter and relieve the surgeon and neuroradiologist.

Angiography of the spinal cord is becoming more important, particularly with the fairly recent development that something can be done about AV malformations in this region. Excellent cervical angiograms of the cord can be produced by simple vertebral or subclavian-vertebral angiography and selective intercostal angiography is coming into fairly frequent usage. Guidetti has removed six hemangioblastomas of the cord with bipolar coagulation forceps. With myelography alone, further progress along such lines is impossible. Direct angiography has been done on the operating table for AV malformations, and this may have application in the future, particularly when coupled with miniature blood flow indicators. Electromyography, used too much for medico-legal fanfare, is occasionally valuable in selected cases, particularly in cervical spondylosis with cord compression in differentiating it from amyotrophic lateral sclerosis, the presence of fibrillations in the lower extremities, making it obvious that the disease is not limited to the cervical cord. The occasional occurrence of both diseases in the same patient indicated the possibility of a common mesodermal origin.

Improvements in anesthesia, while adding greatly to the reduction of mortality, have I fear added much to the morbidity of surgery and the patient is often more ill from toxic effects of preoperative drugs and the anesthetic agent than from the neurosurgical procedure. Patchy atelectasis and expensive intermittent positive pressure breathing add to the illness and expense to the patient and one needs only to revert to Dr. Semmes' advice and do more cases under local anesthesia to note the difference. To remove a 70-gram left frontal meningioma in a 300-pound patient over a two-and-a-half-hour period and have the patient feel well and speak perfectly the first day after surgery would be impossible under heavy preoperative sedation and diabolical halothane anesthesia.

Recent advances in surgical technique are numerous and a look into the future is fascinating. Bipolar coagulation with incorporated suction, introduced thirty years ago, is now recognized as essential for any delicate cord or brain surgery. The development of microsurgery has opened new horizons, and the new instruments for this work are ingenious. The work by Donaghy (the Vermont group), Jannetta, and Rand; Pool, and others, is significant. One could predict that the expensive surgical microscope may be replaced for most work by good optic loupes which will provide a good field of vision and magnification of six to ten times for most of this work, and the microscope itself will be used only for brief moments to get a closer look. Adjuncts are needed to reduce the excursion of the tips of instruments and steady their position in direct proportion to the magnification used. A fulcrum or resting ridge should help. Cryosurgery, hypothermia, really introduced by Temple Fay in 1943, and the use of local cooling to aid in surgery, or as a therapeutic agent in the treatment of certain levels of cord injury as possibly spasticity, may have some useful effect, difficult to predict at this time.

With progress in the control of malignancy, the status of surgery for metastatic carcinoma to the spinal canal is changing (Bucy). The rapid advance

of symptoms in these cases makes immediate diagnosis imperative and surgery an emergency if anything is to be accomplished. The use of Mannitol should probably be restricted to the preoperative period to gain an extra hour or two for accurate diagnosis and to diminish damage while the operating room is being prepared. Hexamethazone may often be dramatic, as it is intracranial lesions, both before and after surgery.

Decompression of tumors which cannot be removed completely or where recurrence is likely is still an effective means of giving a period of relief, but the standard operation, leaving the dura open, preferably without opening the arachnoid where possible, needs a thorough review as to its effectiveness. The overgrowth of scar posteriorly often does not allow sufficient room for expansion of a slow-growing astrocytoma which might go for years without disturbing spinal cord function if a large canal filled with spinal fluid could be provided. The use of dural substitutes, together with metallic hoops, mesh, or a plastic roof, might allow many years of relief in benign tumors which cannot be removed, and a longer period of relief in the more rapidly growing recurrent tumors.

In cervical spondylosis with myelopathy the ability to demonstrate in many cases that spinal cord compression comes as much or more from the irritated and thickened dura as from bone, we have only occasionally found it necessary to resort to cervical interbody fusion, which is usually done only for continued neck pain after removal of a cervical disc protrusion or spur, or in traumatic vertebral body destruction. Careful removal of the spurs anterior to the dura, using Mayfield and Lempert curettes, had been carefully done for some years for both root and cord involvement. For cervical myelopathy alone, this is now rarely necessary if a proper plastic operation is done upon the dura, using transverse cuts, extending out to the nerve root sleeves, which result in considerable separation and relaxation of the dura. When the dural segments are then sutured in the midline, the spinal dural tube resumes a circular instead of a flattened shape, with the arachnoid bridging the gaps and largely preventing cerebrospinal fluid leakage and acting as a bridge for regeneration of dura. At intervals, stitches closing the sections of dura may be left untied and then looped around the muscle sutures to reduce the space between dura and muscle to limit the formation of postoperative hematoma, in the hope that there will be less scar tissue contraction. Opening the dura in the midline and demonstrating that the spinal cord lies flush against the dura, or very near it, is good evidence that the dura is a major factor. Even in cases of reduced anteroposterior diameter of the bony canal, it can be shown in some cases at least that if the dura is opened between the unremoved lamina that the dura is the major factor in cord compression and not the narrowed bony canal which does not restrict the dura. Bony compression is the major factor in others.

We have learned in both cervical and lumbar degenerative disc disease that disc rupture, spur formation, bony overgrowth, and spondylosis are probably one condition, or at least closely related disorders. Removal of a ruptured disc is not necessarily followed by relief of symptomatology if the emerging root is sharply angled over a spur to which it is adherent, and any residual motion

continues to irritate the nerve. Removal of spur or bony prominence anterior to the nerve root so that it takes a normal course is imperative and bone wax at least impedes bone regeneration in the area. Adequate posterior foraminotomy, while necessary, is not sufficient to relieve these patients. We have also demonstrated that compression of nerve roots can take place under an intact fusion or under a pseudoarthrosis from bony overgrowth, and following minimal trauma, the nerve root may be trapped and swell as a bruised finger will swell under a tight ring. Relief by adequate bony decompression may be exceedingly dramatic in the patients who have a solid fusion, since there is no motion of bone around the nerve and they can usually be up and about immediately and leave the hospital in a few days. Even in patients with pseudoarthrosis, adequate removal of bone and of course any ruptured disc material if present will often produce a satisfactory result. The use of fat grafts, placed around nerve roots after disc removal, has been effective in preventing the formation of postoperative adhesions, and in isolating the nerve root from the inevitable postoperative hematoma. Tough fat just under the skin is rarely suitable, but the delicate fat, filling spaces between muscle or the patient's own epidural fat, if available, is ideal for this purpose.

The removal of bone, particularly in cases of severe lumbar spondylosis, is greatly facilitated by use of the pneumatic drill, supplemented by small tipped curettes around the nerve roots.

Occasionally intractable nerve root pain continues and we sometimes do an intra-arachnoid section of the posterior nerve root or rarely a unilateral cordotomy. Fusion is rarely done primarily unless there is gross instability of the back, but a stabilization procedure is seriously considered if there is persistent or recurrent difficulty at a single level.

Our original feeling about vitamin C is unchanged but because of considerable national and some international publicity following a simple, preliminary report given at the 60th Birthday Celebration for Jim Watts, a second paper, although revised many times, has not been submitted for publication, since medical opinions varied from acclaim to irresponsible enthusiasm. There is strong evidence that vitamin C in large doses is essential at least in some individuals in the preservation of integrity of all ligaments, discs, and cartilaginous materials and to some significant degree will prevent the rupture of an intervertebral disc and prevent recurrence after surgery. We are occasionally seeing cases for surgery who have been on vitamin C in large doses of 750 to 1,000 mg. a day, and the disc rupture in these cases usually is a hard, leathery cartilage protrusion which probably represents healing after rupture, too late to completely relieve nerve entrapment. When prehistoric man foraged for food, it is probable that he had an intake of at least 500 to 750 mg. of vitamin C a day, but with the advent of weapons and the eating of delectable meats without vitamin C (only kidney, liver, and the adrenal glands are high in vitamin C), fire and cooking, and the advent of agriculture, his intake was reduced. He still did not die of scurvy until he ran out of fruits and fresh vegetables and he had considerably more time to spend on the development of civilization, education, astronomy, mathematics, literature, politics, war, and the pursuit of pleasure.

The relief of pain by destructive operations upon the spinal cord and nerve roots is still an incomplete chapter in surgery of the spinal cord. The new functioning pathways for pain which appear two to three years after unilateral or bilateral cordotomy are not completely understood, but some of the phenomena, if carefully studied, may give much insight into how the nervous system functions. The human mind, including that of the neurosurgeon, is not as reasoning as we are led to believe and a person thinks chiefly in the light of previous experiences and previous thought processes. When something new which he does not understand is encountered and observed, he finds it difficult to accept if he cannot explain it with what he already knows, and irritated by his perplexity, he ignores or pushes it into this subconscious mind where it may emerge from time to time to trouble him. A neurosurgeon who will not face the facts is inclined simply to make the diagnosis of psychoneurosis (which should have been made much earlier in the case) and thus satisfactorily closes his mind and any likelihood of useful thinking in the future.

I continue recalling a case of intercostal neuralgia in a young woman which, it was thought, followed a localized myelitis or radiculitis. Twenty-five years ago when I had somewhat more energy than now, I resected at two procedures a total of twelve posterior roots in the thoracic region to take care of overlap and she was relieved perfectly for approximately two years. When the pain returned, a unilateral cordotomy was done and she has had no pain to this day, but three years after the second operation, she began to have an occasional grand mal seizure which is now controlled most of the time with the usual anticonvulsive medication. Are the seizures in this case due to a mechanism suggested by recent work on the isolated cortex which is cut off from its afferent impulses?

The second case returns to my consciousness from time to time of a young man with phantom leg pain following a mid-thigh amputation. Relief by cordotomy was complete for something over two years, but gradually returned. In the meantime, narcotic addiction had been totally overcome, using the method suggested by the speaker in a paper presented before this Society at the time he was your President. Because of a similar case of Dean Echols who had obtained relief by cortical resection of the posterior central gyrus, resection was carried out on this man under local anesthesia. Stimulation of the leg center produced extreme discomfort and pain and the positional cramping pain of the typical phantom limb. Resection of the posterior central gyrus in the sensitive area was followed by complete relief again for two to three years. I think it is important to stress that no such sensitivity was elicited on stimulation of any other portion of the sensory cortex. When his pain returned, he was again explored under local anesthesia and the area of resection, approximately $1\frac{1}{2} \times 1\frac{1}{2}$ cm. had healed nicely but the surrounding cortex posteriorly for a distance of at least 1 to $1\frac{1}{2}$ cm. and much larger than the original area was now exquisitely sensitive to electrical stimulation, and resection of this area, while not producing complete stoppage of pain, was reasonably satisfactory for another two to three years, following which he had some additional pain which from time to time was very disabling; but he nevertheless continued to work in a fairly high executive capacity. With proper study and imagination, these two cases alone might furnish the answer

to a better method of controlling pain. It is ironical that the neurosurgeon cannot always separate from the nervous system a painful area so that the patient, as long as he lives, can never again have the type of pain from which he suffers.

There is a third case not involving the spinal cord but of rightsided head pain in a man who had no fear of surgery and was determined to get results. After six surgical procedures, each producing some relief over a period of four years, he remained pain-free seven or eight years until his death by coronary accident. Before his death, he requested that the family report to me if anything happened to him, that he had had no more pain.

In spite of the monumental work by White and Sweet, and much investigative work by Schwartz and others, the neurosurgical relief of pain in many cases, while being reasonably satisfactory for short-term conditions, such as malignancy, remains only partially effective if the patient is to survive a significant number of years.

In a report on progress of spinal cord surgery, one should include the status of removal of tumors from the spinal canal, one of my particular hobbies, and I would like to take the liberty of quoting from the text of a chapter which Julian Youmans was kind enough to ask me to write for his new book on Neurosurgery. "Curable tumors should include nearly all ependymomas, an occasional astrocytoma, a cure or its equivalent in a good percentage of intramedullary epidermoids, teratomas, and dermoids, intramedullary hemangioblastomas, extramedullary neurinomas, meningiomas, and years of relief or cure in osteochondromas, giant cell sarcomas, and extradural epidermoids and dermoids, since in this last group regrowth of a remnant may not produce symptoms during the normal life expectance of the patient. Intramedullary lipomas are rarely curable. Although there is now good evidence that recurrence rarely if ever occurs after complete removal of an intramedullary ependymoma, the growth of these tumors is so slow that at least ten years is needed to give assurance that cure is permanent. Prognosis after subtotal and partial removal of gliomas followed by decompression and radiation is often good for a number of years..... More effective decompression in the future which maintains a large intradural cavity and allows room for slow growth of these tumors may extend this period."

Arteriovenous malformations of the cord, which is still a perplexing but no longer unsolvable problem, should be the most fascinating chapter in progress in surgery of the spinal cord during the next four years. Excellent angiography, microsurgery, and the proper use of bipolar coagulation should make most of them curable by surgery. The greatest need at the moment is understanding of the hemodynamic principles involved, and with investigators of strong interest and intense energies, such as Krayenbuhl, Yasargil, and many others. The answers must be close at hand.

In AV malformations of the brain, we learned early to seek out several large feeding arteries, doing nothing to the large thin-walled draining veins until they changed color from bright red to a darker hue. The malformation could then be completely removed with bipolar forceps with no fear or difficulty (clips were used only for extremely large arteries or for markers). In the silent areas of the brain, the entire lesion with the adjacent brain was removed without significant loss of blood. There is a difference however in the spinal cord where a small amount of nervous tissue is vital to function and practically none can be spared. An important principle not yet solved is with regard to the position of the spinal cord in relation to the shunt or multiple shunts where the reasonably strong arterial vessels flow into thin-walled dilated veins. For the moment I believe that the spinal cord to be functioning must be on the arterial side and it seems unlikely that the functioning cord itself could participate to any extent in the venous drainage of an externally placed AV shunt. It is also difficult to believe that anything but an extremely small AV malformation within the spinal cord (not likely to be shown by angiography) could be present without so interfering with the circulation that function would not be possible. Let us suppose for the moment that the usual problem with which we are confronted is one in which the AV malformation is separate from the spinal cord and picks up some of its arterial supply from vessels arising within the cord which have become enlarged because of the rapid flow and that these arteries leave the cord to supply at least part of the arterial inflow to the shunt. Vessels entering the spinal cord have to compensate for this loss in the AV malformation and have also become enlarged, and if any of these entering arteries are sectioned, it will result in a "steal" of the blood supply of the cord by the shunt. Also if vessels other than the cord vessels are cut which feed the malformation directly, then the supply coming from the cord will flow faster into the malformation, thus causing reduced circulation of the cord in a similar steal. If vessels leaving the cord to the AV malformation are first coagulated and cut, there should be little if any damage other than increased circulation to the cord. In a case to be presented, it was felt that the order of coagulation and section might be of considerable importance. These possibilities indicate the indispensibility of good angiography, the need for a miniature or microflow meter which can give the direction of blood flow in relatively small vessels and the possible consideration of direct angiography into arteries of the malformation at the time of operative exposure.

Before reporting the following case which illustrates some of the principles involved, I would like to express again, as I have in the past, my belief in a Divine Power, available to all of us at times of great need if we are humble enough to acknowledge our inadequacy and ask for help. This belief is basically the same as the imperfect and faltering religions of this age.

P. G., a 20-year-old, white male, was admitted to the Methodist Hospital in December of 1969. Previous history indicated that for the last six years he had had a tendency for attacks of visual disturbance or partial "blacking out" in one eye and his first serious blurring of vision and headache had occurred with difficulty in walking in January of 1968. During the ensuing 23 months, he had

had six or seven serious attacks, at least four of them being verified as subarachnoid hemorrhage by spinal puncture which nearly always increased the severity of the pain and nuchal rigidity. Carotid angiography was negative, but a myelogram suggested some abnormality in the upper cervical cord. Vertebral angiography at a second clinic indicated a definite AV malformation at the C2 and C3 levels of the spinal cord. In June of 1968, this lesion was explored with the patient under local anesthesia, in the upright position, and on opening the dura, he became temporarily quadriplegic and the procedure was interrupted with nothing being done except a simple decompression with dural substitute put in place. He recovered completely except for atrophy of the intrinsic muscles of the hands and weakness of grip which was quite severe in the left hand and much less marked on the right. At the time of our initial examination, the interossei were nearly gone, as were the lumbricales in the left hand, but both were fairly normal on the right. It was felt that the residual neurological picture was the result of arterial steal from the lower level following decompression in the upright position under local anesthesia. The patient felt that any activity had produced small hemorrhages in the past and that he would be certain of having one with any severe muscle activity, such as trotting around the block. During his work-up, he felt that he had another hemorrhage but spinal puncture was negative. In the light of findings at surgery, it is probable that he was correct, since there was evidence of multiple hemorrhages having occurred in a localized area in the subdural space at the level of the malformation. Serial subclavian-vertebral arteriograms were carried out by Dr. Jorge Weibel and these were carefully studied. It was obvious that the major body of the AV malformation lay on the left side of the cervical cord at the C2 and C3 levels, lying both ventral and dorsal to the cord but predominantly on the left side where the majority of enlarged abnormal draining veins were located, one being 6 mm. in diameter, leaving from the bony spinal canal at the level of the left C2-3 intervertebral foramen and interlaminar space. The malformation was supplied by descending branches from both right and left posterior inferior cerebellar arteries, the anterior spinal artery complex, radicular spinal branches from the vertebral artery, the largest of which entered the spinal canal from the right and exited through the C2-3 intervertebral foramina. Smaller arterial contributions were provided by the appropriate radicular branches of the ascending cervical arteries of the right and left thyrocervical trunk. There was a 6 mm. in diameter saccular aneurysm, either arterial or venous, which lay at the left lateral aspect of the posterior portion of the bony spinal canal at the expected position of the resected segment of the left lamina of C2.

After several days of careful study, meditation, and prayer, it became obvious that this lesion, although formidable, was probably amenable to surgical attack. The previous cord damage at the C8 and T1 segments, unquestionably from steal, indicated the need for careful study of the order in which the feeding vessels would be coagulated and sectioned. Eight days after admission, the previous laminectomy was explored under general anesthesia with the patient prone. The subdural membrane was opened under the dural substitute and this was followed immediately by a fairly smooth flow of fresh blood coming from several areas and the small vessels, leaking, were coagulated

with the bipolar suction forceps. The branch coming down from above on the left side, presumably from the posterior inferior cerebellar artery leading into the aneurysm, was occluded with a silver clip, chiefly for marking purposes later, and the small aneurysm was then removed. Two or three vessels coming from the cord on the left side entering the malformation were then carefully coagulated and sectioned. Further separation of the cord from the malformation, which in its caudal part at first appearance seemed to be a tumor because of the mass of vessels surrounded by localized hemorrhage, was then carried out, but preceding this, the dark mass was first tapped with a 25-gauge needle to be sure it did not represent one large saccular malformation. Further separation of the cord from the malformation soon disclosed a much larger aneurysm at the junction of C2-3 with the appearance of a small grape, obviously containing clot and approximately 10 to 12 mm. in diameter which produced a very marked indentation in the left side of the cord. Additional vessels from above and below were then coagulated and sectioned, and by this time it was obvious that there was no longer any pressure in the malformation and the remainder could easily be removed, including the large draining vein, 6 mm. in diameter, leaving the canal between C2 and C3. There was no significant blood loss.

Following surgery there was no regression in his neurological picture and except for some anxiety and neck pain, his course was satisfactory. He was discharged to return home on the twenty-third postoperative day. Postoperative angiogram showed excellent evidence that the aneurysm had been removed. He was asked to write letters once a week for a while and his communication on February 8 brought one of the largest rewards I have received in neurosurgery. It reads as follows: "I thought it would be nice to write a letter on my birthday (21) and that is why I held off for a couple of days. To tell the truth, I didn't think I would see the day. There was a time when the family and I had little hope of leading a normal life or none at all. Of course, no one said anything to each other but we all knew. But we finally eliminated the problem; that "we" is a lot of people! Today I drove the car a couple of miles. And, I can walk as far as I want. My girl friend came over a few days ago and drove me to her girls' dormitory which I enjoyed immensely!"

SUMMARY

To recapitulate: I have attempted to review spinal cord and spinal canal surgery, its progress and present status, and future developments.

1. The antiquity of our present myelographic methods are pointed out with particular reference to the need for new materials to be injected for better resolution of spinal canal abnormalities.

2. The present status of angiography of the spinal canal is discussed, including selective intercostal angiography.

3. Improvements in surgical technique are listed, including increased use of bipolar coagulation, microsurgery, cryosurgery, hypothermia, and the pneumatic drill.

4. The increasing importance of surgery for malignant cord tumors is pointed out in view of better methods of control of cancer.

5. The importance of emergency surgery in rapid spinal cord compression is emphasized, together with the use of Mannitol to gain time for diagnostic procedures and the use of Hexamethazone to reduce swelling.

6. The need is noted for a better decompression operation with particular reference to slow-growing spinal cord tumors which cannot be removed, such as some astrocytomas.

7. The present status of surgery of cervical spondylosis with myelopathy is discussed with reference to a plastic dural procedure and the posterior approach versus anterior interbody fusion.

8. Improvements of technique in the surgery of disc, spur, and bony overgrowth (spondylosis) are outlined. The use of fat grafts to prevent formation of adhesions and the removal of cartilage and relief of nerve root compression under an intact fusion is noted and the status of vitamin C in preservation of disc integrity is mentioned.

9. The problem of the relief of intractable pain by destructive procedures is reviewed.

10. The present status of intramedullary tumor removal is reviewed with particular note that hemangioblastomas of the cord should be added to the list of totally removable tumors.

11. The preliminary outline of principles for resection of AV malformations of the spinal cord is proposed and a report of a specific case of removal of a cervical malformation is given in detail.

It would be well to point out that the nervous system is the person. Long after the minor problems of the human body hold little mystery, including nutrition and oxygen distribution, garbage disposal, and other plumbing, the complexities of the brain, cord, and their connections will be a beckoning field of unlimited potential for the investigator in his search to help mankind.

Careful analysis of known and new facts by good minds who accept their limitations and refuse to ignore that they see every day can result in new knowledge and its useful application.

I feel greatly honored to be allowed to participate in this tribute to Eustace Semmes. What he has done for all of us will continue to have its effect on neurosurgery for many years to come.

"Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time."



Arteriovenous malformation C2 and C3

Preoperative and postoperative vertebral angiograms showing principles thought to be involved in sequential coagulation and section of vessels in removal of an AV malformation of the cord to prevent "steal" (see text) or rupture during the course of removal.

Most of the malformation in this case lies to the left. Ligation of dilated venous channels would result in rupture and difficult hemorrhage; coagulation of all direct feeders to the AV malformation before interrupting feeders from the cord (left side) to the malformation would result in "steal" from the cord and possible damage. There was no significant blood loss in removal. (See case report in text.)



John and Virginia Tytus



The highlight of last year was a trip that Gina and I took to England in July, 1969. Flying to England produces an abrupt change in ones time schedule and, somehow, we lost an entire day, more importantly, a night's sleep. We arrived in England one morning somewhat dazed to pick up a rented car about the size of a motor scooter. It is one thing to be forced to drive on the wrong side of the road and shift gears (which we haven't done for a long time) with the left hand when one is at one's best. In our condition the experience was positively frightening. Somehow, however, we got to the Henley where we spent four delightful days. The Henley Regatta is indeed a show piece where many of England's grandest support their old school tie and their colors (colours) and drink champagne to the music of a military band festooned in richly embroidered military costumes. There were numerous grandstands along the course but by far the most popular places were tents set up as bars facing away from the course towards the military band. I gather that the sociability of the occasion far outweighs the rowing in the minds of most. Our son, Bill, got a creditable second place in the Diamond Skulls which pleased us all very much.

We stayed at the Compleat Angler Hotel in Marlowe. This is a lovely country hotel along the Thames, a very picturesque place with good food. Outside of the usual difficulties with "those strange Americans and their ice" the service was good.

We spent three days with Mr. Pennybacker and John Potter in Oxford and found many changes in the Nuffield I Neurosurgical Unit. Mr. Pennybacker, however, was unchanged and remains the superior surgeon and astute clinician he always was.

We also spent three wonderful days with the Antony Jeffersons in Sheffield. Antony is associated with an extremely busy neurosurgical unit. He seems to have encountered a sizable number of patients with herniated thoracic discs. He has developed a lateral approach to these lesions and apparently obviates the rather marked morbidity that usually accompanies their removal.

In closing let me say again how delightful Gina and I thought the dinner in New York was. Doctor and Mrs. Echlin did a magnificent job with the arrangements of that lovely dinner party.

John's son can certainly be proud of his placing in the Diamond Skulls. Some of you may recall that the father of Grace Kelly (now her Serene Highness Princess Grace) was excluded from the Henley Regatta because he once worked with his hands.



Joseph P. and Hermene Evans



I find it difficult to give a personal account in what is my final year with the University because time has been so broken by travel. I suspect that the abolition of all jet transportation in our universities would increase academic efficiency no less that 50%.

At the end of May there was a quick trip to my fortieth reunion which, because of the Cushing Centenary, was a special year for many of us. Bob McLaurin gave a beautifully written paper commemorating the event and Francis Moore spoke also as Cushing successor in the Moseley Chair. In mid-June I participated in the very interesting meeting of the Montana Division of the American Association of General Practitioners, my only regret being that I missed, because of a conflict, the meeting of the Canadian Congress of the Neurological Sciences in Montreal.

In september there was a brief visit to Boston to look into matters relating to international education and then, of course, there was the International Congress with that delightful meeting at the St. Regis Roof. I returned to Chicago long enough to pick up Hermene and set off for Mexico City for the First Mexican Congress of Neurological Surgery. It was a good meeting and we were entertained with characteristic Latin hospitality. In mid-October we went out to Honolulu for the Pan-Pacific Surgical meeting which was my first experience with that group. They are not only very hospitable hosts but are very experienced in handling this instructive general meeting.

Thereafter we stayed at home for a bit, but early in January Hermene and I left for Africa on a trip for the Adlai Stevenson Institute of International Affairs. There were several purposes, but one of the principal ones was to make contact with the university officials in the central African countries, seeking their cooperation in a "Pre-Pugwash Conference" to be held in Accra, Ghana in July. This preliminary conference is designed to focus the needs of the developing countries so that those needs may be brought to the attention of the main Pugwash Conference which will hold its annual meeting in the Chicago area in September. In the midst of the trip we spent a week in Nigeria - at the University of Ibadan and also at Lagos, just at the end of the Nigerian war. There was a meeting of the Pan-African Congress of the Neurological Sciences which was a very worthwhile and instructive experience. There were many other neurological-neurosurgical contacts along the way, including interesting visits in Cairo and Alexandria in which cities neurological surgery has come to full growth in the course of two decades. I was happy to be made an Honorary Member of the Egyptian Society of Neurological Surgery. This trip wound up with a week in Geneva for WHO contacts and a time of summation. This also made possible a good visit with our oldest daughter, Mary, and her family who reside there.

Shortly after our return to this country in mid-February there was the very interesting Program Directors Workshop in Washington. Then at the end of March I left for the International Symposium on Head Injury which was set up in both Edinburg and Madrid, from which Symposium I learned a good deal, particularly with reference to the organization of head injury services. I returned from Madrid to Boston to attend the Society of Neurological Surgeons meeting where Hermene joined me for the annual dinner at which Wilder Penfield was honored. Though I was in Washington at the time of the Cushing meeting, I saw little of neurosurgical friends there because there was a conflict with the Neurology B Study Section meeting, my final session with that group.

I was back in Washington for two days in May, traveling with two other faculty members and two of our first year students. This trip was made following a faculty meeting, after which in 12 hours 179 of the 300 medical faculty members requested that a group go to explore with our legislators their reaction to the Cambodian campaign. This proved to be a very interesting experience and taught me something of what a tough job our Senators and Congressmen face. There have been interesting academic repercussions for some feel such action involves universities in political affairs. I believe it important to recognize such action represents individual and not official academic involvement. If it seems unduly persuasive I believe that's because of the breadth and depth of conviction among so many of us.

Ed Schlesinger had sometime back been kind enough to ask me to give the Elsberg Memorial Lecture and that took me to New York for their meeting on the 19th of May. It was a very nice group to talk to. I saw many old friends and made some new ones.

From what I have said above it would appear that I have been of progressively less use to the neurosurgical unit and I'm afraid that is true. At the end of April my stewardship for the Head Injury Center for which Sean had taken progressively greater responsibility terminated, as had earlier my responsibility for the clinical unit itself.

One would think that being freed of such clinical responsibilities would make life simpler but other responsibilities have a way of cropping up and demanding time.

David Rossin has been delayed in the preparation of the book that has evolved from the FMG studies and getting that to press will involve a good deal of work in the next few months. The meetings for the Foundation for International Education and Neurological Surgery have proven very helpful in giving a perspective to the Stevenson study. The experience of serving a day or two for many years past as an Associate Examiner on the Board examinations held here has continued to be an interesting experience, even though at times a bit depressing. I suppose it is inevitable that the great increase in candidates means some leveling off in the quality of some of them. By the same token the increased number of training centers may have importance in the total experience.

As one gets on, civic responsibilities increase. The Institute of Medicine of Chicago has become increasingly concerned with the delivery of medical care and serving on its Board has demanded some expenditure of time. I would like to think that the influence of the Institute has helped somewhat in resolving the very involved Cook County Hospital situation. Hopefully, that extremely important unit is now to be rid of the ordinary run of political control. One can only hope that the Governing Commission can keep politics out of what is in fact an extremely complicated and difficult administrative set up.

The association with the Adlai Stevenson Institute has continued to be a fascinating experience. SDS has been a real thorn for the organization this year with Robie House, The Frank Lloyd Wright Memorial that is the home of the Institute, being broken into twice during the month of May with considerable destruction. The Institute has been the object of one of the most anti-intellectual campaigns that could be dreamt up, for in my judgment, nowhere on the campus could a group of scholars be found more dedicated to the study of social problems. After the second raid some of the more perceptive students entered the building in the middle of the night in the effort to undo what they could of the damage that had been done. It is difficult to undo with reason and calm the damage produced by an axe.

I am happy to report that all members of the family are well, with the exception of Hermene's mother who is now nearly ninety. We have been able to have her continue to live with us and though she is no longer very cognizant of what goes on about her is, fortunately, very happy and content. Hermene was able to join me during my travels due to the fact that our youngest daughter, Willi, returned from a year's assignment in Bogota where she was working with an educational group involved with students from North Central colleges

studying in Colombia. She will be leaving for Calgary, Alberta in another month, following the old adage to go west. Ed and Nick continue in their old jobs, with Ed now assigned to Washington and Nick due to return with his family from Okinawa in September. Anne continues to live in Hartford where her husband is in Public Health work with the State of Connecticut. John, a captain in the Medical Service Corps, stationed at Fort Sill, is entering the final month of his service and at the moment of this writing, June, is in Chicago on TDY with his wife and their newly arrived infant daughter, so at the moment there are four generations under this roof. Tom will be finishing Dartmouth shortly and is marrying in mid-August a girl from Worcester who has just graduated from Smith. He is to be teaching French at Williston Academy. His draft board number might be called before the end of December but this seems rather unlikely.

The post-retirement plans that Hermene and I will follow remain uncertain in view of the precarious state of her mother's health. Probably we shall keep a base here but spend a fair proportion of our time in Colombia where Caroline and her family have resided now for nearly fifteen years. Medellin is a beautiful city with a lovely climate. I should like to be of some help in international medical education and perhaps there may be some role to play in this regard, there being some potential developments in the offing.

Since 1925, when I entered medical school I have had an almost constant association with neurologists and neurosurgeons and others in the areas of the neurosciences. It has been a wonderfully happy time for me. Certainly one of the richest experiences has been the continuing association with the members-and their wives, of course-of the American Academy of Neurological Surgery. I have every confidence that the Academy's influence will continue to be one of the significant features of neurological surgery in this country.

Perhaps some of the members of the Academy who are considering retirement could form an association whose members would be available to serve as visiting professors in less developed countries. Certainly there is a need for this type of assistance.



Luncheon in New York.



C. Hunter and Elizabeth Shelden



I have had an interesting Winter and Spring highlighted by a six week's tour of Japan, Hong Kong, Guam, and Vietnam. The Surgeon General of the Navy, Admiral Davis, asked me if I would conduct a survey of the naval medical facilities in the western Pacific area with particular reference to the management of penetrating intracranial injuries.

After leaving Betty in Hong Kong, I proceeded to Saigon then north to DaNang. With this as a base, I visited all the major medical installations from Chu Lai north to the DMZ, including the hospital ship, REPOSE, which was cruising along the coast just south of the DMZ. I was very much impressed with the excellent caliber of the work being done at all the Navy and Army hospitals, especially by the nurses and corpsmen who really make the difference. Their dedication, morale, and training save many lives; in fact, we could use a great deal of this in our civilian hospitals. Everyone is familiar with the life-saving role of the helicopter pilots and I hope that some of these lessons can be utilized at home, especially in the transportation of persons injured on our freeways. All in all, I would say that if one had to be shot, his chance of survival would be better if shot in the rough terrain of Vietnam than on one of the busy streets of most cities in this country.

As many of you know, Bob Pudenz has taken over as the Director of our Neurological Research and Head of the Institute of Applied Medical Research. As usual, he is doing a fine job and we are delighted with the arrangement which allows us to become very much involved in medical electronics, with particular interest in the management of pain, facial hemispasm and, more recently, in problems of vision. The Trustees have embarked on a building program which will double our space available for research with an equal increase in the space for animals.

Betty and I are going through the age-old situation which many of you have already experienced.....when the house gradually seems larger and larger as the family becomes smaller. Anyhow, our boys are all away and we seem to have much more room than we need. They have all graduated in business, with no one more interested in medicine. Jay and Jim have completed their service obligation with the Marines and are living in the Bay area. Geoffrey, the youngest, is now in the Navy, flying jet fighters.



Henry L. and Kit Heyl



By now you will have received a couple of issues of the Journal with its new look inside and out. Since many of these changes are matters of taste, which is a highly personal judgment, we expect some pretty vivid reactions both pro and con. The decisions were not reached lightly, but discussed in some detail by your colleagues on the Editorial Board. We certainly hope that most of you will be pleased.

Although by and large I am very happy in this job of Editor, there are occasional moments when I long for a straight forward operative crisis like a brisk hemorrhage deep in some chiasmatic cavern, instead of the drab humiliation involved in discovering that four of the total of six or seven errors called to our attention in the past year were in one paper. The refreshing type of clinical experience that is routine for many of you still occasionally comes my way. My most recent involved answering a long distance phone call that had found its way across several oceans and ultimately connected me with a neurosurgeon in Thailand who wanted my opinion as a telephone consultant because of a report published by Eldon Foltz and myself back in 1953. We had reported a case of radiation necrosis of the frontal lobe mimicking a tumor; after pathological identification of its true nature we removed the necrotic mass, and the patient experienced considerable benefit.

I am now publishing some of my work on pituitary-adrenal relationships in salmon. The first such paper was in the February 1970 issue of General and Comparative Endocrinology- the definitive international zoological journal. I did not identify myself to the editors except as an unknown professor of anatomy at Dartmouth. I went the whole route of review, frank criticism, revision and ultimate acceptance, and learned a great deal about the other side of the editorial coin.

Kit and I look forward to enjoying Mexico City with all of you.

Juan Cardenas y C.

I am happy to send you a few lines regarding my "hobbies" other than Neurosurgery.

I have a garden with about three hundred plants of roses which I enjoy cultivating myself. I have read several books on roses and I believe that taking care of them is a way of creating beauty and in which your soul and thoughts participate in this aspect of nature. I am married with two sons and two daughters. The oldest boy is happily married to an American girl from Oklahoma, he is a Ph.D. in Agronomy and works for the U.S.A. Government in Bogota, Colombia, His wife, a Ph.D. in Bio-Chemistry. My son has his United States citizenship and is working in a program of technical aid to Colombia. They have three children; Juan Miguel, Linda, and Joseph Edward.

Our second daughter, Lolita, attends Long Beach University in California and is studying for her Masters in English Literature.

Beti, our third child, is 22; a tri-lingual secretary and works at The Aristos Hotel.

Our youngest son, Alejandro, will graduate this coming week and then continue his studies at Whittier College, California.

Aside from the problems of Neurosurgery, we have too many letters to write to keep up with the children. My wife keeps house, enjoys swimming, and is learning French.

I enjoy languages and besides English and French, I am beginning "Deutsch". History interest me because as Toynbee, the great British Historian said, "This is the only way to understand the present, and to have an idea of what the future holds."

My team is composed of Sam Resnikoff, Javier Verdura and Alejandro De Avila (Anesthetist).

From the first time, when my wife and I are "choked" with the "smog" of the city, we go to the Pacific Paradise Acapulco and relax.

About 25% of our work are charity cases. We find it very much gratifying to help these people who cannot afford to go to the United States for medical treatment, as many others do.



The President and guests at the St. Regis Hotel.





Are they planning another
Program Directors' meeting?



How can they smile like that
and reject your manuscript?



If there is an antique stick pin
in town - they will find it.

We are happy to be making preparation for the November meeting in Mexico and hope to give the members of the Academy the best of everything.

This should be an excellent meeting. We are grateful to Juan for his preparations.



Benjamin B. and Margaret Whitcomb



Greetings and looking forward to seeing everybody in Mexico City.

Much as I dislike seeing some of our older members stepping down, we all seem to be doing it. However, we can take great comfort in the quality of the younger men taking over the professors' chairs and the replacements on the American Board. This semiannual meeting of a group appointed to examine our peers probably gives the closest view to work being done in neurosurgery in our country and the opportunity to appreciate the great accomplishments and advances in our field by members of our Academy. It was a rich experience indeed to have served on the Board.

This year we have seen the establishment of two endowed chairs for neurosurgery in this country, both occupied by fellow members - the Busch Chair at Washington University for Henry Schwartz and the Harvey and Kate Cushing Chair at Yale occupied by Bill Collins.

At the annual meeting of the Program Directors, it has been interesting to find that all seemed to feel there was a general improvement in the quality of applicants for neurosurgical house officers across the country. I am sure there is nothing a program director can do that will improve the quality of the training as much as the procurement of high caliber house staff.

By the time this letter goes to press, we will have had our neurosurgical course at Colby College in which several of you will have participated.

Professionally since Charlie Drake came down and showed us how, we have found - with the microscope - that basilar aneurysms can be as uneventful and as easy as those anywhere else in the head.

Personally, Peggie and I are having a spurt in our grandchildren this spring. We have taken a short cruise to the Maine Coast and hope to try out the Baltic with the Bjorkestens just before the Scandanavian meetings.

Ben will be missed on the Board of Neurological Surgery. He proved to be an enthusiastic examiner. Most of the candidates he examined caught this enthusiasm and were helped through their examination -



Robert G. and Constance Fisher



Things are beginning to settle in in better fashion. The Center is beginning to evolve. The medical school has completed its Basic Sciences Building which is certainly one of the most modern and one of the most attractive buildings in which I've ever been. The first phase of the University Hospital is in the process of going up and they have hopes that we can go in by 1972. Two other phases are obviously dependent upon federal fundings to a certain extent and they are dubious about these at the moment, but they have great hopes. There are some very devoted people about this Center who have concluded that they are going to have to stick with this for a great number of years before the final results are seen.

The family have all been well. We are all looking forward to going off on vacation in August back to New Hampshire again, but I must say that the Rocky Mountains, particularly the area around Vail and Aspen, are attracting us more and more.

We recently had an extremely rare type of lesion. A patient had been operated on for a chordoma of the base of the brain 6 years previously and had evidence here of a cord lesion. To make a long story short, we operated and found evidence of an intradural extramedullary lesion in the thoracolumbar area. This was subtotally removed, he was irradiated and we now have about 1 1/2 years of followup on this second lesion. The spinal lesion also proved to be a chordoma.

One of our Residents has put out a nice piece of work about hyperbaric oxygen in spinal cord trauma. He has found that the animals who have a

traumatized cord are permanently paraplegic unless they are exposed to hyperbaric oxygen for short periods of time after the injury. Using this, he has found that they are very much improved so that they can walk or that they are cured and have no residual deficits. I am not sure how far we can apply this to man and obviously we've a lot more work to do before we are in any position to attempt to show its practical application.



Kristian and Brit Kristiansen



The year that has passed since my last letter to *The Neurosurgeon* has as landmarks the Fourth International Congress of Neurosurgery in New York in September 1969, followed by the First Mexican Congress of Neurosurgery in Mexico City. Our first trip to Mexico was a grand experience and the meeting with the charming Mexican colleagues gave Brit and me unforgettable memories.

After my four years of service as Secretary for Federation Affairs in the World Federation of Neurosurgical Societies, Dr. Willem Luyendijk of Holland took over the office last fall. Dr. Luyendijk spent three days with us in Oslo to be briefed on the affairs of the Federation, and when he left Brit and I were happy to have acquired another good friend. It has been a rewarding experience to serve as an officer of the World Federation and particularly gratifying because of the opportunity to work closely with many friends in all parts of the world.

We were fortunate to participate in the International Symposium on Head Injuries in Edinburg and Madrid in the beginning of April this year, a conference which was superbly organized by John Gillingham and Sixto Obrador and their associates. From Madrid we went by the middle of April to Chicago for a fourteen days visit to the Presbyterian St. Luke's Hospital, with the purpose to organize a prospective cooperative study of cerebrovascular diseases between Chicago and Oslo. Dr. Maynard Cohen's interest in this enterprise is partly a consequence of his pioneering service as a neuropathologist at Ullevål Hospital in 1951 to 1952 when he with his outstanding abilities laid the foundation for the Neuropathological Laboratory in our hospital. One of the evenings in Chicago with the Academy Member, Joe Evans and his charming daughter, Willye, at the "Bakery" still lingers in our memory.

As usual when we are in the United States we finished our trip with a visit to Montreal to see our son Kristian Jr., who is now working as an engineer in the C.B.C., - and to meet our dear friends from the years at the Montreal Neurological Institute. Another reason to pass Montreal is the convenient air route Chicago - Montreal - Oslo named the "Oslo Bus" by the Norwegian students in Montreal. Any member of the Academy who wants to come to our corner of the world is recommended to use this air transport (SAS - not paid advertisement !). Let us know the time of arrival and flight number so we can have the red carpet out.

Kris did a superb job as Secretary for Federation affairs. He really deserves a rest, but it looks like he has already found projects to occupy his time.



William and Helene Scoville



I find it harder to write letters each year. Perhaps it means I talk less - what a relief for the Academy members!

I am so pleased with the branching out of the Academy to include this year's meeting in Mexico City, and future meetings to be shared with the British Society. I think the first will be at Oxford with perhaps a side trip to Edinburgh and the following one in Bermuda at the brand new Southampton Princess Hotel, at Bermuda's loveliest time of year.

I am still involved under Bill Hunt in the Malpractice Committee of the Cushing Society. The malpractice crisis appears presently insoluble. It might be worth considering us all giving up insurance entirely, saving the gigantic premiums to pay for our own lawyers and putting as much of our property as possible in other hands. Two notable cases in Boston both required hiring of private lawyers. We would be less likely for suit and if a whole area cancelled its insurance policies the insurance companies might find a solution.

Colby College in Maine runs attractive three day surgical postgraduate seminars combining science with a lovely vacation spot. This summer will be the first neurosurgical one with a distinguished faculty of Academy members - Drake, Heyl, Mayfield, Pool, Ransohoff and Whitcomb, who have promised to bring their wives and children, so I am hoping others may attend.

Ben and I are looking forward to Scandinavian meetings in Neurosurgery, Neuroradiology, and shades of the 50's, in Psychosurgery, at the end of August. Ben will arrive by a somewhat arduous route in a sail boat after picking up Bjorkesten in Helsinki. I hope he arrives before the ice gets thick.

Technically, I believe the most exciting advance perhaps ever has been the Zeiss microscope which we now use for all aneurysms, acoustics, peripheral nerves, third ventricle tumors, and everything difficult. It makes me ashamed to have carried on so many years without it. The new fiberoptic headlights are also a great advance. The one put out by Flexi-Optics (sold by Ruggles Corporation and others) is probably the best, using a small mirror permitting brighter illumination than a lens and a diameter of illumination of only one half to one inch at a distance of 18 inches. The others all give too big a circle of illumination for aneurysm surgery. The most complete microsurgical instruments are probably from Fischer in Germany and sold through Holco Instrument Corporation in New York.



Edward W. and Barbara Davis



Barbara and I spent a few days in Baja California last winter. The fishing was excellent and we managed to land three sail fish and a marlin. Last summer my older son and I spent four days on the Dean River in British Columbia. Between us we beached 52 steelhead, some on flies and some on lures. There were no monsters but they ranged up to 18 pounds. Mike has just graduated from dental school and will spend the next two years in the Army with his first duty assignment being at Letterman General Hospital in San Francisco. Howard is happily married and will start his third year at dental school this fall.

Our neurosurgical activities have been pretty much routine. We do seem to be seeing an increasing number of aneurysms and feel that we have had better results doing these under the operating microscope. We added a third partner last September and both John Dennis and myself have enjoyed the additional free time this affords us.

Barbara and I will be looking forward to seeing you in Mexico City this fall.



John R. and Georgia Green



Our family has enjoyed another eventful and productive year since my last letter to The Neurosurgeon. Georgia has done beautifully with her oil paintings - in fact, she sold twenty-one of them at a recent private showing in April. She loves it and other people are beginning to recognize her talent. One of her best, "A Mill on Mykonos" is a major point of attraction on our newly-opened sixth floor of the Barrow Neurological Institute. She and her partner (not me) won the 1970 mixed doubles tournament at the Phoenix Country Club. These activities, of course, take care of her spare time away from the main show of our busy family. Gretchen is now an enthusiastic and attractive thirteen-year-old - an average student, a delightful person who is enjoying her summer by looking after a horse we've rented for her, and swimming every day. Charles graduated with honors from Camelback High School this June and plans on a career in Marine Engineering. However, he is on a "bum's tour" of the country this summer. We hope he returns safe, sound, and will reenter the educational establishment this fall. I know we share the anxieties of many parents because of the fast-moving pressures on our progeny.

My activities continue to be varied and interesting. The Barrow Neurological Institute organization is developing very satisfactorily now after some early growing pains. We now have eleven neurosurgeons (three geographical full time), eight neuropathologists, and four neurobiologists (neurophysiologist, neurochemist, physiological psychologist, and biomedical engineer). Dr. Jay Angevine from the University of Arizona College of Medicine spends three hours one Saturday morning each month to provide neuroanatomical supplementation to our program. Dr. Ernest Bors, recently retired from the VA Hospital in Long Beach, is coming in once a week in connection with urological aspects of our Spinal Injury Program. The Arizona Spinal Injury Program was recently granted \$250,000.00 for organizational purposes - and the Barrow Staff have the designation for acute care and research. I described this system in my last letter to you. We are now awaiting funding of the patient care aspects through our State Division of Vocational Rehabilitation. Our neurosurgical service keeps busy. In fact, we verified one hundred and fifteen tumors of the brain and cord during 1969. The third consecutive resident from our program passed his board oral examinations this year, and we have been granted the privilege and responsibility of accepting two men into the residency annually commencing July 1, 1970. Our current Senior Resident, Dr. Philip Siegel, progresses to the tutelage of Bill Sweet at Massachusetts General

Hospital for additional laboratory experiences and has the capability, in my opinion, of eventually becoming a capable teacher-investigator-practitioner type.

A number of the members of the Academy were in Phoenix in March for the meeting of the Federation of Western Societies of Neurological Science. This Federation presently includes eight western societies and represents 850 members of these component groups. My responsibility as Chairman of the Board of Directors for the 1970 meeting was extended for the 1971 sessions in San Francisco. We hope to see many of you next year.

Ed Boldrey and I spent several interesting days together in April in Boston at the request of the Central Office of the Veterans Administration for advice on the care of patients and the training of residents on the neurosurgical service at the Boston VA Hospital.

For some years I have been interested in Arizona Medicine, the publication of the Arizona Medical Association. At the 1970 meeting of the House of Delegates of the Association, I was elected as Editor-In-Chief of Arizona Medicine and, also, to the Board of Directors of the Arizona Medical Association. I have an excellent staff and have found this activity to be very interesting (so far) and easy to fit into my regular schedule. My least time-consuming editorial assignment is that one of the Editorial Board of Family Physician (GP) for Neurological Surgery, but this, too, serves to preserve communications with the general medical community.

Georgia and I are looking forward with pleasure to the fall meeting of the Academy in Mexico City in 1970 and would be pleased to host the group again in 1974 (1956 was the first and only other time), if this sounds attractive. We will be bringing Jim and Lona Atkinson to the Mexico City meeting as our guests. Many of you already are acquainted with them in connection with other meetings, including the one in Colorado Springs in 1968 when he presented a paper. I think Jim is one of Arthur Ward's finest trainees and he has been my associate since 1964. He has organized a smooth-running Pain Clinic, an excellent Neurosurgical Research Laboratory, is very productive and is a mainstay in our neurosurgical training program.





William F. and Alice Meacham

There are a few news items to report to The Neurosurgeon from Vanderbilt at this time. Routine neurosurgical problems have continued at the usual pace with a general admixture of tumors, aneurysms, pain problems and the ubiquitous lumbar discs passing through our wards. I suppose everyone has noted the changing trends in certain aspects of neurosurgical practice. The advent of L-Dopa has certainly radically changed the frequency with which stereotactic surgery can be recommended for parkinsonism, and it does appear that Tegretol has materially reduced the number of operations indicated for major trigeminal neuralgia, although we are seeing some patients now who can be classed as Tegretol failures and who deserve the operative procedure.

We are just embarking on a program of expanded use of the operating microscope and plan to train each of our residents in this phase of surgical technique as soon as we can develop a degree of proficiency of our own. There is little doubt that the microscope has been of great help in transphenoidal hypophysectomy, aneurysm surgery, and in the removal of small, intracanalicular acoustic neuromas. We are impressed with the increasing frequency with which these small tumors can be found by using small volume angle myelography with the polytome apparatus.

We have enjoyed a recent visit from Dr. Antonio Revilla of Panama who was serving as a visiting professor, and who fascinated us with the tales of his training days under Walter Dandy at John Hopkins. He has had a tremendous experience with intracranial tuberculomas, a lesion that we rarely see. Radical, total extirpation with appropriate antituberculous therapy has given a high percentage of excellent results with all age groups.

Alice and I are looking forward with great anticipation to the Mexico City meeting and I am sure it will be one of our best.

Congratulations to Dick DeSaussure on his election as secretary of the American Board of Neurological Surgery and to Guy Odom on his elevation to the chairmanship.

- and to Bill Meacham who is President-Elect of The Society of Neurological Surgeons.



Eben and Betty Alexander, Jr.



I have, in fact, had the letter requesting information for the Neurosurgeon, but had not felt that it was really anything exciting enough to report. I had hoped to have an inspiration.

I've just had the interesting experience of being asked to go to one of the suburbs of Cleveland (about 35 or 40 miles out) where an obstetrician was being sued because an infant he delivered had a depressed skull fracture. Neither the obstetrician nor the nurse in attendance felt there was any trauma or that the depression, which was in the frontal region, was produced by the forceps.

A very astute attorney from Cleveland, who was representing the obstetrician, came across the paper Courtland Davis and I published in the Journal of Neurosurgery, the Cushing commemorative issue at the time of the centennial meeting, on intrauterine depressed skull fractures.

Of course, since we looked up this information, we found that in fact depressed fractures do sometimes occur in utero, and even when depressions occur in the presence of trauma to the mother's pelvis, the depression is usually made by the promontory of the sacrum. We were fortunate enough to have one patient who was delivered by caesarean section, without forceps, whose depressed fracture was shown in utero by x-ray to be produced by the promontory of the sacrum, and the depression was seen, of course, after the baby was delivered. This clinched the point and we have had five or six cases in our own experience, plus looking up all those in the world literature.

A surgeon in Cleveland had testified unequivocally that any depressed fracture of the infant's skull occurred only as a result of trauma by the obstetrician, but the jury, which was an impressive one selected from a nice little town, listened patiently to all the information and acquitted the obstetrician unanimously.

I can remember when we first saw one of these, the obstetrician told me there was not any trauma and I rather laughed at the idea. It has taken a good deal of convincing on my part to see that, in fact, these depressed fractures do occur in utero sometimes, and that, in fact, the obstetrician is not to blame in those cases.

It is gratifying to be able to be of some help to a colleague like this on the side of the physician, although I must say it was an immense amount of trouble working the schedule around and going a long distance to testify.

We're in the final stages now of the \$30,000,000 construction that is going on in our Medical Center, but the completion of this will require another couple of years. This will be the huge bed tower which will increase our capacity to something in excess of 725 beds. It will all be very grand when it's finished, but it certainly is inconvenient and noisy while it's going on.

The cost of care to the patients or to third parties or whoever supports the bill is, of course, of great concern to all of us. It is particularly our concern here since we have always been blessed with a great deal of ward service material and there is still that material available, but ways must be found to support it so that the hospital will not have to go even more extensively into debt. I have had numerous meetings with the Board of Trustees and the administration, and I must say this has taken up the major part of my time during the last several weeks.

Alexander and Davis - "Intrauterine Fracture of the Infant's Skull" Journal of Neurosurgery, 1969, Vol. 30, P. 288.

In this age of mal-practice suits, this is certainly a pearl worth remembering.



Arthur Elvidge

Thank you for your letter of June 11, 1970. I have been on L-Dopa for some months. It has improved things and appears to work on a physiological basis. Minor disabilities occur which make it difficult to travel. This, along with photography were favorite hobbies of mine. However, I am fully content to stay relatively close for the moment and think over past travels, many of which included Academy meetings. I am fortunate to have been allowed an office in the research area.

My activities include follow-ups of long-term survivals of brain tumors, especially gliomas. I am also interested in extraneoplastic enucleation with general trimming and those cases with and without x-ray therapy.

With regard to other types of follow-ups, I was having dinner in the Spanish Pavilion at Expo, when I happened to meet the mother of an old patient of mine. This girl was operated on in 1952, at the age of twelve, for a curious and fairly large saccular aneurysm, which had resulted in two hemorrhagic episodes.* The aneurysm was removed. The mother reported that her daughter is completely well. She is married and has three children.

This brings to mind another old patient, on whom I received a surprise follow-up. While in Arizona at an Academy meeting, I chanced to see this lady on the high diving board of the swimming pool next to the hotel where I stayed. She had an aneurysm of the post-communicatory artery which was subsequently clipped. She too, seemed to be completely well.

* See Textbook of Surgery. Edited by H. F. Moseley. Page 256; Fig. 119.

The long-term survival of some patients with a microscopic diagnosis of glioblastoma multiforme is intriguing. Perhaps Arthur will be able to shed some light on this with his follow-up studies.



Guy L. and Mataline Odom

This may be a rather bad time to write because I am in Bethesda following the Council meeting of the NINDS, and will be moving on later this evening to Washington for the Stroke Facilities meeting. I do not know of a meeting that could have been more depressing than the two days we have had here in Bethesda. Last fall we received the news that there would be a cut in the budget from the standpoint of training grants and, as you recall, no new training grants were funded last year, only renewals with fairly high priority. This session, we find that research funds have also been cut and it is only possible to fund grants with very high priority. This year, there will be

approximately \$12,500,000 in research grants that will be approved, but not funded. From the standpoint of training, the philosophy of the administration seems to be changing and, in all probability, training grants will be phased out during the next three or four years. This is only information through the grapevine, but it seems to be authoritative enough to justify looking other places for funds to replace those that are coming from NIH training grants. The training programs are certainly not being helped by articles like the one which has recently appeared in Time magazine. It quotes various educators who have stated that the country has been flooded by Ph.D.'s who are unable to find work in small colleges or high schools. This is the type of data that members of the Bureau of Budgets are using in support of their philosophy. The B.O.B. states that they are willing to reconsider the budget for training if it can be documented that a specific number of neurophysiologists, neurochemists, etc., are actually needed.

Very little progress has been made from the standpoint of spinal cord injury centers, but a special resolution was submitted to the Director of the NIH by the NINDS requesting special funds for civilian spinal cord injury centers. At a recent meeting of the National Consultants of the Veterans Administration for Spinal Cord Injury, which was attended by three of our group, we were notified that the Veterans Administration will be increasing the number of spinal cord injury centers from 10 to 19 by 1972. This increase in centers will give a total of 1,413 beds in Veterans Spinal Cord Injury Centers. They will also consider the addition of three in 1973.

This year, we have finally obtained our own neurosurgical ward, including an intensive care area. The ward is not large enough to take care of all neurosurgical patients, but it has been a big step in the right direction. I did not think that this would happen until I stepped down. It has been a very pleasant addition to our program.

I do not think that we have had any exciting clinical problems, but the usual load has been enough to keep all of us busy. We are looking forward to getting more work out of Barnes now that he has retired from his administrative office. He has finally straightened out the University as Chancellor Pro Tem, and can devote more time to the patients and laboratory.

Since my last letter, our family has increased by three grandchildren, bringing the total to nine. Guy, Jr. has completed his residency in general surgery and will be in practice in a clinic in Rutherfordton, North Carolina. Carolyn and her husband, Terry, who has finished naval architecture, have decided to settle in Houston. The rest of the family are here in the Durham area for the time being.

Despite his duties as Chairman of The Board of Neurological Surgery, President of The Society of Neurological Surgeons, and President-Elect of The American

Association of Neurological Surgeons, Guy finds time for fishing in the Gulf of Mexico with his brother. However, hurricane Celia spoiled some of this fishing.



Charles G. and Ruth Drake



I think we all missed the annual meeting last year but the dinner in New York was an outstanding event, truly an international affair. Karl and Eva Busche were most impressed. Karl came up to London with Adolfo Ley and his son the following weekend and I flew them up to Lion's Head in the twin Cessna. I think it was their first flying experience with an amateur and that they were a little nonpulsed when we landed on a narrow mowed strip in a farmer's field. They seemed to enjoy the magnificent country of the Bruce Peninsula and the majestic limestone cliffs of the Niagara escarpment. Karl's daughter, Karin, will be spending a month with us up there this Summer.

It is nearing the end of my first year as Head of the new Department and a full-time appointment. I do not think I had any real idea of the magnitude of the administrative load and I am very glad that we decided on a rotating chairmanship so that my part of it will be over in another four years. The Department is growing; we now have six neurologists and four neurosurgeons having just taken on a very bright young man, Dr. A. Loren Amacher, to take charge of the Pediatric neurosurgery. As you know, I have been a little skeptical about the surgical treatment of myelomeningocele and hydrocephalus and have never built up much of a service at the Childrens' Hospital. Loren had a year in Boston and I think is determined to prove me wrong - I hope he does.

Most of the steel for the University Hospital is up now. I drive by it every day, and note with amazement the rapidity with which such a massive building is raised. It should be ready for opening in May, 1972, but the pundits tell us it will be Christmas before it is much over 50% occupied. I will resent every day of this. I am also a bit staggered by the proposed costs of setting up the laboratories but have set about to find some more support which I have every reason to believe is forthcoming.

John, 23, is in his last year at Law School and will be on his own all too soon for Ruth. Jimmy, 17, is going to Princeton and has elected to take the General Engineering course modified somewhat so that he can enter one of the other

professions if he so decides. Ruth and I flew down with him to Princeton last week and had a most courteous reception. It is an impressive place. Ruth, about to lose another from the nest came back completely sold with the decision. The cost is a bit staggering and I am glad that the Canadian dollar has "floated" close to that of your country.

Stephen, 15, and Tommy, 13, are both in High School, getting along pretty well with as yet unformed ideas about their futures. I am glad to say we have no longhairs in the family although occasionally I have to push a bit for the monthly hair cut.

There is nothing very new in the way of surgery going on here; my hobby with the basilar aneurysms continues and we have done over 75 cases, fortunately with continuing good luck.



Francis A and Letitia Echlin



Since January I have restricted my activities to research and this only at intervals. I hope to continue work on Vasospasm until the late fall and then return to the "supersensitivity of chronically isolated cortex as a possible basic mechanism in focal epilepsy." I have worked on this problem since 1949 but can't keep up with the modern techniques in neurophysiology. There is, however, no doubt that cerebral cortex becomes very hyperexcitable to topical acetylcholine, electrical stimulation, strychnine, etc. when partially isolated for more than three weeks. Also the cholinesterase activity drops about 60 per cent and the permeability barrier to Ach in isolated cortex is abolished. The hyperexcitability begins within a few days after isolation and increases for up to 3 or more weeks and persists at least several years. This state of affairs must occur when cerebral cortex is partially isolated by a scar, hemorrhage, tumor, etc.

Letitia and I have been in Europe since April and now go to Canada to take part in the wedding of our youngest daughter to a bilingual Canadian. She is to remain in Montreal. Our middle daughter lives in London with an Englishman and the eldest with an American in NYC. They are fortunately married which does not appear to be the general custom any more.

We are looking forward to the meeting in November.



John and Lorene Raaf



Probably the most important activity around here at present is the attempt to rehabilitate Crooked Riffle Lodge and prepare for a resumption this fall of the meetings of The Rogue River Neurosurgical Society. Time flies by so rapidly, it hardly seems possible that almost six years have passed since the December, 1964 flood left the R.R.N.S. without a convention hall. Much more needs to be done, but I think it can be finished in time for September or October conclave. This means a busy summer, particularly in view of the fact that one of my associates left today to bicycle through France with his four children.

Our family situation is in status quo. Contrary to most of our contemporaries who are leaving their big homes, Lorene and I feel we are still able to cope with our three-level, two-acre home at 390 S. W. Edgecliff road. Since I am now fairly well into my Second Thirty-Year Plan here in Portland we decided that this summer was the time to re-roof and paint the exterior. We hope this will reflect a younger and newer look. Other summer activities include an August fishing trip to British Columbia for both of us and later in the month I'll take a four-day horseback ride in the Strawberry Mountain area of Eastern Oregon.

John and his family are in residence in Boston; he starts a surgical internship at the Massachusetts General on July 1. Jean, her husband and their daughter are still at the University of California at Berkeley. There are no new grandchildren in the offing so far as we know.

Lorene and I were very sorry to miss the party last fall at the St. Regis. The Oregon Medical Association and Sommer Memorial Lectures overlapped the International Congress, and since the American Association for the Surgery of Trauma was scheduled for the next week in Portland, we were tied to home base. We hope there will be no conflicts when the Academy meets in Mexico City this fall.

We have had a few interesting cases lately. One was a two-year-old boy with a craniopharyngioma which we completely (and successfully) removed through a left occipitoparietal approach. It is a fascination route-somewhat similar to a Russian tonsillectomy, an anterior operation for protruded cervical disc, etc. We may report the technique at the R.R.N.S. meeting this fall.



George L. and Isabella Maltby



Medically, I am trying to slow down but not very successfully, I keep talking about doing more neurology and less neurosurgery but even this doesn't seem to work out. Sim and I have bought a small house on the beach in Boca Grande, Florida, which is on the West coast between Sarasota and Fort Myers and not too far from Naples where all the neurosurgeons seem to be gathering at the moment and we love it, but we find that we have to lease it most of the time to pay expenses and are hoping that within a few years we will be able to spend more and more time in that area, fishing, etc. I understand Al Uihlein and Frank Mayfield are both more or less residents of Naples now and it seems to be sort of an elephant's retreat for ancient neurological surgeons. On the other hand, I am still keeping reasonably busy with an active neurosurgical service here in Portland and trying to do a lot of administrative work in the same field, plus helping to develop a Teaching Program for 3rd and 4th year students from both Tufts University and the University of Vermont. One of my greatest drives and interests is making the Maine Medical Center here in Portland one of the, if not the, outstanding teaching hospitals north of Boston.

Colby College, as you know, and have seen advertised, is putting on a Surgical Techniques Seminar towards the end of next month, and this should be very good. I hope to be able to get away but both of my associates are interested in going so I may stay home and hold the fort, especially in as much as it is difficult to teach an old dog new tricks. In any event, I hope to have most of the faculty for a buffet luncheon or at least some type of get-together before or after the meeting. You may have realized in reading the Program that came out on this Seminar that 90% of the faculty are members of the Academy.

I don't understand how Dick DeSaussure does everything that he does with the Cushing Society Association, etc., The Neurosurgeon, the Academy meetings and so on and still keeps his cool. I am now finding that with trying to cut down that my neuromedical practice is increasing, my surgical practice is at times more than I want and I have very little time to do other things, to say nothing about keeping up on the literature, the latter worries me the most.

On top of all this I am trying to assume the regality or dignity of being an aging grandfather - I now have 3 grandchildren, 2 Catlin's by my oldest daughter and 1 Persian grandson by my second daughter who is married to a brilliant Ph.D. in Economy - an Iranian but Associate Professor in Economics at

Tufts at the moment. The two younger children are in my opinion "mixed up". They are in that generation that I don't understand so they think I am "mixed up". But, I suppose as time passes this will all work out.

I only wish that I could have given more specific information about great medical accomplishments but I am afraid there are none. Sim is well, active, happy and busy with her grandchildren and sends her very best and we are both looking forward to seeing all of you in Mexico City.



Ernie and Bobbie Mack



It is now the middle of 1970 and I am at the moment wondering where the first half of the year went. It is certain that "the days rush by when one reaches September".

Bobbie and I have developed a sort of fishing camp for ourselves this year up in the country, in an area which has quite satisfactory fishing and quite a number of lakes and streams. Our camp not only has excellent fly-fishing in every direction, but just happens to have three golf courses in the vicinity - and as Bobbie has now enthusiastically approached golf we are having a lot of fun between these two hobbies on the weekends, and any other given time that we can sneak off! Fortunately, it is only an hour's drive from home.

The University of Nevada's medical school is now a reality and is steadily progressing to the point of opening with its first class next year. We are now engaged in trying to finish off the curriculum planning and gradually acquire the necessary faculty. We have great hopes for this and think it will in some measure help with many of the problems which beset us out here in the last surviving wilderness.

The Section of Neurosurgery of the AMA should, as I dictate this, have become a reality - at least so I am assured. This will culminate our work of the last three years of trying to get this established, and I think our efforts have been reasonably successful. We have enjoyed a very satisfactory reception from the members of the practice of medicine who do not usually get an opportunity to attend neurosurgical conferences of this character. We have carefully tried to plan the program so as to have an appeal and to make them meaningful to all of the practitioners, and I have the feeling we have been reasonably successful in this endeavor.

Last year, following the meeting of the Section on Neurosurgery of the AMA, Larry Pool and I joined other friends in Vancouver and proceeded to the famous Dean River, where we finally were installed in the Lower Dean camp, which is perhaps one of the finest fishing camps in Western America. Our success, which was the result of great enthusiasm and minimal skill, produced quite a sizeable number of steelhead in the ten pound category, and much to our surprise numerous salmon going up to twenty pounds which were taking flies. So we really had quite an exceptional trip, and to those of you who might have had an opportunity to see Larry's motion pictures taken of the trip you will know we had a marvelous time. At this moment Larry and I, along with some others, are looking forward to a really exciting trip to Northern Quebec where we will attempt to take some Atlantic salmon on dry flies.

Since I am a devoted Mexicophile I am looking forward with great expectation to the trip to Mexico City this fall, and know our compadre Cardenas will arrange a meeting which will be rewarding and memorable to all of us.

Looking forward to seeing you all in Mexico City this fall.





James and Cynthia Correll



Practice has continued active. One clinical problem which has been of special interest to me recently has to do with the frequency of embolization in occlusive cerebral arterial disease. It seems more important as a cause of symptoms than diminished blood flow, and the complications of surgery are more often dependent upon embolization than any other factor. The majority of lesions removed at surgery are ulcerated, many obviously could be a source of emboli, and in a number of patients, serial angiography has made it possible to study the natural history of ulceration. It is interesting that when these lesions are successfully removed, or when the artery becomes completely occluded, symptoms cease. In more than 200 patients with operations which resulted in full patency, recurrence of symptoms has been evidenced in approximately 10% but it has always been related to some artery other than that operated on.

Study of the participation of the CNS in lipid transportation has continued in the laboratory confirming and extending previous observations. Plasma turbidity may increase within seconds and is associated with an increase in the triglyceride concentration. This response appears to be dependent upon a specific focal diencephalic site. The structure in the CNS important for the change in blood coagulation appears to be diffuse. A great deal of work is still necessary to establish these basic points.

Cynthia and I have not traveled very far from home recently except for a too brief sojourn to St. Croix and spending some time at our beach cottage in North Carolina. Cynthia has been active in continuing her interest in music particularly as a member of the Board of Directors of the Harlem Philharmonic Society. Cynthia and our two children have a strong interest in horses which they continue to exercise. It is with pleasure that we look forward to the coming meeting in Mexico City.

Carotid Surgery should be in the hands of Neurosurgeons. Maybe Jim's work will encourage more Neurosurgeons to take this on.



Phil and Lisa Gordy

In December and January we had some problems with illness in the family. Lisa fractured L1 through muscular effort in trying to brake her car which was sliding down a hill on the ice. There were no neurological problems involved but, initially it was quite a painful injury. She was in the hospital approximately one week. During this time our daughter, Sharon, fell in the bathroom with a glass in her hand and sustained a major hand injury in which the tendons and palmar digital nerves to the median portion of the hand were severed. Fortunately, I was in the house at the time and was able to control the rather profuse hemorrhage and to get her into the hospital to a hand surgeon very quickly. A long and tedious hand operation ensued with approximation of the tendons and digital nerves. At the present time, Sharon is doing well and is using her hand with relatively little difficulty. Lisa now feels fine and is having no further difficulty from her injury.

Michael has just completed his sophomore year at Penn. and has done quite well. At the present time, he is working as a deck hand on a Sun Oil Tanker and has just completed his fourth trip. The first two trips were to Texas and the second two to Columbia and Venezuela. Sharon has just completed her sophomore year at Geneva College at Beaver Falls, Pa. and has done very well in her chosen field of engineering. She is, at the present time, clerking in a small department store in Cambridge, Md.

Lisa and the three girls are currently at our little farm in Cambridge and I am planning to join them as of the first of July. We will spend our summer vacation there - boating and generally relaxing.

On the professional side, the neurosurgical service at Jefferson is coming along well, I think. You may recall that as of last July we became a separate department. Our new affiliated program with my old service in Wilmington is progressing well and adding a great deal of additional clinical experience for the residents. Our 1969-70 graduate, Dr. Irvin B. Keller will enter the Air Force in September and it is anticipated that he will go to Lackland AFB in San Antonio under Col. Paul Meyers.



Joseph and Rita Ransohoff



The past year has been full of so much travels, troubles, successes and failures that I feel constantly as if I am in a giant centrifuge that is a little off center! Had I been asked what happened last week I might have been able to provide some sort of a comprehensive statement, but any attempt to account for the last 12 months will of necessity be a rambling and disjointed communication.

The research efforts in my department continue to move along at a steady pace and some of these activities might be of interest. In the spinal cord area, Pete Campbell and his entire group continue to be quite productive. As a result of a visit to Phanor Perot I came home fired up with the concept of applying evoked potentials to the problem of the spinal cord injury. In the laboratory with the help of a member of our Department of Physiology, Dr. John Siegel, we have been studying the standard spinal cord trauma animal with the addition of this parameter and believe that early evidence of spinal cord function can be seen in the evoked potential studies long before clinical recovery is demonstrable. The clinical application of this methodology is also one of obvious interest and we have been studying total paraplegics as well as controls and have demonstrated the reproducibility of the results in the clinical situation. We are now evaluating partial paraplegics, having two set-ups, one at the Bellevue Hospital and one at the Rusk Rehabilitation Institute.

Working conjointly with Phanor, we hope to be able to develop a set of clinical standards which might indicate in acute situations the reasonability of attempting surgical intervention even if no clinical evidence of reserved function is present. This may all be "whistling Dixie", but it certainly is a stimulating problem.

In the brain tumor area, Humberto Cravioto, of the Department of Neuropathology working with a biochemist in our department, Dr. Joe Weiss, is studying a colony of gliomas produced in animals with the use of nitrosourea. These tumors appear to be quite close to the human glioma as related to sterol metabolism at least and are serving as an interesting model for the study of growth potential and metabolism of the glioma. On a very preliminary basis it would also seem that the sterol studies of the spinal fluid may be some indication as to the rapidity of growth of gliomas and the efficacy of early forms of therapy, although this impression is still much too early to warrant a firm statement.

Hydrocephalus studies also continue apace with further refinement and evaluation of the potential for transventricular absorption in both experimental and naturally occurring hydrocephalus in animals. We are currently testing a new volume control valve in the treatment of clinical hydrocephalus, a valve designed by Rudy Schulte and hope to give a preliminary report on our results at the International Pediatric Meeting in Paris this fall.

Our Head Trauma Unit supported by a program project NIH fund is going full blast evaluating cerebral circulation and pulmonary and cardiac functions in the severely injured patient.

Drs. Hass and Wood, of the Department of Neurology are deeply involved with us and interesting, although confusing, information is being acquired relative to hypoxia in the severe brain injuries, hypoxia which cannot be explained on a purely pulmonary basis.

Finally, as is everyone else, we are struggling with the problem of the acute intracranial aneurysm and attempts to carry the patients through the first two or three weeks after bleed, preventing rebleeding and treating spasm. The rebleed problem seems to be yielding to the combination of hypotensive drugs and Amicar. So far, spasm, of course, is still the enigma. The recent publication of *The Noradrenergic Mediation of Experimental Cerebrovascular Spasm* presented by Frazier, Stein, Barrett and Pool at our recent Neurosurgical Meetings seems to be most exciting to us and hopefully, may lead us to some clinical trials. Clinically, we continue to be busy enough to keep us out of trouble.

We recently lost Ernie Mathews to Earl Walker's unit but are very proud and happy for him. The opportunity to develop pediatric neurosurgery at the Harriet Lane Children's Hospital is certainly a grand opening and we wish him the best of luck. Fred Epstein, who is just completing our residency, has always expressed a great interest in the pediatric problem and he will stay with us to take over the Pediatric Neurosurgical Service.

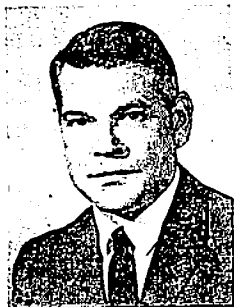
From the politico-medical point of view, New York has been an interesting place in the past year. The new Hospital Corporation for municipal hospitals of New York City is about to become a functioning reality as of July 1st. We are all extremely excited with the appointment of Dr. John English as Director of the Hospital Corporation. He is reputed to be a highly skilled individual in the problems of providing medical care and we expect his input into the problems of the New York City Hospital System to be most significant. We will keep struggling to push along the completion of the new Bellevue Hospital and expect great help from him in this area as well.

Our students and faculty have become actively involved in the problems of providing medical care to the Bellevue community. Initially the most radical and activist students seemed to have control of the movement, but this has changed in the past few months and really constructive and joint efforts are

being carried out. Certainly the young people in medicine must be heard and it is particularly nice to listen when they are making constructive noise rather than being totally negative as so often seems to be the situation.

As far as I myself am concerned, I occasionally am able to get off on my boat chasing some big fish, but not nearly often enough to satisfy my wanderlust. Most of the time I seem to be following the admonitions of Satchel Paige. My "never look behind you, something might be gaining on you" makes me feel like I am really spinning gravel most of the time and I am certain that whatever it is, is gaining on me.

The work on spinal cord trauma is certainly encouraging. Perhaps this work or evoked potentials will detect those individuals who can be helped by hypothermia. It is hard to see how Joe can keep up with all his activities, but gratifying to see that it can be done.



David and Marjorie Reynolds



My travel plans have been altered by the pressures of the clinical services and Dr. Lockart's illness and retirement. However, I do plan to get away for a short period of time in late August when I expect to do some hill climbing and rock hunting in North Carolina.

Even though the vacation will be somewhat short I am sure that it will be less hectic and really more restful than my four week jaunt to Australia last summer.

Hope that everyone is having a nice summer.



Lyle A. and Gene French



Gene and I have been up to our cabin in northern Minnesota fishing a bit, but with very little luck. It seems that we can catch a lot of fish, but none of them very big. This is just to the contrary of most fish stories.

We visited in Europe for a couple of weeks. This was just prior to the Society meeting in Boston. We visited Edinburg, Madrid, and Lisbon and attended an International Symposium of Head Injuries. It was very interesting. I am always amazed at the interest our colleagues have in the organization of the care of the injured. It really is quite terrific. They not only will have a section of a city or a whole city organized, but even a whole country organized down to the very last point of transportation, etc. I think we can learn much from them. The weather was perfect and we were with so many of our old friends, that it was a tremendous experience.

That is about the extent of our personal travels. Our children, however, seem to get around more. Our youngest daughter, Barbara, age 19, is currently on a two month tour of Europe. Our youngest son, Eldridge, age 23, went to British Honduras on a fishing trip during college Spring break, and our oldest son, Fred, who is now 27 years old, has returned to the University as a graduate Student after two years as a merchandiser. He claims he wants to be a general practitioner of medicine.

At the University there have been many changes. The general administrative format is being organized so that we will have a Vice President in charge of Health Affairs, and under him there will be separate schools with theoretically equal status. These would include Medicine, Dentistry, Public Health, Nursing, Pharmacy, and probably Veterinary Medicine. Each school will be headed by a Dean (incidentally our Dean resigned a few months ago, so we will be looking for a new one). We are also going through the woes of construction. They are to start on a new Basic Science and Dentistry building this fall, and then hopefully, in a few years will start construction of a new Clinical Science (hospital) unit. Our present hospital is only 850 beds and we hope to enlarge this considerably.

At the present time, our Department of Neurosurgery at the University Hospital has about 45 beds. We usually have about 50 or 60 patients, so it is obvious that we need more beds, and in the new unit we should pick these up. It is also hoped that a new Veterans Administration Hospital will be placed back to back with the new University Hospitals so that the 30 or 35 beds that

we now have at the Veterans Hospital will be in close juxtaposition with our University units. The other two hospitals which are under our neurosurgical unit are the Minneapolis and St. Paul City Hospitals. We have about 30 beds devoted to neurosurgery in each. The patients are usually there because of trauma, although there is a fair mix of other types of patients. In fact, this aspect of these two hospitals is improving each year in spite of Medicare, Medicaid, etc.

Interesting clinical problems - we have them the same as everyone else. But I can tell a better story verbally than in writing, so I will hold these until our meeting in Mexico City.

Thomas A. and Mary Weaver, Jr.

Like many, our family at home is shrinking but our family away from home is growing with the addition of wives, husbands and grandchildren. Our oldest, with two children, graduated from Toledo University and has been a manager in the United Parcel Company in Cleveland for six years. Number two son, also with two children and a graduate of Wilmington, lives in Fort Wayne, Indiana and presently serves as a unit sales manager with Proctor and Gamble. Susan, a graduate of Wittenberg, is married and also lives in Fort Wayne where her husband is with Central Soya. She works as a psychologist at the State Hospital for the Mentally Retarded. Jeff remains at home and currently is a junior at Wright State University. Molly is married and lives in Dayton where both are working. Jim, our baby at eighteen, will matriculate at Ohio University in September. So you see, I have to keep working a while longer.

We, myself and two partners, have a busy clinical neurosurgical practice. We are forced to work at three general hospitals with a bed capacity of almost fifteen hundred beds plus being the only neurosurgeons to serve on a two hundred bed children's hospital. We desperately need an energetic young man to join us, one both qualified and willing to work. I fully expect Wright State University to have a medical school within five years which should give such a man a chance to affiliate with a teaching center plus research facilities. Dayton is not a bad place to live with super highways linking it with Columbus and Cincinnati.

Mary and I are looking forward to Mexico City.



John F. and Vivian Mullan



"We are living in a period of medical angst," said our friend the Associate Dean. We had not heard the word for years—not since our college days when a well placed "angst" like a line from Elliot could raise the quality of undergraduate conversation to unprecedented heights. It wasn't agony, certainly not agony in a personal sense—more the anguish of a people, with lots of frustration and common misery, and no end or solution in sight. Angst always had to be a long term affair.

It was the right word. Perhaps he had picked it up at a dean's meeting somewhere, or carried it with him along with that distinctive blend of Dutch Calvinism and liberal pragmatism that had become the signature of his office. I believe we first heard it in late September a year ago when he tried to explain why the neural sciences building for which we had worked so hard and so long and for which matching funds were approved in early September was not likely to be founded in '69—or even '70—or even —.

Then our surgery department joined the other eighteen or nineteen that sought a permanent department head. It was angst all over again, tempered by the fact that there were 38 (or was it 83?) departments of psychiatry in a similar position. Did we really need a department head, a father figure in an age of outmoded paternalism? Is there no longer a place for a Halsted or a Cushing? Where are the forces that once held surgery departments together? Were they the bonds of an intellectual discipline or simply the bonds of common adversity—sepsis, shock and anesthetic hazard? Is it unsupportable problems or their unacceptable absence that drives a society into angst—or new and unfamiliar problems like Goldstein's "well" and "worried well" who clamor at our doors not knowing that Halsted and Cushing had only taught us to care for the "sick" and "early sick." Is the department by therapeutic technique set up centuries ago, less meaningful than the department by regional organ or the department by disease? Has surgery simply reached the end of its technical evolution? Are there no more ways to sew the gut, or nail the bone, or turn the flap? Perhaps a Halsted or a Cushing today would take up virology, or immunology rather than surgical technique. Or if he took up that great surgical speciality of administration he might use it to study rather than to practice, he might take up where Flexner left off. Might not a new report with an equally clear and radical insight open a new era in medicine as decisively as did Flexner in 1910?

Meantime the nearest father figure, the surgical department head, must assume, like college presidents, the burden of local discontent. By-passed, but not yet redundant, he stands, like a fireman on the footplate of the diesel, the living symbol of another age—which, we suppose, is why our friend the associate dean asked us to assume temporary chairmanship of the department of surgery. "Its a great time," as Joe Evans said "not to chair a department."

Vivian thought it sounded like medical politics which was strictly for the birds and headed off for the summer to our abandoned farm. It is beautiful fruit growing country in South Michigan with more fish in the creeks than John and Brian can pull out and more family pets than Joan can look after. There, danger is an unsinkable sail boat that turns over, excitement a combine that runs amok, disappointment a rainy morning and happiness a small boy that rides a pony. It seems a pity that one small rural community does not need one practising neurosurgeon.



Robert S. and Louise Knighton



The only news from this part of the country is that we are rearranging our teaching program in neurological surgery. Formerly, Neurosurgery was a Division of General Surgery. We are now organizing a Department of Neurology and Neurosurgery. The reason for this is that with the acceptance of medical students from the University of Michigan, we feel that a better teaching program in neurological sciences can be presented.

We plan to have a physical relationship on the in-patient floor of the hospital with both services admitting patients to the same general area but still, of course, plan to maintain our independence as separate services within the overall department.

We feel that this will enhance our teaching program by having all patients with neurological disease in one area and by affording a close relationship of both services with Neuroradiology and Neuropathology. I have been appointment Chairman of this combined department.

Louise and I are looking forward to our meeting in Mexico City this fall.



Edwin B. and Helen Boldrey



Bob King, Eldon Foltz and I are completing a four-year tour of duty as members of the Neurological Sciences Research Training Grant A Committee—a part of National Institute of Neurological Diseases and Stroke of the NIH. I am sure I speak for them as well as for myself when I say this has been a tremendous experience. Recently there have been some depressing aspects due to the cut-backs in finance to the NINDS. This, of course, has hit neurosurgery particularly hard since our field has been a newcomer to this government activity. Certainly the funds that have been provided have aided in the improvement of quality of a number of training programs. It will be recalled that the Neurosurgical reservation related to quantity.

And speaking of quantity of neurosurgeons, it is noted that the number of training programs has now been increased by four, which is very interesting indeed.

To Guy Odom, by the way, hearty congratulations on being appointed the new Chairman of the Board.

To come back to this matter of the National Institute of Neurological Diseases and Stroke, the problem of finance there is one which affects everyone who has an interest in developing quality in the profession of medicine. This includes every member of the Academy, of course.

Last year the necessity of individual participation on communication with members of Congress was emphasized, and actually the appropriation for the National Institute of Neurological Diseases and Stroke was raised following, and we like to think due to, in some respects at least, the efforts of members of the Academy supplementing and complimenting the major participation by such as Dick DeSaussure. It must be emphasized that eternal and continuing activity is imperative at the present time.

Also there must be added to the efforts of all toward the Congress some exploration in depth as to the role of administration in this educational and professional crisis. I should say that the word "crisis" is not regarded as hyperbole here for major problems in the quality of education in the neurological sciences is to be anticipated if appropriately qualified young men are not given encouragement in the complex situation in which we now find

ourselves. The government is not being urged to increase the number of neurosurgeons in our own particular instance; it is being urged to assist in improving quality and hence their potential.

This, to my mind, is a very important matter.

I think that members of the Academy along with all other neurosurgeons must start to give serious consideration to the role of Health in Health, Education and Welfare. At the present time Health is distinctly number 3 in this complex. With government playing a greater and greater role in health, re-appraisal of this "troika" would seem to be a paramount matter and consideration of, among others, members of the Academy so that some appropriate solution may be arrived at in the course of the revision of alignment which seems to be unavoidable.

B. and Indira Ramamurthi

Indira and I were in New York at the World Congress and cemented old friendships and made many new ones. Then there was the travel right across the country visiting various friends and centers. There is always so much to see and to learn from such visits, especially for people like me from far away. Later on in April, I was at Edinburg and Madrid attending the International Symposium on Head Injuries which was sponsored by John Gillingham and Obrador. Both these are excellent organizers and wonderful hosts.

The year has been full of excitement, making final preparations for the inauguration of an Institute of Neurology at Madras. The Neurology Block will be opened by the Prime Minister by middle 1970. As a part of this activity, a souvenir crystallizing our twenty years' experience in Neurosurgery at Madras is to be brought out. In addition, the Editor of "Neurology" India, has accepted to bring out a special number of the Journal to commemorate the twentieth anniversary of our Department. This has been really a hard task to undertake and most of the holidays have been spent in writing papers and correcting. However, I think it is really worth it.

Thus, days pass by full of interest and excitement. In the new institute, we hope to enlarge our surgical capacities and increase our share of work on pain relief, epilepsy and stereotactic surgery and microneurosurgery.



John D. and Dorothy French

The past year has been a very busy one for me as it has doubtless for you and all other members of the Academy. It's pleasant, however, to take a little time for a chat with friends.

As you might expect, the National Grant Support crisis caused me a lot of trouble. Almost our total operating budget is derived from outside sources and funding last year was down significantly over the year before. This, of course, required a good deal of belt tightening but all of our programs have survived and some even prospered. Perhaps it might be of interest to the members to learn of one of the latter.

Some four years ago the BRI established a paired research association with two institutions in Belgrade, Yugoslavia, the Institute of Biological Research of the Academy of Sciences and the University of Belgrade. The research program was designed to support teams of investigators from the two countries working together on neuroscience problems of mutual interest in a city, Kotor, on the southern Adriatic Coast. The Yugoslavs gave and completely renovated two buildings for the purpose, one of which was to house investigators and the other to provide resources for research activities. The project was funded partly by the Yugoslav government and partly by two grants from NIH. One provided dollars to purchase equipment, and the second and larger was paid in dinars and under the terms of Public Law 480 of the United States which makes available funds in national currencies derived from release of United States credits to the country concerned. The first three years of the Grant represented a period of development during which time three good physiology laboratories were established and a chemistry laboratory initiated in the renovated building of approximately 15,000 square feet of space. An excellent ship was purchased by the Yugoslav government to serve both as a collection ship and laboratory vessel and active research was commenced.

At the end of the three year grant period, progress was so substantial and the environment in Yugoslavia so attractive as a site for international research in which individuals from Eastern Europe could join with colleagues from the West in conducting research activities that the grant resulting from reapplication was approximately doubled in amount. Last April I spent some time there to discuss further developments with colleagues and officials both in the Yugoslav government and the American Embassy. I came away more enthused than ever about the future of the program since it seems to be fulfilling our fondest hopes for it. At the end of this three year period of core

support there should be six good laboratories for neurochemistry and neurophysiology, an anatomical unit for tissue preparation and anatomical studies, an expanded aquarium, a photographic unit, electronic and mechanical shops, a library, a small computing unit and other facilities that are required to make the laboratory a most attractive center for research and teaching. I might add that the installation has been made a part of the University and Institute system of Yugoslavia so that all research and teaching done there receive full academic credit.

Since the grant was awarded, interest in neuroscience in terms of governmental support in Yugoslavia has exploded and large numbers of young people are being attracted to the field. In addition, of course, the capabilities of investigators are rapidly improving as instrumentation, formerly in short supply, is being provided. In short, we believe Kotor will become a kind of year-round Wood's Hole on the Adriatic, a beautiful coastline South of Dubrovnik which everyone should see. We hope to see it become an active, productive international laboratory for brain research giving much to science. In addition, it would seem to have social and political values through the interaction of multinational scientists and students around subjects which are not politically controversial.



Building of the Kotor Laboratory



William H. and Faith Feindel



The fine dinner in New York at the World Congress seems already in the dim past but was a highlight of the meeting that Faith and I enjoyed immensely along with our guest, Dr. Mario Brock, the young neurosurgeon who has just finished his session with Dr. Kurt Schurmann at the University of Gutenberg in Mainz, and joined the Department of Neurosurgery at the new medical school at Hanover.

Earl Walker and his various hard-working committees deserve an enormous amount of praise for the Congress organization. We found the coffee room one of the most attractive features in meeting and chatting with friends from near and far. I was impressed with the contribution made by the wives and those of us who are presented reports in the television series were particularly grateful to Elizabeth Ballantine for sustaining us with coffee, buns and Bostonian charm. We were also intrigued with the linguistic fluency of Bob Pudenz during his gracious and charming chairmanship of our dinner.

Some items of news from Montreal include an interesting meeting of the Canadian Congress of Neurological Sciences in June of last year just before the World Congress. We have, fortunately, been able to keep the Neurologists, Neurosurgeons, and Brain Scientists together for an annual scientific meeting although each has their own executive business sessions. Dick and Molly Masland were our guests and Ed and Helen Boldrey were on deck. We had a tremendous skiing winter with a record amount of snow but also one casualty, when our oldest son, Christopher, an electrical engineer working with the National Research Council in Ottawa, had a double fracture of tibia and fibula, complicated later by a pulmonary embolus from which he has fortunately recovered very well. Six months seems a long time to make up for those few minutes on the downhill. But as a spin-off, Christopher became interested in the hospital environment, as well as one of the Orthopedic nurses, and has decided to top off his engineering by going into Medicine. I have made a point of showing him our computer unit here at the Institute and some of our radioisotope instrumentation, including the new Picker Dynacamera, which we are evaluating at present.

On the clinical side, we had a most unusual arterio-venous malformation in the region of the torcular, giving increased pressure in the venous system and supplied by meningeal arterial branches from both above and below the tentorium and by a branch from the cerebellar arteries. Romeo Ethier, our senior Neuroradiologist, and I have not been able to turn up a similar case in

the literature and would be grateful if any of you have come across this entity before. The shunting of arterial blood directly into the torcular and the longitudinal sinus resulted in what amounted to a functional block of the sinus with extensive venous anastomoses as one sees in a completely occluded sinus. The patient had severe papilledema with deteriorating vision and this has fortunately recovered since surgery which involved doing bilateral occipital bone flaps and a suboccipital craniectomy, isolating and dividing all the dural arteries supplying the malformation as well as the cerebellar arterial supply, without compromising the venous collateral vessels.

I am writing this as I leave for the lower St. Lawrence River, where we hope to gather al' six offspring to celebrate our 25th wedding anniversary at the end of the month.

We are looking forward to our session in Mexico City.



William H. and Mary Sweet

The Society of Neurological Surgeons is receiving a large grant from the Markle Foundation to prepare a set of tapes or records which will each constitute a "teaching packet" suitable for replay on a television screen. Those of us concerned with selecting a man for the crucial task of directing the whole enterprise were overjoyed to have Bronson Ray accept the position. He will luckily be able to devote half of his time to this since he retired at the end of June from his position for decades as Professor and Chief of Neurosurgery at Cornell, yet continues with the office for this special educational function at Cornell.

The present plan is that two types of educational packets will be developed and one focused around depiction of critical features of operative techniques with appropriate references to pre-operative diagnosis and care and post-operative management; the other will deal with basic science presentations especially germane to the problems of clinical neurosurgery.

Any member of the Academy with what he considers to be fruitful thoughts on either of these groups of topics would do well to write directly to Professor Bronson Ray. It is hoped that the teaching materials will be useful for medical students, residents and practicing neurosurgeons.



Alfred and Ione Uihlein



At the moment Ione and I are in Amery, Wisconsin campaigning with Sarah's horses. I have recently recovered from virus pneumonia contracted in Australia and have been on the go more than I like.

Judy presented us with our second grandchild while we were in Europe. Our house plans in Naples were stumbling along this past winter during which time I kept from "climbing my tree" by doing part-time Neurosurgical consultation work at the Naples Community Hospital. I enjoyed this experience in a new locale and assisted with instruction of house staff and nurses.

This Spring, Ione and I traveled to New Zealand and Australia via Tahiti as guests of the American Orthopedic Association. This was a most delightful trip which included seminars, sight seeing and some splendid trout fishing. I recommended the latter in New Zealand. While in Auckland, spent two days with David Robertson, Graeme MacDonald and Keith Eyre as well as Philip Wrightson. We had interesting discussions and all wished more American Neurosurgeons would visit them and their New Hospital, which should be completed. They have funds to help defray some costs. In Sydney, Rex Money, Sir Douglas Miller and Kevin Blaesel were most hospitable and toured us around the various neurosurgical wards. They had excellent teaching seminars for their house staffs and themselves. An interesting by-line was the interest expressed in the aims and objectives of the Foundation for International Education in Neurological Surgery. T.A.R. (Jim) Dinning spoke for all Neurosurgeons in hoping that they might find an opportunity to gear the purposes of the Foundation to their training programs.

When I returned to Washington for the American Association meeting, I expressed my feeling to some friends that we neurosurgeons might consider including more orthopedic surgeons on some of our programs. Many are taking over peripheral nerve surgery, among other procedures we perfected. Our mutual interests might be discussed less unilaterally by more joint discussions. It may be too late, but it seems to me our specialties have more ideas and common goals to the mutual benefit of all.

This Spring, Sarah graduated from Foxcroft School in Middleburg, Virginia and is entering Duke University this Fall. We hope to see our daughter, Pam, who is still working in Florence, Italy, before Thanksgiving.

Now that Frank Mayfield and Francis Murphey will be spending more time in Naples, we certainly hope to be able to arrange for golf, fishing, and fun for our Academy friends.

Ione and I send our best regards and wishes to all and hope to see everyone at the Mexico meeting.



Aidan A. and Mary Raney



When Charlie Drake raised the question a couple or a few years ago about a son going to medical school at home, I wondered if he were referring to the old tutorship or apprenticeship method of preparing a young man for the practice of medicine. You have to be a little suspicious of Charlie, you know.

At the time he raised the question, I was not involved in such a problem. Since then, I became involved and the problem has been resolved. Aidan, Jr. finished his first year at U.S.C. He goes to school there and lives there. Judging by the tons of steaks he devours on his weekends at home, Mary (as she sadly studies her food budget) swears he doesn't eat there.

Another issue is now arising. Should a daughter go to medical school at home? Should a daughter go to medical school? Should a daughter go to school? Personally, I vote negative to each question because I think gals are already too smart.

It seems to me that the days and the months and even the years are getting shorter and shorter. No doubt this is due to the many interesting and fascinating neurosurgical cases. None, however, are worthy of a case report.

Mary and I are looking forward to seeing everyone in Mexico City. Tomorrow we are off with the younger children to Newport Beach (California) for a month. Hope to catch a few fish and improve my golf.



George and Lari Ehni



On reflecting over the past year, it appears that several of Lari's and my offspring deserve a bit of recognition for their accomplishments. In January, Margo, our first daughter, and her husband, Bill Goodwin, made grandparents of us by having a fine son, Grady George. George, our oldest son, received his Master's degree at S.M.U. on May 24th as his wife and we proudly watched. The next evening we did the same as Brian graduated from Lamar High School - he is already anticipating his first semester at Texas A & M University. Bruce, soon in his last semester at Texas, and Nikki, still an undergraduate at Beloit College, Wisconsin, have tried verbally to close the "generation gap" between them and us, but whether they feel this has been accomplished is perhaps still debatable!

My time continues to be pretty busily divided between my responsibilities in the Division of Neurological Surgery at Baylor College of Medicine and my private practice, and I try to get in a little medical writing in between. The growth of the Texas Medical Center continues at a remarkable rate and Houston's whole medical community is probably going to be influenced greatly by the University of Texas Medical Branch here which starts its first class in September of 1970.

Lari, never idle, continues to derive a great deal of pleasure from all sorts of creative handwork and turned out to be a prize winner with some she exhibited this year. We had a good week in New York last September during the meeting of the International Congress of Neurological Surgery and loafed in Acapulco for two weeks in early March, then going on to Ojai Valley, California for the Neurosurgical Society of America meeting. We've stayed home since so we're looking forward to our Neurosurgical Travel Club's meeting in Rochester, Minnesota and Cable, Wisconsin in early July. We plan to drive up with our youngest children as we will combine this with a visit to Owatonna, Minnesota for a visit with Lari's family before returning home.



Harry and Margaret Botterell



My activities are about to change substantially, for Dr. Douglas Waugh celebrates the First of July, Dominion Day in Canada, by assuming the responsibilities of the Deanship of Queen's Faculty of Medicine. I am carrying on as Vice-Principal for the Health Sciences for another year. This should be a very interesting year, for there are a number of problems about which I should like to collect my thoughts, having to do with medical schools, medical education, and as well the education of nurses and doctors' associates and doctors' assistants. I am going to re-activate my interests in the neurological sciences with the keen group that is here at Queen's, as a part-time commitment this year, and I am planning to enjoy some of the neurological and neurosurgical meetings this coming academic year.

A major side-line in my life has been membership in the Ontario Council of Health, which is the senior advisory committee to the Department of Health of the Province of Ontario. My particular responsibility has been to chair the Committee on Manpower. This reports on the manpower needs of the Province of Ontario.

The Harry Botterell Foundation for the Neurological Sciences has been set up at Queen's University, of which I am very proud and much honoured. The income from this Fund is to be used to support research in the neurological sciences at Queen's. The Foundation was set up from gifts and bequests.

I had a delightful visit with Joe Evans in Toronto the other day. Margaret and I have had a very happy and healthy three years, and during this time daughter Jocelyn, the erstwhile ballet dancer, has married and produced a red-headed son.

This brings warm greetings from Margaret and me to our friends in the Academy.

Ideas about medical education are changing rapidly. Harry's background is ideal for thoughts on how to speed up the process of education without loss of quality.



Bruce and Gloria Hendrick

The past year at the Hospital for Sick Children in Toronto has been a busy one for our unit. We have started a project involving a long term follow-up of our hydrocephalics. The program was just gotten underway but I feel that there are approximately three thousand, seven hundred admissions from which we are abstracting information, with review clinical follow-ups and psychological assessments. When we are finished it may not be the answer, but it will certainly help others to avoid the pitfalls and errors that I've committed in the last fifteen years.

It seems that the volume of head injuries is going up by the week and whether it is due to the fact that there are more cars on the road in Toronto or that people have ignored the over-population cries and are going ahead on their own to reproduce.

I have had some interesting tumors including several hamartomas in the region of the tuber cinereum producing precocious puberty in children under two years of age. The approach is not difficult but trying to remove this particular problem has proven a bit of a technical tour-de-force even with operating microscope.

In the extra neurosurgical sense, I have become rather involved with the Canadian Ski Patrol System which, because of the increase in skiing activities in Ontario, has assumed larger responsibility. There is very little medical guidance and I find while their first aid techniques are excellent, there are many things that need to be changed. It was an excellent year for skiing but perhaps, because I was involved with skiing first aid, we ended up with one head injury, one injured back and a broken leg in four skiing members of the family. In spite of this we are all looking forward to next winter.

In Canada and particularly in Ontario, the Government is assuming more and more control over medical practice and I have been rather involved with committees and attempts, at least on paper to plan for the public need in the future. As one gets older and I am told one gets involved more and more with committee work but I really am having some difficulty to adjusting to it and look back on the days when clinical neurosurgery was the only thing that occupied my time.

Both Gloria and I are looking forward to seeing the group in Mexico although unfortunately our stay will be rather short and we will not be able to enjoy the local exotica.



James G. and Peggy Galbraith



As for activities, ours have been of the routine sort this summer with a heavy load of clinical work as well as teaching activity brought on by changes in the curriculum. Our struggle to continue exposure of undergraduate medical students to neurosurgery has met with moderate success and we are gaining additional time in the curriculum for next year. This is a struggle which we certainly must all meet with continuing insistence if we are to be heard.

Notices from Cone Peverhouse indicate that plans for the Mexico City meeting are proceeding smoothly and this should be a very enjoyable event. It is hoped that the attendance will bear this out. One major concern regarding the Academy relates to the statistics Cone sent out concerning the average age of the active members. This has been increasing because the current members are aging and also because new members are being admitted at a later age period. It would seem desirable, if we are to maintain a viable and vigorous organization, to admit some younger candidates to membership on the basis of their promise and potential, rather than making past performance and accomplishments the sole requisites for election to membership. After all, this is the basis on which the Academy was started, and I would certainly like to see the membership policy again move in this direction.

I will be looking forward to see everyone at the Mexico meeting.

William and Phyllis Beswick

We have had a bad year, and I am not referring to the weather. Our University was really the site of unbelievable activities. The radical element of the faculty and student body almost succeeded in closing down the institution. Whether or not the summer vacation has marked the close of violence remains to be seen. We all hope so, but the citizens of Buffalo are just on the verge of expressing their own objections to the developments.

In a happier vein I am happy to report that Phyllis and I are grandparents. Valley presented us with Scott Andrei Massey on January 12, 1970. At the moment he has reason to disturb our usually quiet neighborhood - his first two teeth are coming in - slowly.

Phyllis is really relaxed and happy, knowing her grandson is nearby and that Bill has recovered from all of his wounds. He is busy assisting in the training of new Special Force men at Ft. Bragg.

I am still treating cervical spondylosis by using the anterior approach, but have discarded the use of osteo-periosteal plugs. We are getting good interbody fusion by using the bone fragments obtained with the new four fluted carborundum steel drill point made by Codman. By adding a bit more pressure on the drill that is turned more slowly, one is able to obtain ribbons or curls of bone fragments rather than the material we usually call bone dust obtained from a rapidly turning drill point.

I am also happy to report that Dr. Carl Graf has returned to Buffalo from Iowa City to continue his private practice as he left it two years ago.

We are looking forward to seeing everyone in Mexico City.

Thirty years have elapsed since the first examination given by the American Board of Neurological Surgery. At the suggestion of Ed Boldrey, letters were written to the men who took this first examination. Several events seemed to have impressed the "candidates".

Frank Mayfield

The records will show that the Harvey Cushing Society and the Society of Neurological Surgeons decided to form an American Board of Neurological Surgery. These activities were begun in 1938, I believe, and were completed to the extent that the Board was prepared to and did give its first examination in October of 1940. Inasmuch as I was associated with Glen Spurling at the time of the organization of the Board, and he was Secretary of the Board at its organization, I had many first-hand conversations with him about the problems confronted by the Board in its organizational period and some of the policies which it eventually developed.

First the decision had to be made as to which of those men in the practice of neurosurgery in this country would be certified by charter and which would require examination in order to obtain a certificate.

At the time of the initial examination, I was in my ninth graduate year, as were several others, Joe Evans, Francis Murphey, Rup Raney, Dean Echols, Spence Braden and others. We had first been advised that we would probably be certified by charter but subsequently the Board reconsidered and decided that those of us in our graduate category should be examined. Correspondence then developed as almost a request that we accept the change in status and report to Chicago for Examination. Since all of us were in complete sympathy with the concept of the Board and anxious to see it succeed we accepted readily, paid the \$50.00 fee, and reported for examination.

I don't know how much preliminary study the others did but inasmuch as my general philosophy was that if I wasn't prepared for the examination already then cram study would do little good. Moreover, I really had the feeling that I was doing the Board a favor in accepting the changed status.

The examinations were held in the new Neurological Institute at Illinois. I don't remember who all of the Board members were nor all of the associate examiners whom they had collected, but I do remember some of them vividly and I remember some of the people who took the examination. These included Francis Murphey, Rupert Raney, Spence Braden, Dean Echols, Joseph Evans, Frank Slaughter, myself and five others.

Among the people who were doing the examining were Dr. Percival Bailey, Dr. Lichtenstein and Dr. Paul Bucy. I passed through the clinical examinations without much difficulty and at about the third or fourth session I arrived in the examining room to be examined by Dr. Lichtenstein and Dr. Bailey in neuropathology. The set-up of the room consisted of Dr. Bailey lying recumbent on an examining table and Dr. Lichtenstein taking me through gross specimens and then microscopic slides. I apparently did satisfactorily on the gross examination and then was able to identify and name 5 or 6 slides that were placed under the microscope by Dr. Lichtenstein, then a slide which subsequently proved to be a section of the cortex from a patient with paresis came under the microscope and I didn't have the slightest idea what it was or was supposed to be and remained silent till finally Bailey came to a sitting position and said, "Mayfield, have you gone to sleep." I said, "No, but I don't know what this is." He said, "Then describe it," and I made the unfortunate and impertinent remark, "Dr. Bailey, I am six up on you and I don't know what this is and I don't think I ought to engage in a discussion with you about a microscopic slide." Whereupon he came bolting off the couch, pushed Lichtenstein out of his chair and sat down and gave me a series of slides that I am sure would have been difficult for anybody but became blanks as I looked at them while his sarcastic tongue gave me a going over. Eventually time ran out and I moved on to the next examining room. I learned later that I did fairly well on the Board examination except in pathology. Dr. Spurling told me that Dr. Bailey said he didn't know whether I should be passed in pathology or not since I had refused to talk, but inasmuch as I was not anticipating a career in teaching he would, out of compassion, let me pass.

Dean Echols followed me through the examining room with Doctors Bailey and Lichtenstein and the following is from hearsay, but I think reasonably true. Dean, recognizing that his knowledge of the microscopic slides was not the best, and also knowing that Dr. Peet and Dr. Bailey had totally different philosophies as to the significance of pathology as part of basic training in neurosurgery, opened the conversation by saying, "Dr. Bailey, I am a little nervous because I haven't looked at a microscopic slide since I left Ann Arbor." Bailey is supposed to have retorted, "Well, you had better a damn sight be nervous because nobody can pass this examination who made that statement." And the interesting part was that Dean did not pass this examination, failing the special subject of pathology, and had to repeat the following year.

In the meantime Paul Bucy, who by the change of the rule from 9 to 10 year approval, was certified by charter and wound up as one of the examiners in anatomy and when Spence Braden (now dead) came into his room for examination Paul began to quiz him somewhat sarcastically about the intrinsic structure of the brain, some of which Braden knew well and some of which he didn't, but Paul began to heckle Braden whereupon Braden interrupted the Examination and said, "Paul, I came over to be examined and not to listen to a bunch of sarcasm out of you and you either get on with the examination with a peaceful tongue or I'll knock your teeth out." This apparently interrupted the examination—Spence left the room, left the examining Board and went back to Cleveland. That night they were confronted with the fact of a man who had threatened to knock out the teeth of the examiner, but who had not failed any

examination, and I think they modified the record to show that he had not been examined and brought him back the following year and he passed satisfactorily.

There were many other funny little incidents but those were the three that stand out in my mind. Immediately upon completion of the examinations, which had proven to be a rather exacting and gruelling interview for all of us, and again I might say quite unexpectedly, Francis Murphey, Rup Raney and I went to the bar in the Palmer House—and it is the only time in his entire life that I saw Rup look bedraggled—and Rup told the bartender to put 6 Scotch and sodas on the bar and keep the empty ones full. By the time we boarded the train for Cleveland that night we had drowned our anxieties pretty well in alcohol.

In retrospect I do believe that the compassion and consideration and the policies of the Board were substantially modified by these confrontations and the policy of having a member of the Board with substantial clinical experience in the room with each associate examiner was adopted in order to insure that the candidate got a fair deal.

Hunter Shelden

It was my impression at the time that this was the first formal examination given for certification in Neurosurgery. At the time, however, I was not concerned as to where this examination ranked chronologically. My only hope was to pass it and have it over and done with.

My recollections are rather skimpy, as I probably purposely tried to forget each day that portion of the examination as it was passed....something like not getting upset because you have already made a bum golf shot.

The examination, however, was very much more informal. I think the candidates were certainly better known to the examiners, as one would expect, since the number was small and each candidate was fairly well known to each examiner. The candidates, when addressed, were called by their first names but I must say that the candidates were not calling the examiners by their first names.

At that time, one of the major portions of the examinations was neuro-ophthalmology. I remember this specifically because I thought this would be one of my strong points, having spent a year with Dr. Henry Wagner just doing fields and examining fundi. This was to be my last examination in the afternoon, but the examination immediately preceding it was in neuroradiology. Both of these subjects were held in the same room on each side of a partition because a semi-dark room was necessary for each examination. I must have got all the questions right for in the end they said, "Well, we'll try you on the \$64.00 question." This turned out to be on the variations in the suture pattern

of a celido-cranial dysostosis. Somehow or other, they figured out that I had answered the question correctly. One examiner yelled over behind the screen to the man in ophthalmology and told him that I had answered the \$64.00 question. To my dismay, I heard "Don't send him here. I don't think we need to examine him." I suppose I should have been happy, but I hated to have my best subject eliminated. I apparently got an "A" in ophthalmology without taking the examination; at any rate, it took me nearly a week away from home to take a half-day's examination.

I think one could summarize it by saying that the examinations were more informal and more clinically oriented, but I do not believe that they were anywhere near as comprehensive as our present examinations, and I do not believe the examiners had to put out anywhere near the effort since failure to pass the examination was not the leave or take proposition it is today.

David L. Reeves

I am glad to write my impressions of the first Board Examinations in Neurological Surgery given in October 1940.

First of all I had the erroneous impression that inasmuch as we had been considered eligible for the examination that such would be more or less a pleasant formality. Nothing could have been further from reality.

Neuroanatomy and neurophysiology were particularly horrible, no doubt because such had not been emphasized in our training. It also seemed the examiners led the lamb to slaughter much like a prosecuting attorney going after a reluctant witness. Neuropathology was not difficult because of adequate interest and foundation in the training period.

When I came to be interviewed by the late Alfred Adson, having heard many tales about his operating peccadillos, I thought this indeed was doomsday. Contrariwise, he asked me clinical questions pertinent to the specialty and found out I did know something. It was a surprise, and I believe he saved my neck.

An interesting feature to me was the fact that prior to the examinations, the thought was that after all this was a necessary procedure for the overall good of neurosurgery, but it would for example have no bearing insofar as considering neurosurgeons for membership in the American Academy of Neurosurgery was concerned. After Mt. Everest had been conquered, it was amusing how quickly it became apparent no one would be considered unless he had passed the Board Examinations.

The training programs at present have seen to it that the candidates for the most part are well grounded in the subjects in which they will be examined, and the candidates themselves realize what they will be facing. Such was not the usual case in the early days.

Francis Murphey

I was in the first group to take the Board examination, but only by accident. I had originally been accepted for this examination, but about a month before the date, Glen Spurling called me and asked if I would mind waiting until the next one, since they were going to examine fewer candidates, to which I readily agreed, since I thought I needed more time to study anyway.

Two weeks later he called again, stating that someone had dropped out, and that I could be examined two weeks hence if I wanted to. It is a fact that I had studied for this examination for at least six months already, and the thought of another six months of study was a little unnerving, so I decided to get it over.

I remember going back to the University of Chicago two or three days in advance of the examination to go over some slides with Earl Walker, who was also taking the exam. Spence Braden showed up at the University, and asked me if I had done any studying, and in particular, did I know anything about the tracts that ran up and down the spinal cord. I assured him that I did. It was apparent then that he was a little tee'd off about having to take the exam, particularly since Paul Bucy was junior to him and had been certified without taking the examination.

Those who took the examination were mainly members of the Academy at that time, namely, Frank Mayfield, Joe Evans, Keith Bradford, Earl Walker, Rupe Rainey, Dean Echols, George Baker, David Reeves, Don Coburn, and Jess Hermann.

As I recall, I was examined by Paul Bucy and someone else in anatomy and physiology, but fortunately I didn't have any trouble there. Dr. Bailey and Dr. Lichtenstein were the examiners in pathology. This was relatively easy except for one slide of general paresis, which I thought was encephalitis. Dr. Peet examined me in neurosurgery, and we talked about cervical disc and birds. Wink Craig examined me in neurology with someone I didn't know. I drew a patient with multiple sclerosis. I recall him asking me how the abdominal reflexes were mediated, which I didn't know, and still don't. Dr. Loyal Davis examined me in radiology. He was extremely kind and considerate, and gave what I thought to be a very fair examination. I didn't get into any trouble until

I was examined by Adson and the Professor of Surgery at Illinois in general surgery. Dr. Adson asked me if a patient had a cold and an acute appendicitis would I operate on him, and I must have been rather short when I said "certainly". Furthermore, I made the mistake of getting into an argument with him about how to fuse a humerus. Fortunately, or unfortunately, I had just helped Harold Boyd at Campbell's Clinic on one after a radial nerve suture, and there was obviously a considerable difference between the way things were done at Mayo Clinic and at Campbell's Clinic.

The history of Spence Braden's encounter with Paul Bucy is well known and I won't repeat this. Dean Echols, when he went in to take the pathology exam, told Dr. Bailey that he hadn't looked through a microscope since he had left Ann Arbor four years before, so Dr. Bailey told him to go back home and look through the microscope and come back next year. He did.

We heard (I don't know if this was true) that there was a contest between Max Peet on the one hand and Adson and Craig on the other to see who could fail most of the others' residents. We also heard that there was a fracas between Glen Spurling and Byron Stookey, when the latter flunked Keith Bradford in neurosurgery.

After the examination was over, we were going to the second or third meeting of the Academy at Cleveland. Frank, Rupe, and I got together before the train left and got thoroughly plastered. As I recall, Rupe told the bartender to keep several scotch and sodas lined up on the bar so there would be no wasted time waiting for another one. It was at that time that Frank told me that he had learned from Glen that the three of us had passed.

There was an amusing incident on the train that night. I had gone to bed, and Frank decided that I needed another drink, upon which he reached in the wrong berth and pulled a huge guy right out onto the aisle. Imagine his surprise. Of course I heard the whole thing and let Mayfield talk his way out of that one, which he did with some difficulty. At least he didn't bother me again that night.

The examination was quite fair and conducted in a serious manner, with the exceptions that I have noted. The problem then, as it is now, was that some of the men did not take it seriously. As a result I believe the score was 12 passed and 12 failed.

Fortunately for me, nobody was mad at Dr. Semmes so I got by.

Stuart Rowe

I am afraid that the passage of time since the first oral examination by the American Board of Neurological Surgery in 1940 has dimmed my recollections of the occasion quite appreciably, but a few incidents come to mind, and I will pass them along to you for what they are worth.

First of all, you may be sure that I shared the general tension and uneasiness about the outcome that was experienced, I am sure, by all of the candidates on that occasion, not to mention some of the later ones. However, I had been in attendance as a guest at a meeting of the senior neurosurgical society and thus was aware that these lofty pioneers in the field did have human moments. I also had the good fortune to know one or two of them very slightly from previous contacts.

The general format of the examination was to have two examiners, one a neurosurgeon from the Board and the other a non-neurosurgeon. I can recall that I started out in general surgery with Dr. Adson. He promptly put me at ease and extracted some of my knowledge in the field of general surgery very calmly - quite a variance to the legends of his behavior in the operating room.

I believe that I had Dr. Craig in neurology, and he was quite rightly mildly upset because I leapt at once to a positive diagnosis after examining a patient instead of discussing the various possibilities in an organized fashion and then proceeding to make a final diagnosis. Fortunately, his unhappiness was tempered slightly by the fact that I had happened to hit on the correct diagnosis. As I recall, the lady probably had a herniated disc in the cervical region, but at that time we settled for cervical arthritis.

Of the other examiners, I recall Dr. Peet and I believe Dr. Spurling and Dr. Bucy. Our examination in the field of roentgenology was simplified somewhat by the absence of angiograms, but I can recall studying an x-ray of the skull for some time without seeing any pathology until I finally noticed a foreign body in the orbit, and without any previous acquaintance with such a shadow, took a chance and called it an artificial eye - happily this was correct. It seems to me that in neuropathology a rather vast array of gross specimens troubled me considerably, but I felt that the slides were all typical and quite fair.

In neurosurgery, questions about the peripheral nerves tapped an area in which I had had very little experience (this being prior to World War II experience), and as I look back on it I wonder that I succeeded in answering as many questions correctly as I did.

The fall candidates included a number of members of the Academy of Neurological Surgery, of course. I can recall Wesley Gustafson going about his examination in deadly earnest and with very little to say between times. Following the examination a number of us drove down town with Dave Cleveland, who was in Milwaukee at that time and who had come over in his car. Of course, we compared notes freely and tried to be encouraging to those in the group who had been summoned to return for additional check-up later in the evening.

Finally, I must say that I have a strong feeling that these early examiners set a pattern for a fair, honest, and yet worthwhile examination, which has been followed ever since, although I am sure that the subsequent examinations have steadily become more difficult.

Keith Bradford

It is correct that I was certified in October, 1940, and will be glad to report the difficulties encountered.

The examination in Neurosurgery was given me by Dr. Byron Stookey and by Dr. Leo Davidoff. Dr. Stookey was quizzing on temporal lobe abscess from middle ear infection and I thought I was answering satisfactorily, but Dr. Stookey kept prodding. Dr. Davidoff would try to get in a few words of suggestion, but Dr. Stookey shut him up.

After the entire examination was completed, I felt satisfied and went over to the University of Chicago to visit. While over there I got the urgent message to return to the examination, which I did.

When I reached the examination, Dr. Spurling told me that Dr. Stookey had failed me in Neurosurgery. It was said that I had only operated on two brain tumors which was true since entering practice in July of 1939. I was re-examined in Neurosurgery by Dr. Max Peet, who seemed satisfied. In due course, I received my certification.

At the time I felt very uncertain as to what might have happened to me except for my two good friends on the Board, Dr. Bailey and Dr. Spurling.

Recipient of
THE NEUROSURGEON AWARD

1969



Henry G. Schwartz

THE NEUROSURGEON AWARD

Henry was born March 11, 1909 in New York. He received his B.A. from Princeton University in 1928 and his M.D. from Johns Hopkins School of Medicine in 1932. He stayed at Hopkins the following year as a house officer in General Surgery and then spent the ensuing three years at Harvard Medical School; the first two as a National Research Council Fellow and the third as an instructor in Anatomy. Several important contributions on the sympathetic nervous system were a consequence. To this day he has maintained an interest in Anatomy, which, along with Neurosurgery and the fly rod, continues to be one of his true loves. His training in Neurosurgery was with Ernst Sachs at Washington University School of Medicine from 1937 to 1942. From 1942 to 1945 he joined the Armed Forces as a member of the Washington University 21st General Hospital. He served with distinction in the African Theatre and in Italy, achieving the rank of Lt. Col. and receiving the Legion of Merit in 1945. His loyalty to and interest in the U.S. Army has continued and he currently serves as Consultant to the Surgeon General of the U.S. Army.

After separation from the Army, he returned to Washington University and was appointed Professor of Neurological Surgery in 1946, a position which he holds to this day. His most consuming interest has been his training program. His demand for perfection has frequently stretched the physical fiber and equanimity of his residents to the limit. However, to a man, they have met the challenge and it is with pride that they come to realize the value of their experience. Many, as you know, now have their own training programs and have achieved distinction in American Neurosurgery. Although Henry has never been explicit about his key to success, those who know him believe that his principle is to start with a good man - thereafter "he learns, you don't teach him".

His distinctions are known to many of you: past President of the American Academy of Neurological Surgery, Southern Neurosurgical Society, American Association of Neurological Surgeons and Society of Neurological Surgeons; past Chairman of the Editorial Board of The Journal of Neurosurgery and past Chairman of the American Board of Neurological Surgery. He has served on the Neurology Study Section and Neurology Training Grant Committee for the National Institutes of Health and is currently on the Board of Scientific Counselors of the National Institute of Neurological Diseases and Stroke. One would not think it possible, but he has also found time to serve as a member of his city's Board of Education and is a regional representative for Johns Hopkins University on admissions; activities which undoubtedly reflect his concern with education.

If one were only to cite Henry's achievements, the record would be incomplete. His friends cherish his loyalty and frankness, qualities upon which he puts great emphasis. Also, to reflect on Henry's career is to reflect on Reddie, for she has shared intimately in all that he has achieved.

It is with pleasure and pride that the American Academy of Neurological Surgery bestows this year's Neurosurgeon award on Henry G. Schwartz.

THE GRANDFATHERS' CLUB

E. Harry Botterell

Howard A. Brown

Donald F. Coburn

Dean H. Echols

George Ehni

Joseph P. Evans

James Greenwood, Jr.

Wallace B. Hamby

Hannibal Hamlin

Jess D. Herrmann

William S. Keith

Kristian Kristiansen

George L. Maltby

Edmund J. Morrissey

Francis Murphey

Guy L. Odom

John Raaf

Stuart N. Rowe

William B. Scoville

Henry Schwartz

Samuel R. Snodgrass

Alfred Uihlein

Thomas A. Weaver

Benjamin B. Whitcomb

Barnes Woodhall

COMMITTEES
THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY
1970 - 71

EXECUTIVE COMMITTEE

Robert Pudenz - Chairman
James G. Galbraith
William B. Scoville
Augustus McCravey
Byron C. Pevehouse
George Ehni

PROGRAM COMMITTEE

Eldon Foltz - Chairman
William H. Feindel
Charles B. Wilson

ACADEMY AWARD COMMITTEE

Henry L. Heyl - Chairman
Thomas Ballantine
Frank Nulsen

MEMBERSHIP ADVISORY COMMITTEE

Guy L. Odom - Chairman
James G. Galbraith
Robert Pudenz
Byron C. Pevehouse
Frank E. Nulsen
Lyle A. French

SUB-COMMITTEE REGARDING CORRESPONDING MEMBERSHIP

Lyle French - Chairman
Edwin B. Boldrey
Theodore B. Rasmussen
William B. Scoville
Hendrick J. Svien

LOCAL ARRANGEMENTS COMMITTEE - 1970

Juan Cardenas - Chairman

LADIES PROGRAM COMMITTEE

Mrs. Juan Cardenas

COMMITTEE ON EDUCATION IN NEUROLOGICAL SURGERY

James G. Galbraith
Ernest Mack
Benjamin B. Whitcomb

ROUND ROBIN COMMITTEE

Richard L. DeSaussure - Chairman
William F. Meacham
Byron C. Pevehouse
Alfred Uihlein

REPRESENTATIVES TO NEUROSURGICAL LIAISON COMMITTEE

(CUSHING SOCIETY)

Eben Alexander
Lyle French

REPRESENTATIVE TO BOARD OF DIRECTORS,
THE AMERICAN ASSOCIATION OF NEUROLOGICAL SURGEONS

Richard L. DeSaussure

DELEGATES TO INTERNATIONAL CONGRESS OF NEUROLOGICAL
SURGERY

Richard L. DeSaussure
William Feindell

"PAST PRESIDENTS CLUB"

1938	Dean Echols	1953	J. Lawrence Pool
1939	Dean Echols	1954	Rupert B. Raney
1940	Spencer Braden	1955	David L. Reeves
1941	Joseph P. Evans	1956	Stuart N. Rowe
1942	Francis Murphey	1957	Arthur R. Elvidge
1943	Frank H. Mayfield	1958	Jess D. Hermann
1944	A. Earl Walker	1959	Edwin B. Boldrey
1946	Barnes Woodhall	1960	George S. Baker
1947	William S. Keith	1961-62	C. Hunter Shelden
1948	Howard Brown	1963	Samuel R. Snodgrass
1949	John Raaf	1964	Theodore B. Rasmussen
1950	E. Harry Botterell	1965	Edmund J. Morrissey
1951	Wallace B. Hamby	1966	George J. Maltby
1952	Henry G. Schwartz	1967	Guy L. Odom
		1968	James G. Galbraith

PAST VICE-PRESIDENTS

1941	Francis Murphey	1955	Stuart N. Rowe
1942	William S. Keith	1956	Jess D. Herrman
1943	John Raaf	1957	George S. Baker
1944	Rupert B. Raney	1958	Samuel R. Snodgrass
1946	Arthur R. Elvidge	1959	C. Hunter Shelden
1947	John Raaf	1960	Edmund J. Morrissey
1948	Arthur R. Elvidge	1961-62	Donald F. Coburn
1949	F. Keith Bradford	1963	Eben Alexander, Jr.
1950	David L. Reeves	1964	George L. Maltby
1951	Henry G. Schwartz	1965	Robert H. Pudenz
1952	J. Lawrence Pool	1966	Francis A. Echlin
1953	Rupert B. Raney	1967	Benjamin B. Whitcomb
1954	David L. Reeves	1968	Homer S. Swanson

PAST SECRETARY-TREASURERS

Francis Murphey	1938-40
A. Earl Walker	1941-43
Theodore C. Erickson	1944-47
Wallace B. Hamby	1948-50
Theodore B. Rasmussen	1951-53
Eben Alexander, Jr.	1954-57
Robert L. McLaurin	1958-62
Edward W. Davis	1963-65
Robert G. Fisher	1966-68

THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY
FOUNDED OCTOBER, 1938

HONORARY MEMBERS - 3

ELECTED

Dr. Percival Bailey 731 Lincoln Street Evanston, Illinois 60201	1960
Dr. Wilder Penfield Montreal Neurological Institute 3801 University Street Montreal 2, Quebec, Canada	1960
Dr. R. Eustace Semmes 20 South Dudley Street, 101B Memphis, Tennessee 38103	1955

SENIOR MEMBERS - 17

Dr. George Baker 200 First Street, S. W. Rochester, Minnesota 55901	Enid Salem Road, Route 2 Rochester, Minnesota	1940
Dr. E. Harry Botterell Faculty of Medicine Queen's University Kingston, Ontario, Canada	Margaret 2 Lake Shore Boulevard Reddendale Kingston, Canada	1938
Dr. Donald F. Coburn 6400 Prospect Ave., Rm. 204 Kansas City, Missouri	Ellie	1938
Dr. Theodore Erickson University Hospitals 1300 University Avenue Madison, Wisconsin 53706	Martha 531 North Pinckney Madison, Wisconsin	1940
Dr. Joseph P. Evans University of Chicago Cl. 950 East 59th Street Chicago, Illinois 60637	Hermene 1160 E. 56th Street Chicago, Illinois	Founder
Dr. Wesley Gustafson First National Bank Bldg. McAllen, Texas 78501	Jennie North Ware Rd., R. R. 1 Box 296-A McAllen, Texas 78501	1942

CORRESPONDING MEMBERS - 5

ELECTED

Dr. Fernando Cabieses Clinica Anglo Americana Apartado 2713 Lima, Peru	1966
Dr. Juan Cardenas y C. Av. Insurgentes Sur 594 Mexico, D. F.	1966
Dr. John Gillingham Boraston House, Ravelston Edinburg 4, Scotland	1962
Dr. Kristian Kristiansen Oslo Kommune Ullval Sykehus Oslo, Norway	1962
Dr. B. Ramamurthi 14, 11 Main Road, C. I. T. Colony Mowbray's Road Madras 4, India	1966

ACTIVE MEMBERS - 79

Dr. Eben Alexander, Jr. Bowman Gray Sch. of Med. Winston-Salem, N. C. 27103	Betty 1941 Georgia Avenue Winston-Salem, N. C. 27104	1950
Dr. H. T. Ballantine, Jr. Massachusetts General Hosp. Boston, Mass. 02114	Elizabeth 30 Embankment Road Boston, Mass. 02114	1951
Dr. Gilles Bertrand Montreal Neurological Inst. 3801 University Street Montreal, Quebec, Canada	Louise 385 Lethbridge Montreal 16, Quebec Canada	1967
Dr. William F. Beswick 1275 Delaware Avenue Buffalo, New York 14209	Phyllis 59 Ashland Avenue Buffalo, New York 14222	1949
Dr. Edwin B. Boldrey Univ. of California Hosp. 3rd Ave. & Parnassus San Francisco, Calif. 94122	Helen 924 Hayne Road Hillsborough, California 94010	1941

		ELECTED
Dr. Wallace B. Hamby 3001 NE 47th Court Ft. Lauderdale, Florida 33308	Eleanor	1941
Dr. Jess D. Hermann P. O. Box 135 Mountain Pine, Arkansas 71956	Mary Jo	1938
Dr. Henry L. Heyl Dartmouth Medical School Hanover, New Hampshire 03755	Kit	1951
Dr. William S. Keith Toronto Western Medical Bldg. Suite 309 Toronto 130, Ontario, Canada	Eleanor 55 St. Leonardi Crescent Toronto, Ontario, Canada	Founder
Dr. Francis Murphey 20 South Dudley Street, 101B Memphis, Tennessee 38103	Roder	Founder
Dr. J. Lawrence Pool 710 W. 168th Street New York, New York 10032	Angeline Closter Dock Road Alpine, New Jersey	1940
Dr. Stuart N. Rowe 3-2 Iroquois Building 3600 Forbes Street Pittsburg, Pennsylvania 15213	Elva 6847 Reynolds Street Pittsburg, Pennsylvania	1938
Dr. Samuel R. Snodgrass John Sealy Hospital University of Texas Medical Branch Galveston, Texas 77550	Margaret 1405 Harbor View Drive Galveston, Texas	1939
Dr. A. Earl Walker Johns Hopkins Hospital Div. of Neurological Surgery .601 North Broadway Baltimore, Maryland 21205	Terrye 6007 Lakehurst Drive Baltimore, Maryland	1938
Dr. Barnes Woodhall University Medical Center Durham, North Carolina 27706	Frances 4006 Dover Road, Hope Valley Durham, North Carolina 27707	1941

ELECTED

Dr. F. Keith Bradford 1200 Moursund Avenue Houston, Texas 77025	Byra 3826 Linklea Drive Houston, Texas 77025	1938
Dr. Barton Brown 2000 Van Ness Avenue San Francisco, Calif. 94109	Martha 65 Liberty Street San Francisco, Calif.	1968
Dr. Howard A. Brown 2000 Van Ness Avenue San Francisco, Calif. 94109	Dorothy 2240 Hyde Street San Francisco, Calif. 94109	1939
Dr. Harvey Chenault 2134 Nicholasville Road Lexington, Kentucky 40503	Margaret 667 Bateswood Road Lexington, Kentucky 40502	1949
Dr. William F. Collins, Jr. Yale University School of Medicine New Haven, Conn. 06510	Gwen 403 St. Ronan Street New Haven, Conn. 06510	1963
Dr. James Correll Neurological Institute 710 W. 168th Street New York, New York 10032	Cynthia Algonquin Trail Saddle River, New Jersey	1966
Dr. Courtland Davis Bowman Gray Sch. of Medicine Winston-Salem, N. C. 27103	Marilyn 921 Goodwood Road Winston-Salem, N. C. 27106	1967
Dr. Edward W. Davis Providence Med. Office Bldg. 545 NE 47th Avenue Portland, Oregon 97213	Barbara Box 974, Route 3 Troutdale, Oregon 97060	1949
Dr. R. L. DeSaussure, Jr. 20 South Dudley St., 101B Memphis, Tennessee 38103	Phyllis 4290 Heatherwood Lane Memphis, Tennessee 38117	1962
Dr. Donald F. Dohn 2020 E. 93rd Street Cleveland, Ohio 44106	Betty 3010 Huntington Road Shaker Heights, Ohio 44120	1968
Dr. Charles G. Drake 111 Waterloo Street, 211 London, Ontario, Canada	Ruth R. R. 3, Medway Heights London, Ontario, Canada	1958
Dr. Francis A. Echlin 100 East 77th Street New York, New York 10021	Letitia R. D. #2 New Paltz, New York 12561	1944

		ELECTED Founder
Dr. Dean H. Echols Ochsner Clinic 1514 Jefferson Highway New Orleans, Louisiana 70121	Fran 1428 First Street New Orleans, Louisiana 70130	
Dr. George EhnI 1531 Hermann Prof. Bldg. 6410 Fannin Street Houston, Texas 77025	Velaire (Lary) 16 Sunset Houston, Texas 77005	1964
Dr. Arthur Elvidge Montreal Neurological Inst. 3801 University Street Montreal 2, Quebec, Canada	1465 Bernard Avenue, West Outremont, Quebec, Canada	1939
Dr. William H. Feindel Montreal Neurological Inst. 3801 University Street Montreal, Quebec, Canada	Faith 39 Thornhill Avenue Westmount, Quebec, Canada	1959
Dr. Robert G. Fisher 800 NE 13th Street Oklahoma City, Okla. 73104	Constance 107 Lake Aluma Drive Oklahoma, City, Okla. 73121	1957
Dr. Eldon L. Foltz Div. of Neurological Surgery Univ. of Calif. Sch. of Med. Irvine, California	Catherine 2480 Monaco Drive Laguna Beach, Calif. 92651	1960
Dr. John D. French The Medical Center University of California Los Angeles, Calif. 90024	Dorothy 12841 Sunset Blvd. Los Angeles, California	1951
Dr. Lyle A. French U. of Minnesota Hospital Minneapolis, Minnesota 55455	Gene 85 Otis Lane St. Paul, Minnesota 55104	1954
Dr. James G. Galbraith U. of Alabama Med. Ctr. 1919 Seventh Avenue, South Birmingham, Alabama 34233	Peggy 4227 Altamont Road Birmingham, Alabama 34213	1947
Dr. Sidney Goldring Barnes Hospital Plaza Division of Neurosurgery St. Louis, Missouri 63110	Lois 11430 Conway Road St. Louis, Missouri 63131	1964
Dr. Phillip D. Gordy 1025 Walnut Street Philadelphia, Pennsylvania	Elizabeth Ann (Lisa) 420 N. Rose Lane Haverford, Pennsylvania	1968

ELECTED

Dr. Everett G. Grantham
625 Medical Towers, South
Louisville, Kentucky 40202

Mary Carmel 1942
410 Mockingbird Hill Road
Louisville, Kentucky 40207

Dr. John R. Green
Barrow Neurological Inst.
St. Joseph's Hospital
Phoenix, Arizona 85013

Georgia 1943
2524 E. Crittendon Lane
Phoenix, Arizona 85016

Dr. James Greenwood, Jr.
718 Hermann Prof. Bldg.
Houston, Texas 77025

Mary 1952
1839 Kirby Drive
Houston, Texas 77019

Dr. Hannibal Hamlin
270 Benefit Street
Providence, R. I. 02903

Margaret 1948
270 Benefit Street
Providence, Rhode Island

Dr. John W. Hanbery
Div. of Neurosurgery
Stanford Medical Center
Palo Alto, California 94305

Shirley 1959
70 Mercedes Lane
Atherton, California 94025

Dr. George J. Hayes
Commanding General
U. S. Army Med. Command
Japan, APO San Francisco
California 96343

Catherine 1962
1362 Gernaum Street, N. W.
Washington, D. C.

Dr. E. Bruce Hendrick
Hospital for Sick Children
555 University Avenue
Toronto, Ontario, Canada

Gloria 1968
63 Leggett Avenue
Weston, Ontario, Canada

Dr. Robert G. King
University Hospital
Upstate Medical Center
Syracuse, New York 13210

Molly 1958
408 Maple Drive
Fayetteville, New York 13066

Dr. Robert S. Knighton
Henry Ford Hospital
2799 W. Grand Boulevard
Detroit, Michigan 48202

Louise 1966
27485 Lathrup Boulevard
Lathrup Village, Michigan

Dr. Theodore Kurze
U. of Southern California
School of Medicine
1200 N. State Street
Los Angeles, Calif. 90033

Emma 1967
2225 Homet Road
San Marino, Calif. 91108

ELECTED

Dr. Raeburn C. Llewellyn Tulane University 1430 Tulane Avenue New Orleans, Louisiana 70112	Carmen 32 Versailles Blvd. New Orleans, Louisiana 70125	1963
Dr. William M. Lougheed Medical Arts Bldg., # 905 170 St. George Street Toronto 5, Ontario, Canada	Grace Eleanor 67 Ridge Drive Toronto, Ontario, Canada	1962
Dr. Herbert Lourie 750 E. Adams Street Syracuse, New York 13210	Betty 101 Thomas Road DeWitt, New York 13214	1965
Dr. John J. Lowrey Straub Clinic 888 S. King Street Honolulu, Hawaii 96813	Catherine (Katy) 2299-B Round Top Drive Honolulu, Hawaii 96822	1965
Dr. Ernest W. Mack 505 S. Arlington Avenue Suite # 212 Reno, Nevada 89502	Roberta 235 Juniper Hill Road Reno, Nevada 89502	1956
Dr. George L. Maltby 31 Bramhall Street Portland, Maine 04102	Isabella (Sim) Breakwater Farm Cape Elizabeth, Maine	1942
Dr. Frank Mayfield 506 Oak Street Cincinnati, Ohio 45219	Queenee 1220 Rockwood Drive Cincinnati, Ohio 45208	Founder
Dr. Augustus McCravey 1010 E. Third Street Chattanooga, Tennessee 37403	Helen 130 N. Crest Road Chattanooga, Tennessee	1944
Dr. Robert L. McLaurin Division of Neurosurgery Cincinnati General Hosp. Cincinnati, Ohio 45229	Kathleen 2461 Grandin Road Cincinnati, Ohio 45208	1955
Dr. William F. Meacham Vanderbilt Hospital Nashville, Tennessee 37203	Alice 3513 Woodmont Road Nashville, Tennessee 37215	1952
Dr. Edmund J. Morrissey 450 Sutter St., Suite 1504 San Francisco, Calif. 94108	Kate 2700 Vallejo Street San Francisco, Calif. 94123	1941

		ELECTED
Dr. John R. Mullan 950 E. 59th Street Chicago, Illinois 60621	Vivian 6911 S. Bennett Avenue Chicago, Illinois 60649	1963
Dr. Blaine Nashold Duke University Med. Ctr. Durham, North Carolina 27706	Irene 410 E. Forest Hills Blvd. Durham, North Carolina	1967
Dr. Frank E. Nulsen Division of Neurosurgery Univ. Hosp. of Cleveland University Circle Cleveland, Ohio 44106	Ginny 21301 Shaker Boulevard Shaker Heights, Ohio	1956
Dr. Guy L. Odom Duke University Med. Ctr. Durham, North Carolina 27706	Mataline 2812 Chelsea Circle Durham, North Carolina	1946
Dr. Robert G. Ojemann Massachusetts Gen. Hosp. Boston, Massachusetts 02114	Jean 85 Nobscot Road Weston, Massachusetts 02193	1968
Dr. Byron C. Pevehouse 2000 Van Ness Avenue San Francisco, Calif. 94109	Maxine 135 Mountain Spring Avenue San Francisco, Calif. 94114	1964
Dr. Robert W. Porter 5901 E. 7th Street Long Beach, Calif. 90804	Aubrey Dean 6461 Bixby Hill Road Long Beach, Calif. 90815	1962
Dr. Robert Pudenz Huntington Inst. of Applied Medical Research 734 Fairmount Avenue Pasadena, Calif. 91105	Mary Ruth 385 S. Oakland Ave. # 101 Pasadena, California	1943
Dr. John Raaf 833 SW 11th Avenue Portland, Oregon 97205	Lorene 390 SW Edgecliff Road Portland, Oregon 97219	Founder
Dr. Aidan A. Raney 2010 Wilshire Blvd. # 203 Los Angeles, Calif. 90057	Mary 125 N. Las Palmas Los Angeles, Calif. 90004	1946
Dr. Joseph Ransohoff New York Univ. Med. Ctr. 550 First Avenue New York, New York 10016	Rita 140 Riverside Drive New York, New York	1965
Dr. Th Theodore B. Rasmussen Montreal Neurological Inst. 3801 University Street Montreal 2, Quebec, Canada	Catherine 29 Surrey Drive Montreal 16, Quebec Canada	1947

		ELECTED
Dr. David Reynolds 1700 NW 10th Avenue Miami, Florida	Marjorie 1701 Espanola Drive Miami, Florida	1964
Dr. R. C. L. Robertson Shamrock Prof. Bldg. 2210 Maroneal Boulevard Houston, Texas 77025	Marjorie 5472 Lynbrook Drive Houston, Texas	1946
Dr. Henry G. Schwartz Barnes Hospital Plaza St. Louis, Missouri 63110	Reedie 2 Briar Oak, Ladue St. Louis, Missouri 63132	1942
Dr. William B. Scoville 85 Jefferson Street Hartford, Connecticut 06103	Helene 27 High Street Farmington, Connecticut	1944
Dr. C. Hunter Shelden 744 Fairmount Avenue Pasadena, California 91105	Elizabeth 1345 Bedford Road San Marino, California	1941
Dr. Anthony F. Susen 3600 Forbes Avenue Pittsburg, Pa. 15213	Phyllis 3955 Bigelow Blvd. Pittsburg, Pa.	1965
Dr. Hendrik J. Svien 200 First Street, S. W. Rochester, Minnesota 55901	Nancy 827 Eighth Street, S. W. Rochester, Minnesota	1957
Dr. Homer S. Swanson 1938 Peachtree Road, N. W. Atlanta, Georgia 30309	LaMyra 1951 Mt. Paran Road, N. W. Atlanta, Georgia	1949
Dr. William H. Sweet Massachusetts Gen. Hospital Boston, Mass. 02114	Mary 35 Chestnut Place Brookline, Mass.	1950
Dr. George T. Tindall U. of Texas Med. Branch Galveston, Texas 77550	Katy 2938 Dominique Drive Galveston, Texas	1968
Dr. John Tytus 1118 Ninth Avenue Seattle, Wash. 98101	Virginia 1000 NW Northwood Road Seattle, Wash. 98117	1968
Dr. Alfred Uihlein P. O. Box 1082 Rochester, Minnesota	Ione Box 1127 Naples, Florida	1950
Dr. Exum Walker 490 Peachtree Street, NE Atlanta, Georgia 30308	Nelle 380 Valley Road, NW Atlanta, Georgia 30305	1938

ELECTED

Dr. Arthur A. Ward, Jr. Dept. of Neurological Sur. U. Of Washington Seattle, Wash. 98105	Janet 3922 Belvoir Place, NE Seattle, Wash. 98105	1953
Dr. Thomas A. Weaver, Jr. 146 Wyoming Street Dayton, Ohio 45409	Mary 868 W. Alexandersville Bellbrook Road Dayton, Ohio	1943
Dr. W. Keasley Welch 4200 E. Ninth Avenue Denver, Colorado 80220	Elizabeth 744 Dexter Street Denver, Colorado 80220	1957
Dr. Benjamin B. Whitcomb 85 Jefferson Street Hartford, Conn. 06106	Margaret (Peggy) 38 High Farms Road West Hartford, Conn. 06107	1947
Dr. Charles V. Wilson U. of California Hospitals San Francisco Med. Ctr. San Francisco, Calif. 94122	Mary 168 Rock Hill Drive Tiburon, Calif. 94920	1966

DECEASED MEMBERS - 12

	ELECTED
Dr. Spencer Braden 7-20-69 Cleveland, Ohio	Founder
Dr. Winchell McK. Craig (Honorary) 2-12-60 Rochester, Minnesota	1942
Dr. Olan R. Hyndman (Senior) 6-23-66 Iowa City, Iowa	1942
Sir Geoffrey Jefferson (Honorary) 3-22-61 Manchester, England	1951
Dr. Donald D. Matson (Active) 5-10-69 Boston, Massachusetts	1950
Dr. Kenneth G. McKenzie (Honorary) 2-11-64 Toronto, Ontario, Canada	1960
Dr. James M. Meredith (Active) 12-19-62 Richmond, Virginia	1946
Dr. W. Jason Mixter (Honorary) 3-16-58 Woods Hole, Massachusetts	1951
Dr. Rupert B. Raney (Active) 11-28-59 Los Angeles, California	1939
Dr. David Reeves (Senior) 8-18-70 Santa Barbara, California	1939
Dr. O. William Stewart (Corresponding) Montreal, Quebec, Canada	1948
Dr. Glen Spurling (Honorary) 2-7-68 LaJolla, California	1942

THE ACADEMY AWARD WINNERS

Paul M. Linn	1955
Hubert L. Rosomoff	1956
Byron C. Pevehouse	1957
Normal Hill	1958
Jack Stern	1959
Robert Ojemann	1960
Lowell E. Ford	1962
Charles H. Tator	1963
Earle E. Crandall	1964
M. Stephen Mahaley, Jr.	1965
Chun Ching Kao	1966
John P. Kapp	1967
Yoshio Hosobuchi	1968

THE NEUROSURGEON AWARD WINNERS

Edwin B. Boldrey	1955
Georgia and John Green	1956
Dean Echols	1957
Arthur R. Elvidge	1958
John Raaf	1959
Rupert B. Raney	1960
R. Glen Spurling	1961
Hannibal Hamlin	1962
Frank H. Mayfield	1963
Francis Murphey	1964
The Ladies	1965
David L. Reeves	1966
Eben Alexander	1967
Donald D. Matson	1968
Henry Schwartz	1969

THE NEUROSURGEON AWARD WINNERS

Edwin B. Boldrey	1955
Georgia and John Green	1956
Dean Echols	1957
Arthur R. Elvidge	1958
John Raaf	1959
Rupert B. Raney	1960
R. Glen Spurling	1961
Hannibal Hamlin	1962
Frank H. Mayfield	1963
Francis Murphey	1964
The Ladies	1965
David L. Reeves	1966
Eben Alexander	1967
Donald D. Matson	1968
Henry Schwartz	1969

PAST MEETINGS OF THE ACADEMY

Hotel Peabody, Memphis, Tennessee (Organizational Meeting)	April 22, 1938
Hotel Netherland Plaza Cincinnati, Ohio	October 28 - 29, 1938
Roosevelt Hotel New Orleans, Louisiana	October 27 - 29, 1939
Tudor Arms Hotel Cleveland, Ohio	October 21 - 22, 1940
Ambassador Hotel Los Angeles, California	November 11 - 15, 1941
The Palmer House Chicago, Illinois	October 16 - 17, 1942
Percy Jones General Hospital Battle Creek, Michigan	September 17 - 18, 1943
Ashford General Hospital White Sulphur Springs, West Virginia	September 7 - 9, 1944
The Homestead Hot Springs, Virginia	September 9 - 11, 1946
Broadmoor Hotel Colorado Springs, Colorado	October 9 - 11, 1947
Windsor Hotel Montreal, Canada	September 20 - 28, 1948
Benson Hotel Portland, Oregon	October 25 - 27, 1949
Mayo Clinic Rochester, Minnesota	September 28 - 30, 1950
Shamrock Hotel Houston, Texas	October 4 - 6, 1951
Waldorf Astoria Hotel New York, New York	September 29-October 1, 1952
Biltmore Hotel Santa Barbara, California	October 12 - 14, 1953
Broadmoor Hotel Colorado Springs, Colorado	October 21 - 23, 1954

The Homestead Hot Springs, Virginia	October 27 - 29, 1955
Camelback Inn Phoenix, Arizona	November 8 - 10, 1956
The Cloister Sea Island, Georgia	November 11 - 13, 1957
The York Toronto, Ontario, Canada	November 6 - 8, 1958
Del Monte Lodge Pebble Beach, California	October 19 - 21, 1959
Sheraton-Plaza Hotel Boston, Massachusetts	October 6 - 8, 1960
Larz Anderson House Washington, D. C.	October 18, 1961
Royal Orleans Hotel New Orleans, Louisiana	November 7 - 10, 1962
El Mirador Hotel Palm Springs, California	October 23 - 26, 1963
Key Biscayne Miami, Florida	November 11 - 14, 1964
Terrace Hilton Hotel Cincinnati, Ohio	October 14 - 16, 1965
Fairmount Hotel San Francisco, California	October 16 - 19, 1966
Key Biscayne Miami, Florida	November 8 - 11, 1967
Broadmoor Hotel Colorado Springs, Colorado	October 6 - 9, 1968
St. Regis Hotel New York, New York	September 21, 1969

FUTURE MEETINGS

Mexico City	November 19 - 21, 1970
Sahara-Tahoe Lake Tahoe	1971

FUTURE MEETINGS
of
OTHER SOCIETIES AND ASSOCIATIONS

The American Association of Neurological Surgeons

Houston, Texas	April 18 - 22, 1971
Boston, Massachusetts	April 16 - 20, 1972
Los Angeles, California	April 8 - 12, 1973

American College of Surgeons

Atlantic City, New Jersey	October 18 - 22, 1971
San Francisco, California	October 2 - 6, 1972
Chicago, Illinois	October 15 - 19, 1973
Atlantic City, New Jersey	October 14 - 18, 1974

Congress of Neurological Surgeons

Miami, Florida	October 10 - 16, 1971
Denver, Colorado	October 15 - 21, 1972
New Orleans, Louisiana	October 7 - 12, 1973

Neurosurgical Society of America

Sea Island, Georgia	May 9 - 12, 1971
Del Monte	March 22 - 25, 1972
Pebble Beach, California	

Western Neurosurgical Society

Colorado Springs, Colorado	October 31-November 3, 1971
----------------------------	-----------------------------

International Congress of Neurological Surgeons

Tokyo, Japan	1973
--------------	------

Pan-Pacific Surgical Association

Honolulu, Hawaii	October 10 - 19, 1972
------------------	-----------------------
